



**Valley Boulevard Multi-Family
Residential Project Traffic Impact
Study**

April 26, 2019

Revised September 2021

Prepared for:

Phil Martin & Associates

Prepared by:

Keith R. Rutherford T.E.
Josh D. Park T.E.
Kenny Pham E.I.T.

VALLEY BOULEVARD MULTI-FAMILY RESIDENTIAL PROJECT TRAFFIC IMPACT STUDY

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Prepared by Josh Park
(signature)
Josh D. Park

Reviewed by Keith Rutherford
(signature)
Keith Rutherford

Approved by Keith Rutherford
(signature)
Keith Rutherford

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1.0 INTRODUCTION

The purpose of this traffic impact analysis (TIA) is to evaluate potential traffic circulation issues associated with the proposed Valley Boulevard Multi-Family Residential project and associated land use rezoning (Project). Implementation of the Project would rezone the site property from existing C-3 commercial use to proposed MMU multiple-use. This TIA will identify mitigation measures, if necessary, to meet City of El Monte circulation network level of service (LOS) criteria considering implementation of the Valley Boulevard Multi-Family Residential Project. The location of the proposed Valley Boulevard Multi-Family Residential Project is shown on Figure 1.

The project will be developed at a 2.57-acre site located at 11640 - 11730 Valley Boulevard in the City of El Monte (City) that was formerly used as a pre-owned vehicle dealership and is now vacant. This site is proposed to be developed as Multi-Family Residential use that will provide 83 multi-family residential units and 2,400 square feet of recreational community center. The project is comprised of two lots each with separate parking facilities and with no vehicle circulation between sites.

Lot A is located on the easterly portion of the site and is bordered on the east by La Madera Avenue. Lot A will provide 43 residential flats, the community center, and ground-level parking within a Podium building. Lot A will also provide surface parking for residents and guests in an area outside of the gated entrance to the Podium building. Lot B is on the westerly portion of the site and is to be developed with 40 townhomes with garages and a surface parking area.

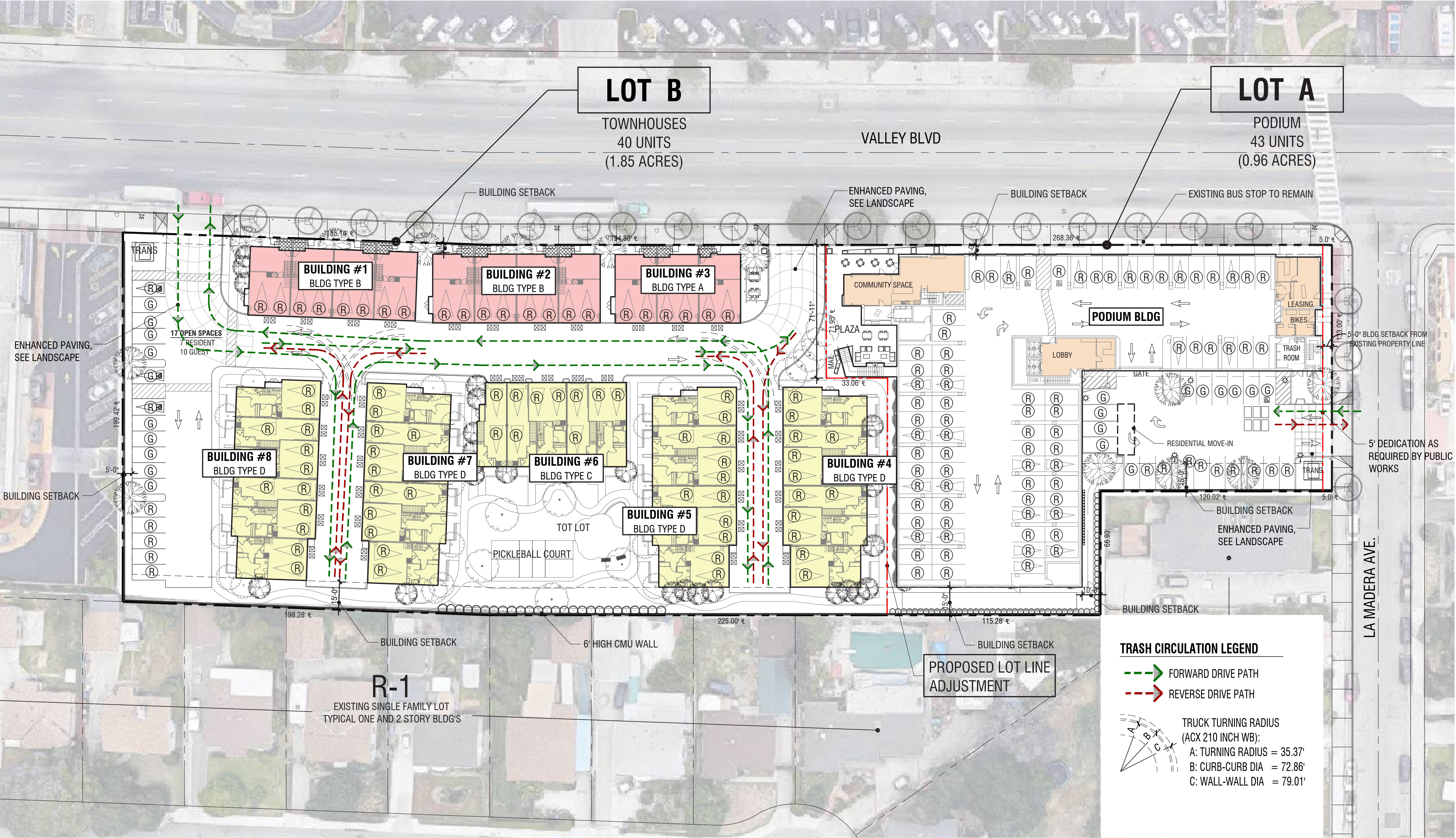
Access to the new site would be provided by three proposed driveways, two off the south side of Valley Boulevard for access to Lot B and the third off the west side of La Madera Avenue for access to Lot A.

The proposed project site plan for the new Valley Boulevard Multi-Family Residential Project is shown on Figure 2. For the original 2019 traffic analysis, the Project was assumed to be implemented by 2022 as a single phase. This updated study includes an analysis and discussion of revising the Project implementation year to 2024.





Figure 2- Project Site Plan



SITE SUMMARY		
Site Zoning:		MMU
Overall Lot Size: (121,472 S.F.)		2.79 Acres
Lot A (41,364 s.f.)		0.95 Acres
Lot B (80,108 s.f.)		1.84 Acres
Total Dwelling Units		83 Units
Lot A (Flats)		43 Units
Lot B (Townhomes)		40 Units
Overall Density:		29.9 DU/AC
Lot A (43 unit/0.95 ac)		45.3 Du/Ac
Lot B (40 unit/1.84 ac)		21.7 Du/Ac
Overall Parking:		191 stalls
Lot A:		94 stalls
Lot B:		97 stalls
Overall Common Open Space:		21,260 s.f.
Lot A:		13,010 S.F.
Lot B:		8,250 S.F.
Maximum Proposed Building Heights		
Lot A:		49'-11", 4-Stories
Lot B:		43'-6", 3-Stories

PARKING SUMMARY		
191 Total Spaces Provided		
Resident Parking		
Resident Parking Required		
1-Bed (10 Units X 1.5 Space)		15 Spaces
2-Bed (59 Units X 2 Sp.)		118 Spaces
3-Bed (14 Units X 2 Sp.)		28 Spaces
Resident Parking Provided		
Garage Standrd		82 Spaces
Garage Tandem		70 Spaces
Standard Open		14 Spaces
Accessible (2 Gar + 2 Open)		4 Spaces
Residential Guest Parking		
Guest Parking Required		
83 Units X 1/6 Space		13.8 Spaces
Guest Parking Provided		
Standard Open		19 Spaces
Accessible Open		2 Spaces

LEGEND	
	Townhome Buildings
	Street-Facing Residential Townhomes
	Enclosed Common Areas
	Resident Parking Space
	Residential Guest Parking Space

11640 - 11730 Valley Boulevard

OVERALL SITE PLAN

A4

SCHEMATIC DESIGN

2.0 EXISTING STUDY AREA CONDITIONS

Figure 3 shows the existing roadway network and intersections surrounding the Project site. The following intersections are included in the study area for analysis:

1. Valley Boulevard and Ramona Boulevard (signalized);
2. Valley Boulevard and Johnson Avenue (signalized);
3. Valley Boulevard and Peck Road (signalized);
4. Valley Boulevard and I-10 Westbound Ramps (stop-controlled);
5. Valley Boulevard and La Madera Avenue (stop-controlled);
6. Valley Boulevard and Mountain View Road (signalized); and
7. Valley Boulevard and Garvey Avenue (signalized);
8. Garvey Avenue and La Madera Ave (stop-controlled);
9. Garvey Avenue and Meeker Avenue (signalized); and
10. Garvey Avenue and Peck Road (signalized).

Figure 3 also shows existing intersection geometrics and controls and the number of through lanes for roadways surrounding the project area. The Project site is in a developed, urban environment surrounded by commercial, retail, office, restaurant, and single-family and multi-family housing land uses.

Valley Boulevard borders the project site on the North and is designated a Major Arterial roadway per the City General Plan. Valley Boulevard is a four-lane divided roadway with a center striped two-way left-turn lane or raised median and provides two travel lanes in the eastbound and westbound directions. On-street parking is allowed where permitted and the posted speed limit is 45 mph. Access to the project is provided via two driveways that connect to the south side of Valley Boulevard.

Peck Road is located to the west of the project study area and is a north-south Major Arterial roadway. Peck Road provides three through lanes in each direction north of Valley Boulevard with a continuous raised center median and separate left-turn lanes at intersections. South of Valley Boulevard Peck Road is a four-lane divided roadway that allows on-street parking along both sides of the roadway and the posted speed limit is 45 mph.



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Existing Study Area Conditions
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Garvey Avenue is located approximately 0.3 mile east of the project. Garvey Avenue is an east-west Major Arterial roadway. In vicinity of the project area, Garvey Avenue provides two through lanes in each direction with a continuous painted center median or two-way left-turn lane with separate left-turn lanes at intersections. On-street parking is prohibited on both sides of the roadway and the posted speed limit is 45 mph.

La Madera Avenue is located directly east of the project and is a north-south local street. La Madera Avenue provides one through lane in each direction with no painted centerline. On-street parking is permitted along both sides of the roadway and the posted speed limit is 25 mph.

2.1 EXISTING TRAFFIC VOLUMES

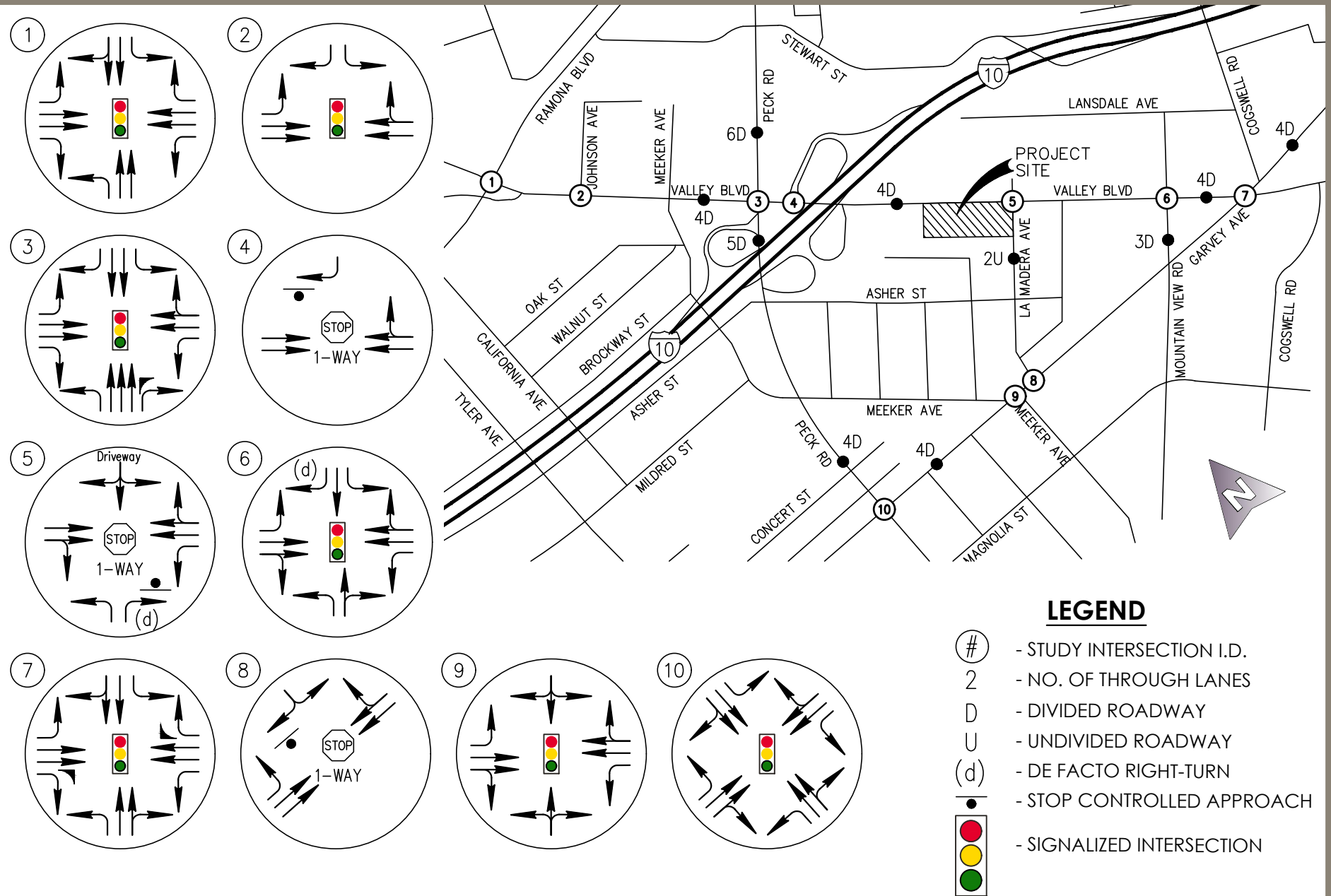
Figures 4A and 4B show existing (November 2018) weekday am and pm peak hour intersection turning movement volumes within the project study area, respectively. Figure 5 shows existing weekday 24-hour volumes on roadway segments. Traffic Data was collected on Tuesday, November 13, 2018 for this study by AimTD. and is included in the appendix. Schools were in session when this data was collected.

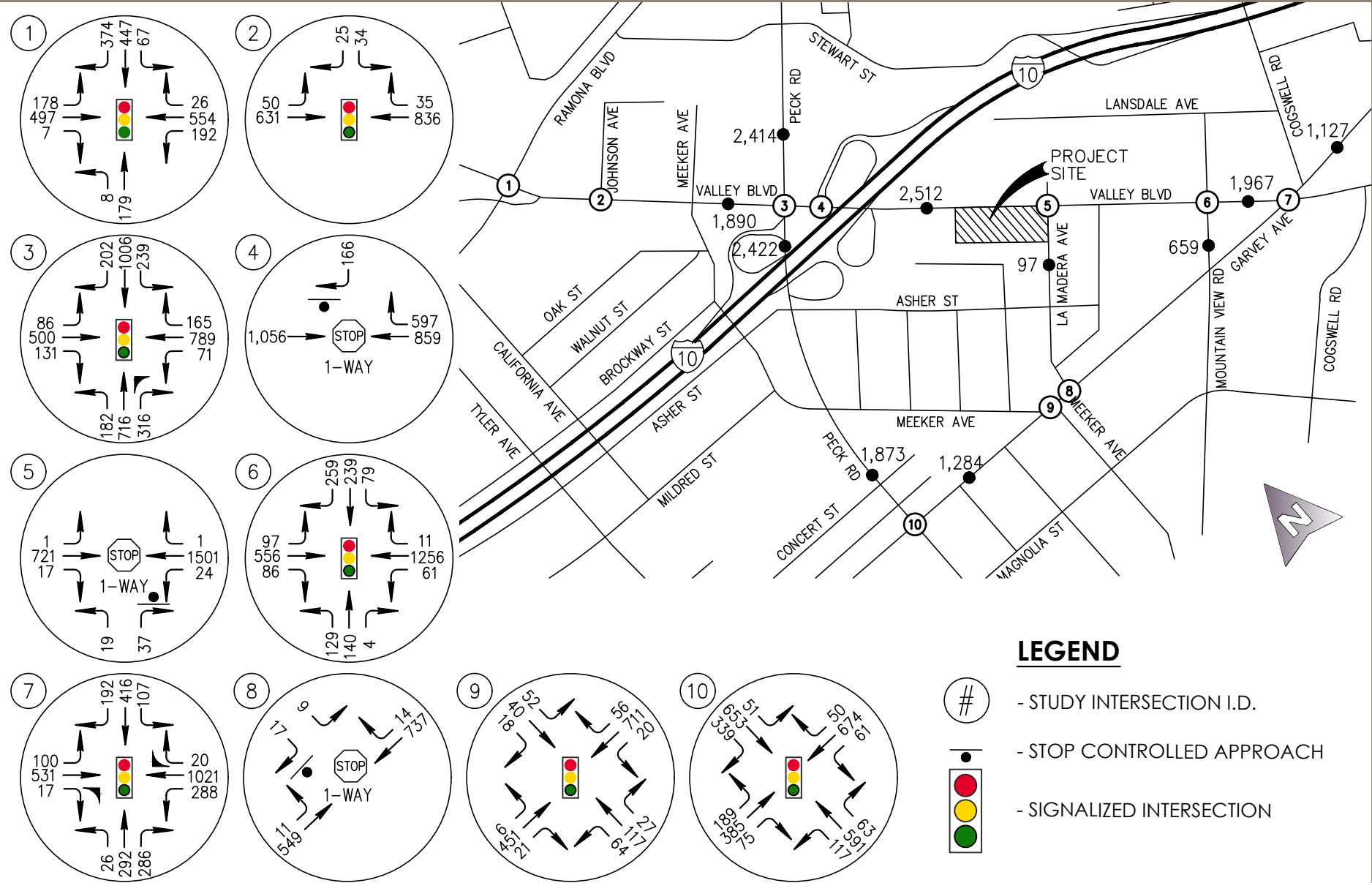
2.2 PROJECT IMPLEMENTATION YEAR (2022) VOLUMES

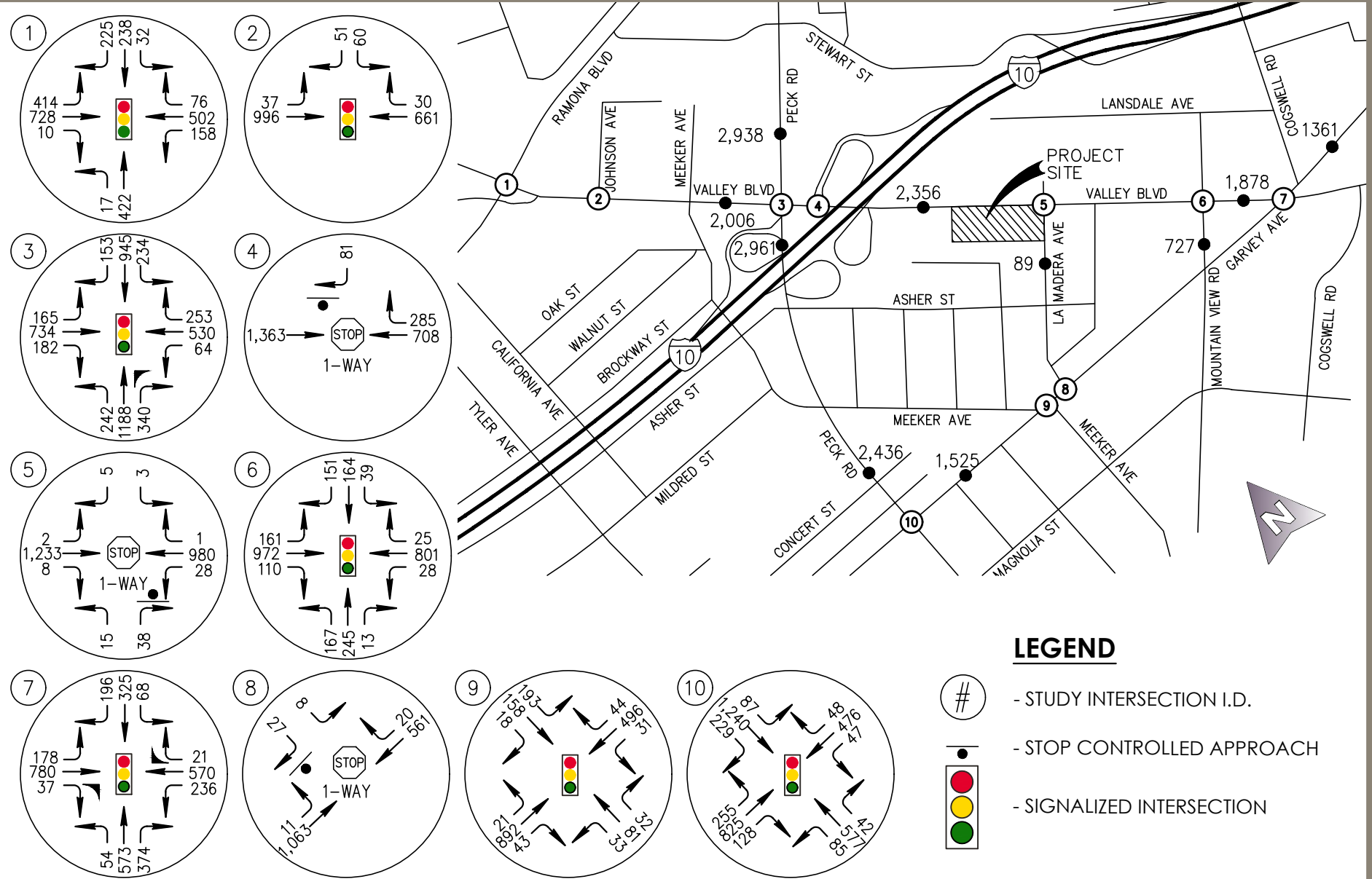
For this analysis, the Project is anticipated to be implemented in one phase by 2022. Baseline 2022 traffic volumes have been developed by factoring existing 2018 volumes by an ambient growth rate of 1% per year (for 4 years) and then adding traffic from identified future cumulative development projects. Eleven cumulative development projects were identified for the Project study area. See Section 3 of this study for a list of development projects whose forecast cumulative traffic volumes have been considered in this study.

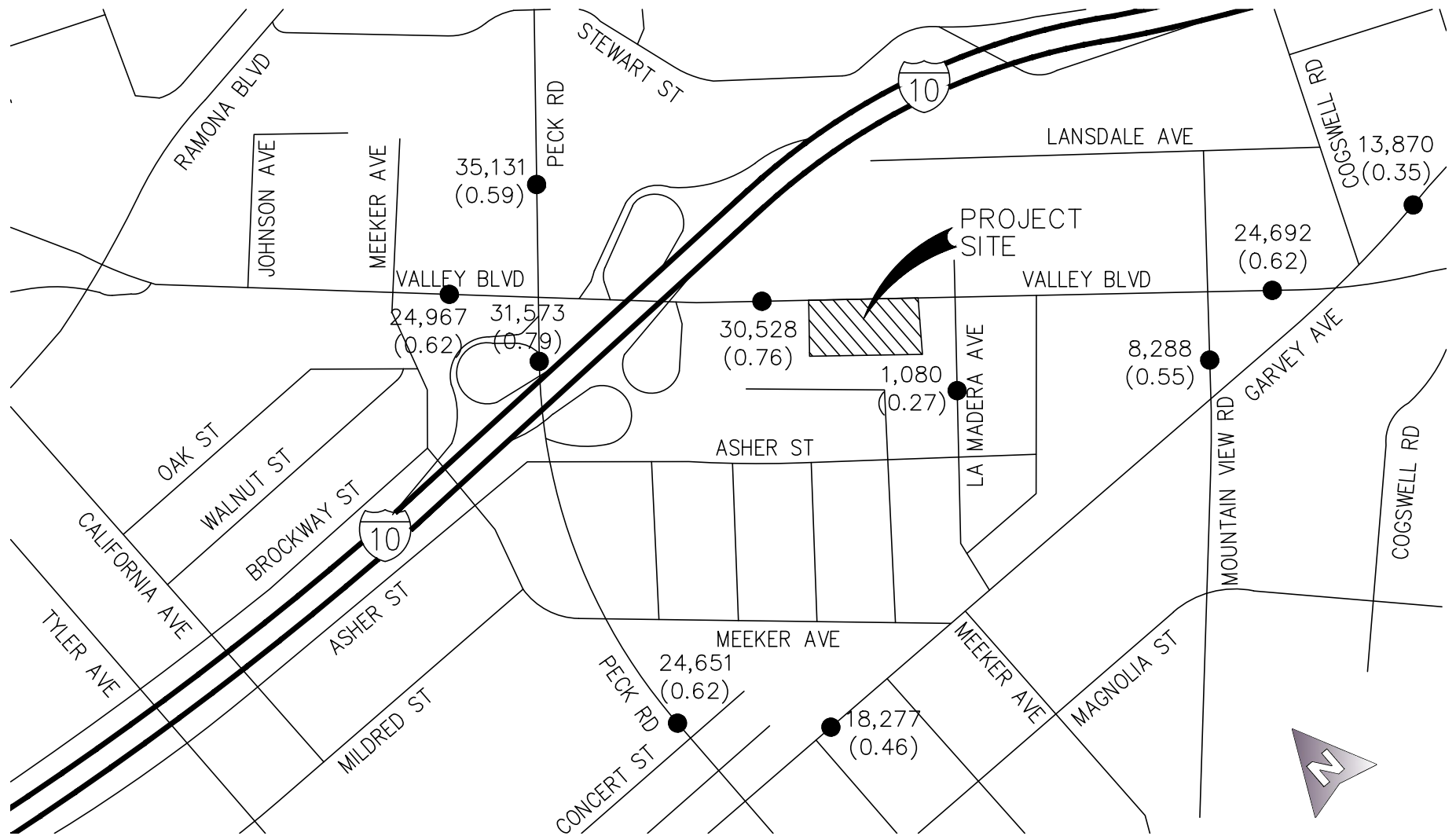
Figures 6A and 6B show Baseline 2022 weekday am and pm peak hour intersection turning movement volumes within the project study area, respectively. Figure 7 shows Baseline 2022 weekday 24-hour volumes on roadway segments.

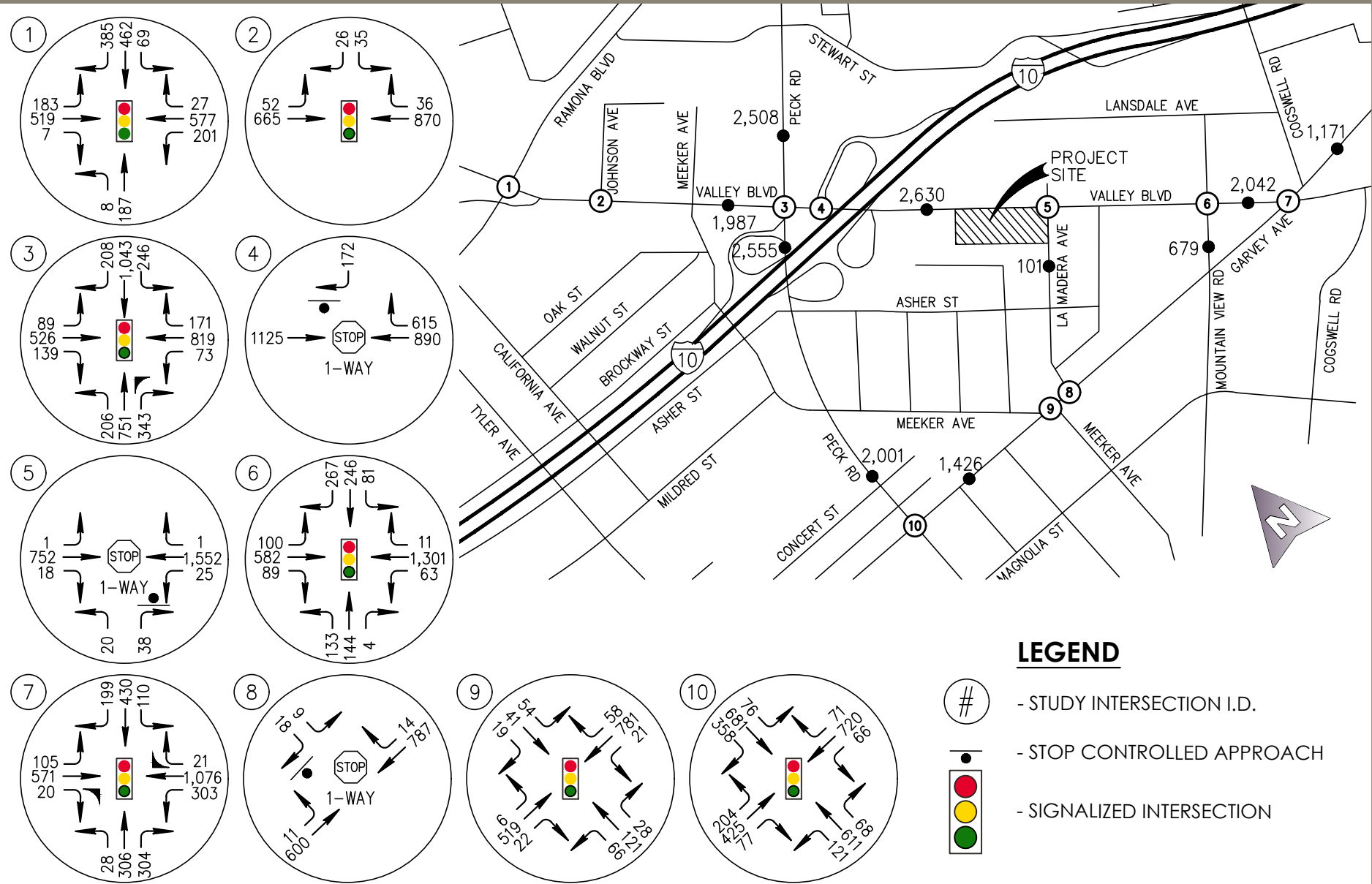


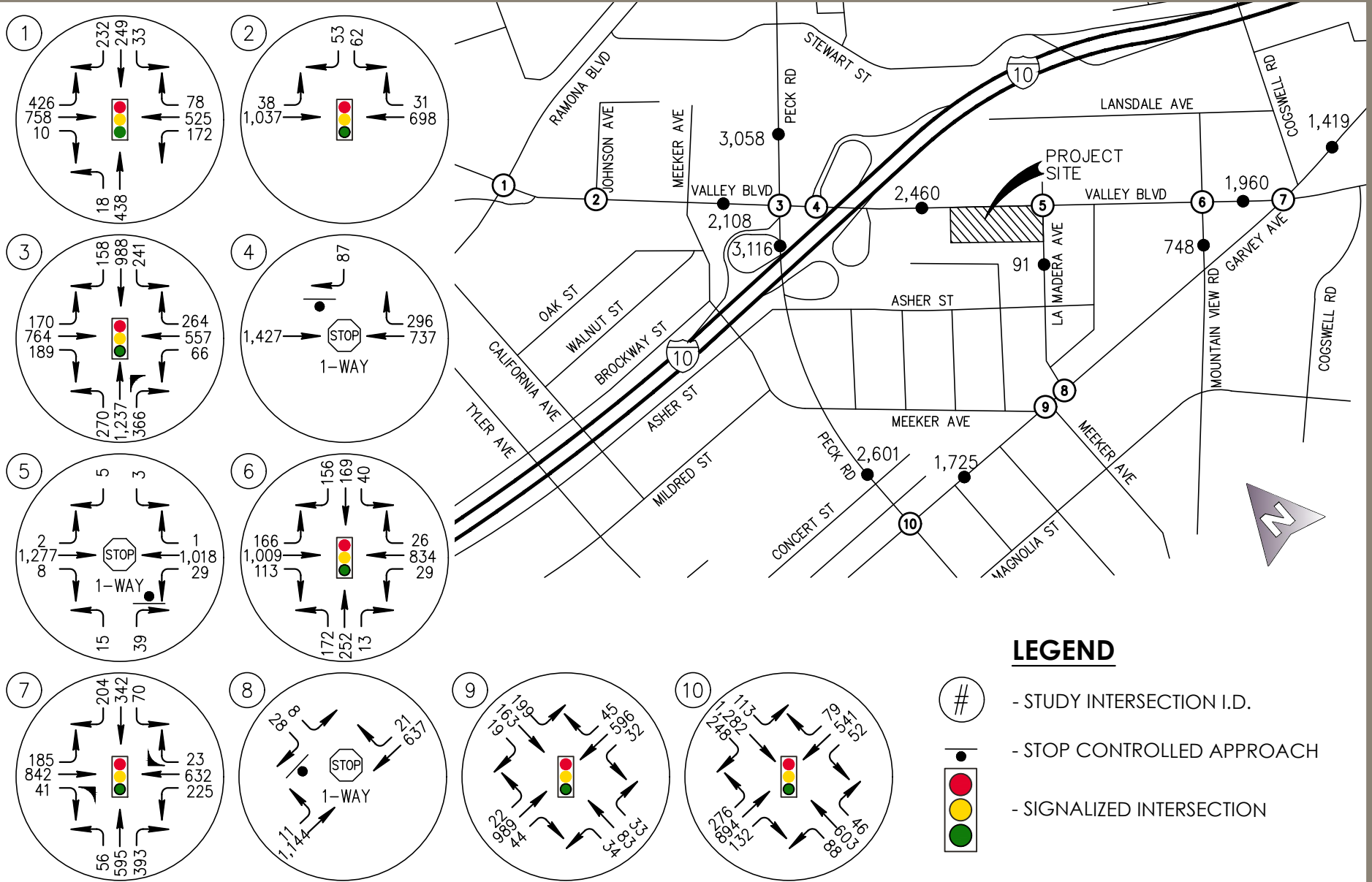


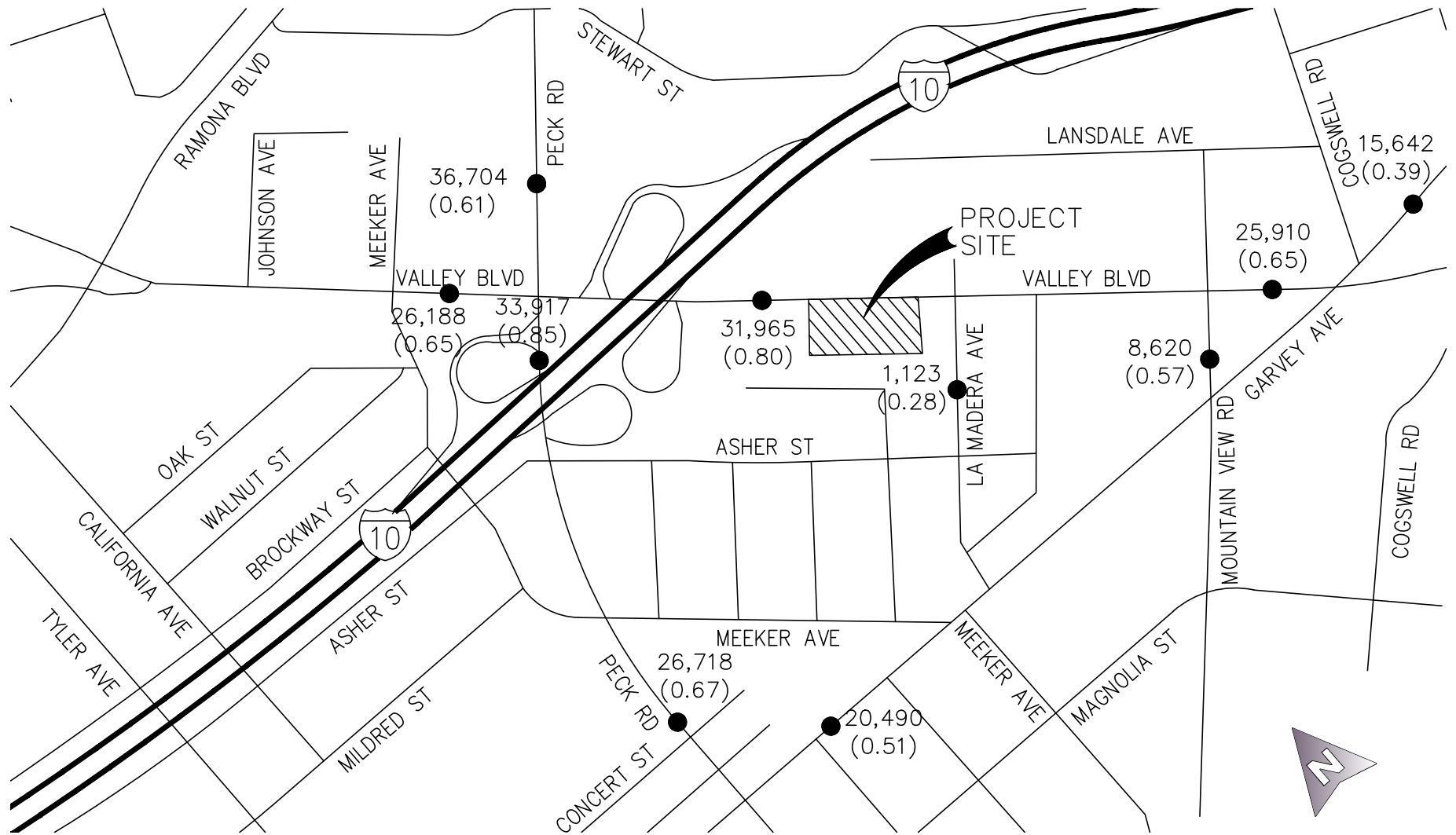












2.3 EXISTING AND BASELINE 2022 LEVEL OF SERVICE (LOS) ANALYSIS

To provide a detailed analysis of existing peak hour and Baseline 2022 year traffic operation within the study area and to provide a baseline for existing and year 2022 level of service (LOS), signalized intersection LOS was determined using the Intersection Capacity Utilization (ICU) method and unsignalized intersection LOS was determined using the Highway Capacity Manual 6th Edition (HCM6) unsignalized operations method. The three project study area unsignalized intersections are the I-10 Westbound Ramp/Valley Boulevard intersection, the La Madera Avenue/Valley Boulevard intersection, and the La Madera Avenue/Garvey Avenue intersection.

In ICU analysis, the volume of traffic using the intersection is compared to the capacity of the intersection. ICU's are calculated for the peak hours of traffic and include the unique features of the intersection such as turning movement volumes, intersection lane configurations, and traffic signal phasing. ICU is generally expressed as a percent. The percentage represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic and provides a guide to the number and types of lanes required at the intersection. This percentage can also be used to determine a level of service (LOS) based on the utilized capacity of the intersection. Table 1A provides ICU level of service ranges and descriptions. The City of El Monte target minimum Level of Service is LOS D and all parameters used in ICU analysis are consistent with Los Angeles County guidelines.

Using the HCM 6th Edition operations method for unsignalized two-way stop-controlled intersections, level of service is based on the worst-approach delay in the intersection as shown on Table 1B. This is a much more conservative method than the Caltrans' procedures for determining LOS at unsignalized intersections by calculating the average intersection delay for the intersection as a whole.

Table 2 shows the results of intersection level of service analysis for the study area intersections, separated by signalized/unsignalized, under existing 2018 conditions and Table 3 for Baseline 2022 conditions.



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Table 1A
Intersection Capacity Utilization (ICU) Analysis
Level of Service Descriptions
for Signalized Intersections

Level of Service	Traffic Flow Description	Nominal Range of ICU
A	Low volumes; high speeds; speed not restricted by other vehicles; all signal cycles clear with no vehicles waiting through more than one signal cycle.	0.00 - 0.60
B	Operating speeds beginning to be affected by other traffic; between one and ten percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods.	0.61 - 0.70
C	Operating speeds and maneuverability closely controlled by other traffic; between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods; recommended ideal design standard.	0.71 - 0.80
D	Tolerable operating speeds; 31 to 70 percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods; often used as design standard in urban areas.	0.81 - 0.90
E	Capacity; the maximum traffic volume an intersection can accommodate; restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicles which wait through more than one cycle during peak traffic periods.	0.91 - 1.00
F	Long queues of traffic; unstable flow; stoppages of long duration; traffic volumes and traffic speed can drop to zero; traffic volumes will be less than the volume which occurs at Level of Service E.	over 1.00

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Table 1B
Highway Capacity Manual (HCM) Analysis
Level of Service Descriptions
for Unsignalized Intersections

Level of Service	Traffic Flow Description	Worst Case Approach Delay (Sec/Vehicle)
A	Operations with delay less than or equal to 10.0 sec per vehicle; most vehicles have a very short stop	≤ 10.0
B	Operations with delay in the range of 10.1 to 15.0 sec per vehicle; higher levels of delay, longer stops than LOS A	10.1 to 15.0
C	Operations with delay in the range of 15.1 to 25.0 sec per vehicle; significant levels of delay	15.1 to 25.0
D	Operations with delay in the range of 25.1 to 35.0 sec per vehicle; noticeable congestion; increased queue lengths; long delays	25.1 to 35.0
E	Operations with delay in the range of 35.1 to 50.0 sec per vehicle; limit of acceptable delay; very long delay; long queue lengths	35.1 to 50.0
F	Operations with delay in excess of 50.0 sec per vehicle; considered unacceptable driver delay; congestion; oversaturation; unacceptable queuing	> 50.0

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Table 2
Existing 2018 - Study Area Intersections Level of Service

Signalized Intersections	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
1. Ramona Blvd/Valley Blvd	0.65	B	0.67	B
2. Johnson Ave/Valley Blvd	0.42	A	0.45	A
3. Peck Rd/Valley Blvd	0.82	D	0.82	D
6. Mountain View Rd/Valley Blvd	0.79	C	0.66	B
7. Garvey Ave/Valley Blvd	0.73	C	0.83	D
9. Meeker Ave/Garvey Ave	0.50	A	0.66	B
10. Peck Rd/Garvey Ave	0.70	B	0.85	D

Unsignalized Intersections (Worst-case Approach Delay)	HCM			
	AM Peak Hour		PM Peak Hour	
	Delay (sec.)	LOS	Delay (sec.)	LOS
4. I-10 WB Ramp/Valley Blvd (HCM - Sec/Delay)	28.3	D	14.1	B
5. La Madera Ave/Valley Blvd (HCM - Sec/Delay)	17.2	C	22.6	C
8. La Madera Ave/Garvey Ave (HCM - Sec/Delay)	14.8	B	13.2	B

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Table 3
Baseline 2022 - Study Area Intersections Level of Service

Signalized Intersections	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
1. Ramona Blvd/Valley Blvd	0.66	B	0.69	B
2. Johnson Ave/Valley Blvd	0.43	A	0.46	A
3. Peck Rd/Valley Blvd	0.88	D	0.86	D
6. Mountain View Rd/Valley Blvd	0.80	C	0.69	B
7. Garvey Ave/Valley Blvd	0.77	C	0.87	D
9. Meeker Ave/Garvey Ave	0.52	A	0.70	B
10. Peck Rd/Garvey Ave	0.75	C	0.90	D

Unsignalized Intersections (Worst-case Approach Delay)	HCM			
	AM Peak Hour		PM Peak Hour	
	Delay (sec.)	LOS	Delay (sec.)	LOS
4. I-10 WB Ramp/Valley Blvd (HCM - Sec/Delay)	31.4	D	14.6	B
5. La Madera Ave/Valley Blvd (HCM - Sec/Delay)	18.1	C	23.7	C
8. La Madera Ave/Garvey Ave (HCM - Sec/Delay)	15.4	C	13.9	C

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Table 2 shows that all study area intersections are currently operating at Level of Service D or better during am and pm peak hours with existing 2018 traffic volumes and improvements. Table 3 shows that study area intersection LOS for Baseline 2022 conditions will remain at LOS D or better. The baseline 2022 study area intersection and roadway configurations are considered to be the same as the existing (2018) network.

Figure 5 shows the existing weekday 24-hour traffic volumes on Valley Boulevard are approximately 26,000 to 32,000 vehicles per day in vicinity of the Project site. These volumes are below capacity of this roadway (approximately 40,000 vehicles per day) and are consistent with the LOS D or better predicted for the study area intersections by ICU analysis. The weekday volumes for Garvey Avenue, Peck Road, and La Madera Avenue are also below the 24-hour capacities of the various roadway configurations and would typically indicate desirable LOS (LOS D or better) at intersections during peak hours. Existing weekday 24-hour roadway volume counts were taken in November 2018 and are included in Appendix A. Daily roadway capacities used for volume-to-capacity (v/c) ratios shown on Figure 5 are provided in Table 4.

Table 4 – Roadway Capacities by Type¹

Roadway Type	No. of Lanes	Daily Capacity (vehicles)	Per Hour Capacity Per Lane (veh/hour)
Major Arterial	6	60,000	800
Major Arterial	4	40,000	800
Secondary Arterial	4	35,000	700
Collector Street	2	15,000	600
Local Street ²	2	4,000	500

¹Unless otherwise indicated, values in Table 4 are from the 2000 Highway Capacity Manual (HCM) and as included in City of El Monte General Plan and Zoning Code Update Draft EIR, March 2011, Page 5.13-2

²Local street value shown has been assumed for La Madera Avenue which has a direct connection to Valley Boulevard and therefore operates similar to a low volume collector street.

Figure 7 shows that Baseline 2022 weekday 24-hour volumes on the roadways surrounding the project are forecast to remain below theoretical daily capacity.



3.0 PROJECTED FUTURE TRAFFIC

3.1 TRIP GENERATION

Trip generation rates and forecast project daily and peak hour traffic volumes are shown on Table 5. The trip generation rates used to forecast traffic volumes produced by the project are identified by the Institute of Transportation Engineers, in *Trip Generation*, 10th Edition.

The proposed project is to be implemented in a single phase in 2022. Baseline 2022 traffic volumes have been developed by factoring existing 2018 volumes by an ambient growth rate of 1% per year (for 4 years) and then adding traffic from identified future cumulative development projects. The identified projects whose cumulative traffic volumes have been considered in this analysis include:

1. 26 Senior Condominiums, 5,465 sf. Retail: 11605 Garvey Avenue, El Monte;
2. 690,000 sf. Retail and Restaurant, 250 room Hotel: 600 Residential Units, 94010-9600 Flair Dr, El Monte;
3. 70-unit Townhome development, 2,000 sf. Retail: 11022-11048 Garvey Avenue, El Monte;
4. 2,200 sf. Retail, 12 multi-family units: 11301-11401 Garvey Ave, El Monte;
5. 80-Room Hotel: 12300 Valley Blvd, El Monte;
6. 22-unit Single Family Units: 4422-4436 Bannister Street, El Monte;
7. Medicinal Commercial Cannabis: 3141 Maxon Road, El Monte;
8. 97-Room Holiday Inn Express Hotel: 12432 Valley Blvd., El Monte;
9. 51-unit Affordable Housing: 3454 Tyler Avenue, El Monte;
10. 147,581 sf. Mixed-Use Complex, 28 senior units, 78 Assisted Living: 11691-11707 Garvey Avenue, El Monte and,
11. 40-unit Townhomes: 2704-2728 Santa Anita Avenue, El Monte.

The list of cumulative projects and its locations are also shown graphically on Figure 8.

As was previously mentioned, the project site is currently vacant with no trip generation so no trip reduction has been applied to forecast site volumes. Also, although the Project site is served by transit, will provide bicycle facilities, and is within walking distance of retail areas, it is assumed



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that all project trips are made by vehicle. Therefore, based on the considerations above, the trip generation used in this analysis is considered to be conservative.

3.2 TRIP DISTRIBUTION AND ASSIGNMENT

Figure 9 shows the distribution and assignment for traffic generated by the Project. This figure shows that 15% of project traffic is assigned to/from the east and west along Valley Boulevard, 15% each assigned to/from east and west via the I-10 Freeway, 10% each assigned to/from the north and south via Peck Road, 10% each assigned to/from south via Mountain View Road, and 10% assigned to/from the south via La Madera Avenue.

3.3 PROJECT SITE ACCESS AND PARKING

There are two proposed 30-foot wide project access driveways along Valley Boulevard at the east and west ends of the townhome portion of the site (Lot B) and a third 26-foot driveway on La Madera Avenue. The two driveways along Valley Boulevard provide access to forty townhomes (Lot B) of the eighty-three residential units located on the project site. The La Madera Avenue driveway provides access to forty-three residential units and the Community recreational Center located in the Podium building (Lot A).

The two Valley Boulevard access driveways serve residents of Lot B as shown in the Site Plan (Figure 2). Lot B provides 80 parking spaces assigned equally to each residential unit via individual parking garages and 17 ground-level parking for both the residents and guests. The La Madera Avenue access driveway serves residents of Lot A (flats in Podium building) including community space, and provides 74 parking stalls on the ground-floor parking level of the building and 20 stalls on ground-level outside of the gated entrance to the building. This gate location is internal to the property and there is no gated access off either La Madera Avenue or Valley Boulevard into the site. There is no internal site circulation (vehicle) between Lot A (Podium building) and Lot B (townhomes site).

All driveways will provide full two-way project access and there are no concerns with vehicle queuing at Valley Boulevard or at the project driveways. The driveway volumes will be low with less than an average of 50 vehicles per driveway in both directions during peak hours. The two driveways along Valley Boulevard are separated by approximately 295' of two-way left turn lane



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(TWLTL) which could provide storage for up to approximately 12 vehicles. The highest number of left turns into the site occurs during the PM peak hour with a total hourly volume of 7 left turn vehicles into the westerly driveway. Ignoring the fact that these vehicles will arrive during a 60-minute period and will rarely exceed more than one vehicle at a time, the entire volume of 7 vehicles could be easily accommodated within the TWLTL upstream of the easterly Valley Boulevard driveway. There is virtually no probability that inbound left turn movements at the westerly driveway could impact operation (outbound left turns) at the easterly driveway. The same is true at the easterly Valley Boulevard driveway where the inbound PM peak hour volume is also 7 vehicles and there is approximately 260' feet of TWLTL storage to the La Madera Avenue intersection.

The project provides on-site parking in excess of City code requirements. The site requires a total of 175 spaces (161 – residential, 14 guest) and provides a total of 191 (170 – residential, 21 guest). Lot A provides 94 spaces (83 – residential, 11 - guest) and Lot B 97 spaces (87 – residential, 10 - guest). Parking code calculations and the locations of residential and guest parking facilities are shown on the site plan, Figure 2.

3.4 PROJECT PEAK HOUR INTERSECTION TURNING MOVEMENT AND WEEKDAY DAILY TRAFFIC VOLUMES

The combination of Project trip generation and trip distribution/assignment results in the Project traffic volumes shown on Figures 10A and 10B for am and pm peak hours, respectively. These figures show the project peak hour turning movement volumes at study area intersections and the total (two-way) project peak hour volumes on roadway links between intersections. Figure 11 shows Project weekday daily 24-hour traffic volumes.

3.5 EXISTING 2018 WITH PROJECT TRAFFIC VOLUMES

Existing 2018 and project only traffic volumes have been combined to produce forecasts of existing traffic conditions with Project implementation. Figures 12A and 12B show Existing 2018 with Project traffic volumes for am and pm peak hours, respectively. Figure 13 shows Existing 2018 with Project weekday daily 24-hour traffic volumes.



Projected Future Traffic
September 2021

3.6 BASELINE 2022 WITH PROJECT TRAFFIC VOLUMES

Baseline 2022 and project only traffic volumes have been combined to produce forecasts of future traffic conditions with Project implementation. Figures 14A and 14B show Baseline 2022 with Project traffic volumes for am and pm peak hours, respectively. Figure 15 shows Baseline 2022 with Project weekday daily 24-hour traffic volumes.



Table 5
Project Trip Generation

Trip Generation Rates*

Land Use	Unit	ITE Land Code	Quantity	Daily Rate	AM Peak Hour Split		PM Peak Hour Split			
					Rate	In	Out	Rate	In	Out
1. Multi-Family Housing (Low-Rise)	DU	220	83	7.32	0.46	23%	77%	0.56	63%	37%
2. Recreational Community Center	SF	495	2,400	Eqn ¹	Eqn ²	66%	34%	Eqn ³	47%	53%
		Eqn ¹	ln(T) = 0.98 ln(X) + 3.42				Eqn ²	ln(T) = 0.54 ln(X) + 2.73		
							Eqn ³	ln(T) = 0.76 ln(X) + 2.00		

Project Trip Generation

<u>Land Use</u>	<u>Quantity</u>	<u>ADT</u>	<u>Total</u>	<u>AM Peak Hour Volume</u>		<u>PM Peak Hour Volume</u>		
				<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>
1. Multi-Family Housing (Low-Rise)	83	608	38	9	29	46	29	17
2. Recreational Community Center	2,400	72	25	17	9	14	7	7

Total	680		63	25	38	60	36	24
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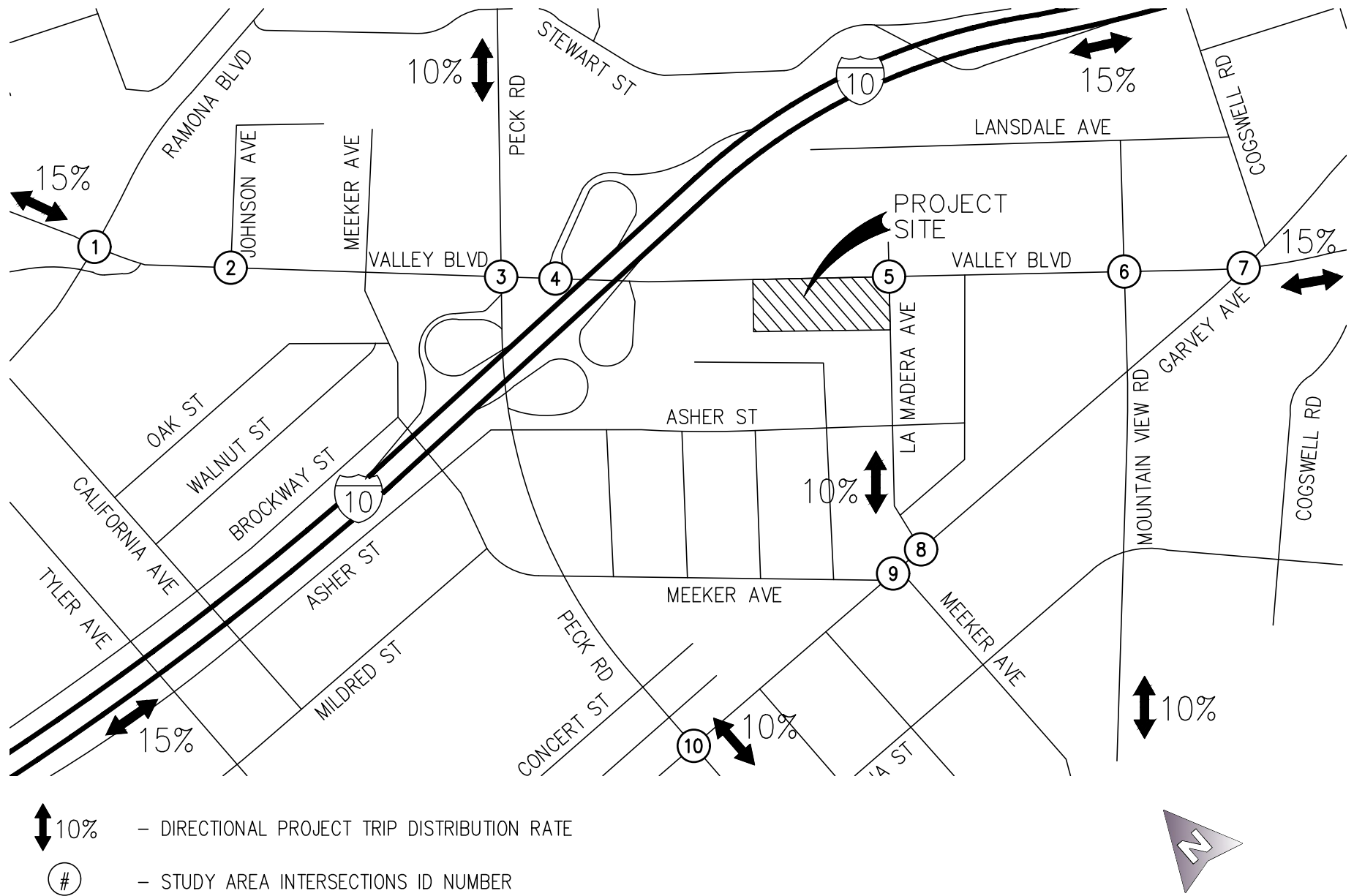
* Source: ITE Trip Generation Manual, 9th Edition

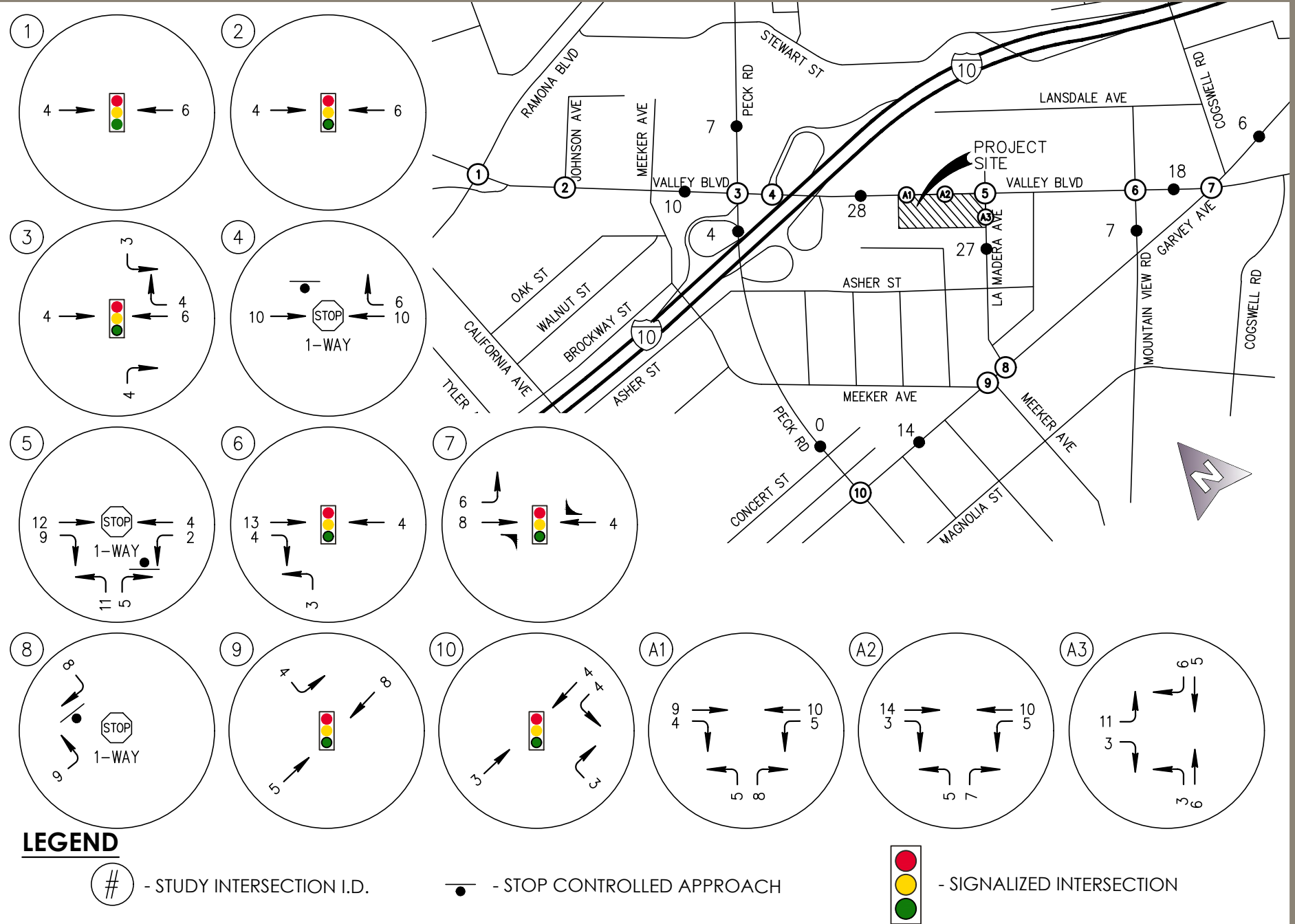
PROJECT NO.	ADDRESS	PROJECT DESCRIPTION
1	11605 GARVEY AVE	26 SENIOR CONDOS, 5,465 SF. RETAIL
2	9400-9600 FLAIR DR	690,000 SF. RETAIL AND RESTAURANT, 250 ROOM HOTEL, 600 RESIDENTIAL UNITS
3	11022-11048 GARVEY AVE	70 TOWNHOMES, 2,000 SF. RETAIL
4	11301-11401 GARVEY AVE	2,200 SF. RETAIL, 12 MULTI-FAMILY UNITS
5	12300 VALLEY BLVD	80-ROOM HOTEL
6	4422-4436 BANNISTER ST	22 SINGLE FAMILY UNITS
7	3141 MAXSON ROAD	MEDICINAL COMMERCIAL CANNABIS, 3,310 SF. NURSERY, 40,000 SF. CULTIVATION, 11,101 SF. MANUFACTURING, 3,476 SF DISTRIBUTION
8	12432 VALLEY BLVD	97 ROOM HOLIDAY INN EXPRESS HOTEL
9	3454 TYLER AVE	51 AFFORDABLE HOUSING UNITS
10	11619-11707 GARVEY AVE	147,581 SF. MIXED-USE COMPLEX: 28 SENIOR UNITS, 78 ASSISTED LIVING & 40 MEMORY CARE UNITS
11	2704-2728 SANTA ANITA AVE, 2721 GRANADA	40 TOWNHOMES

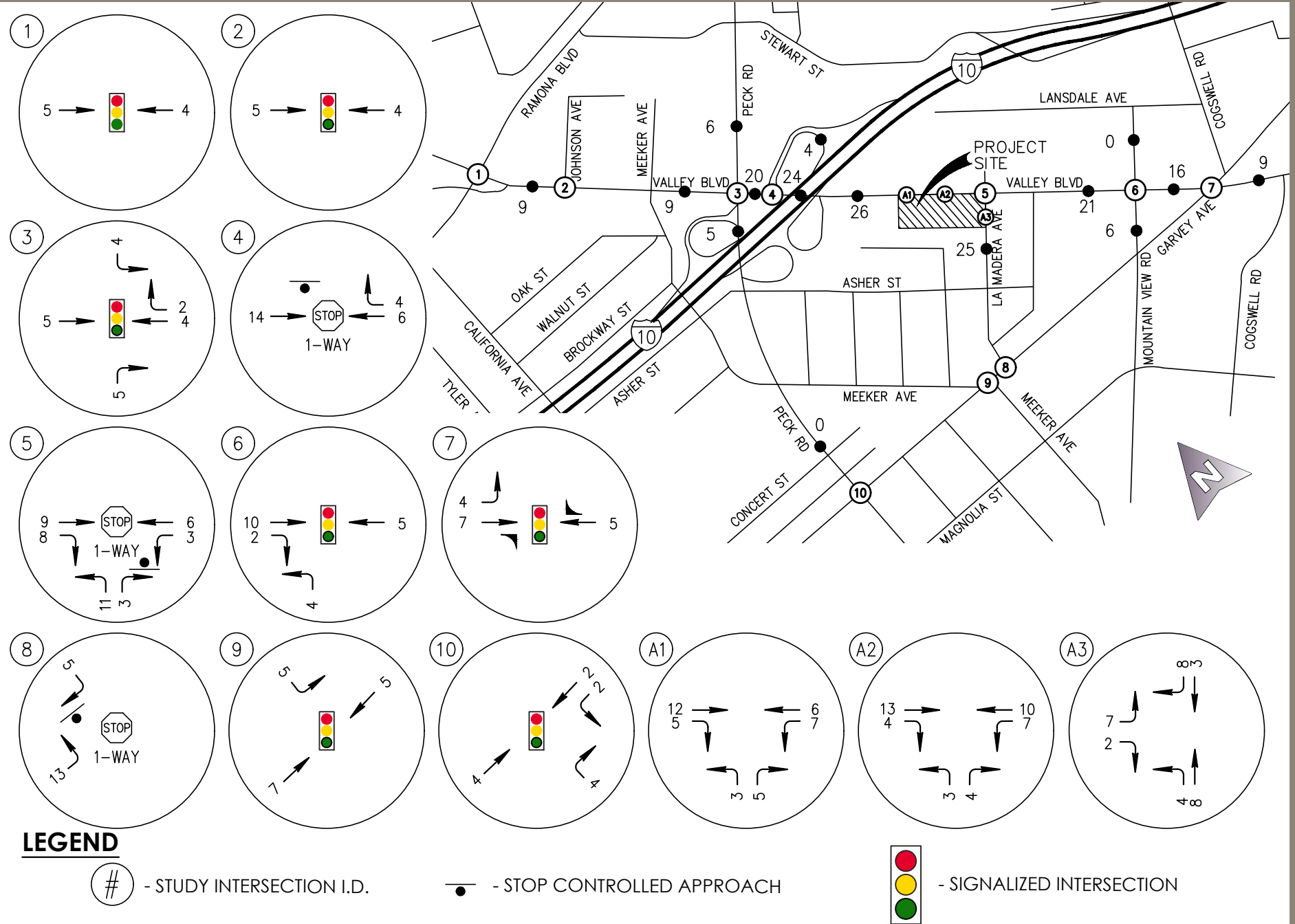
**LEGEND**

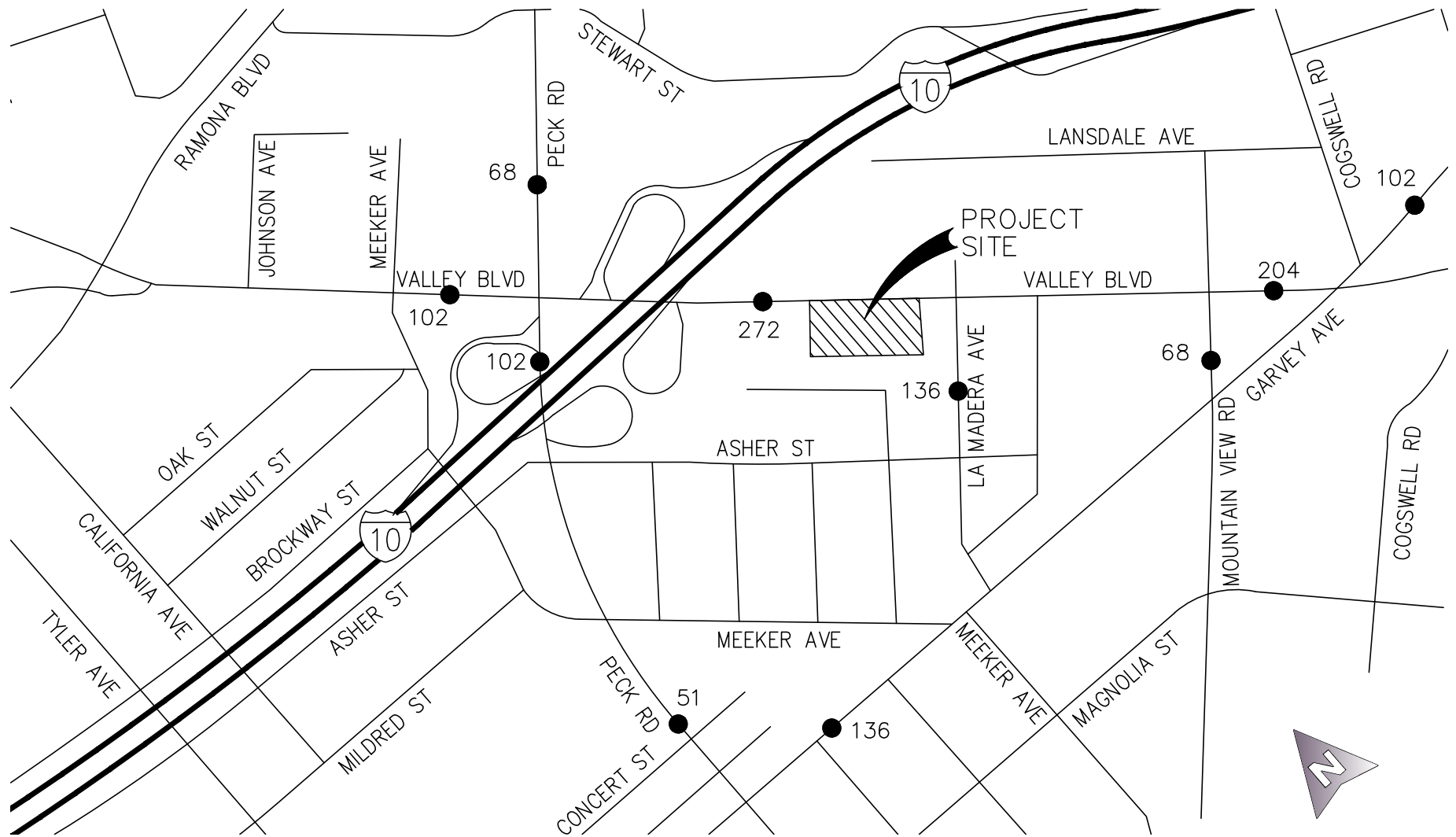
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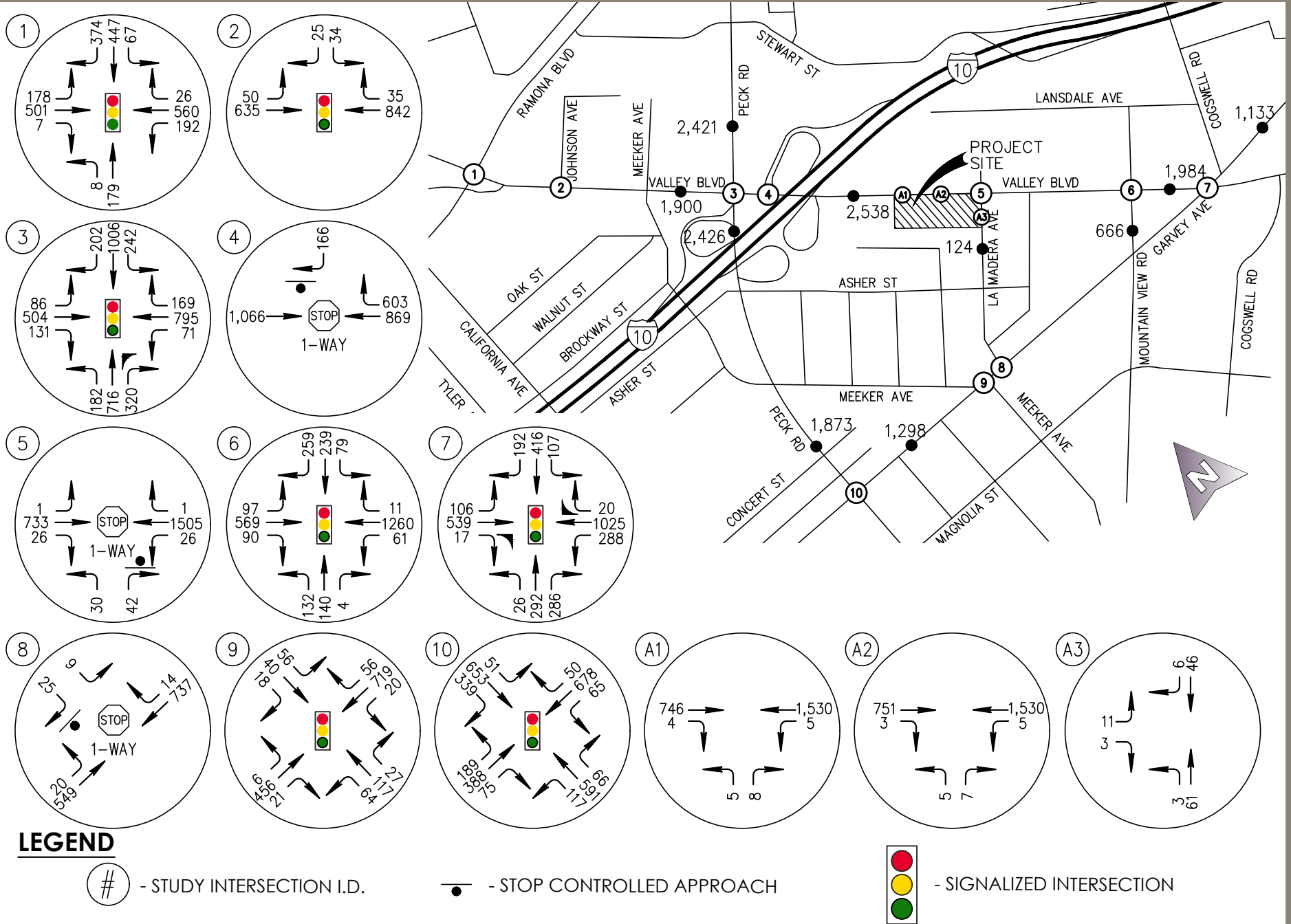


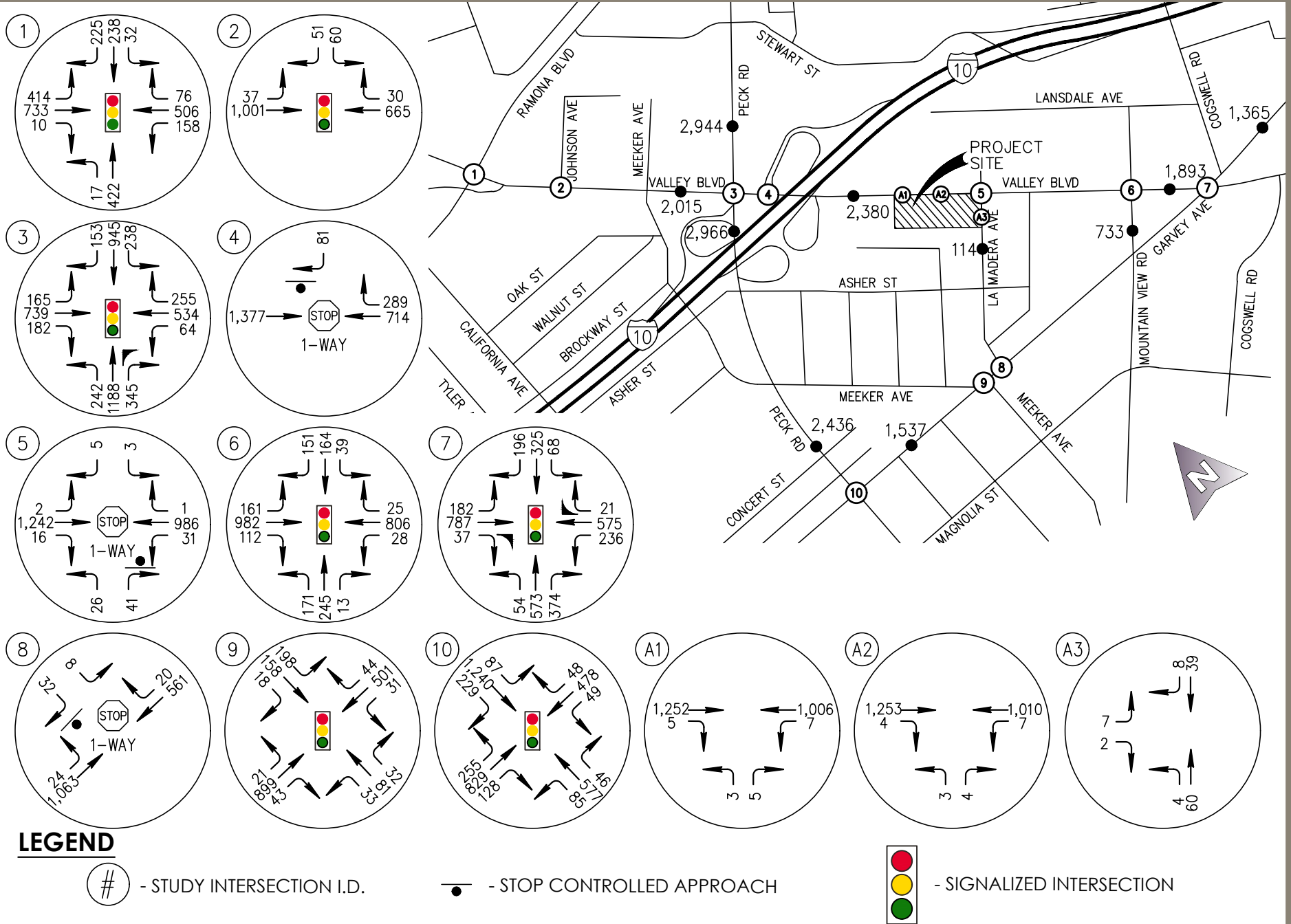


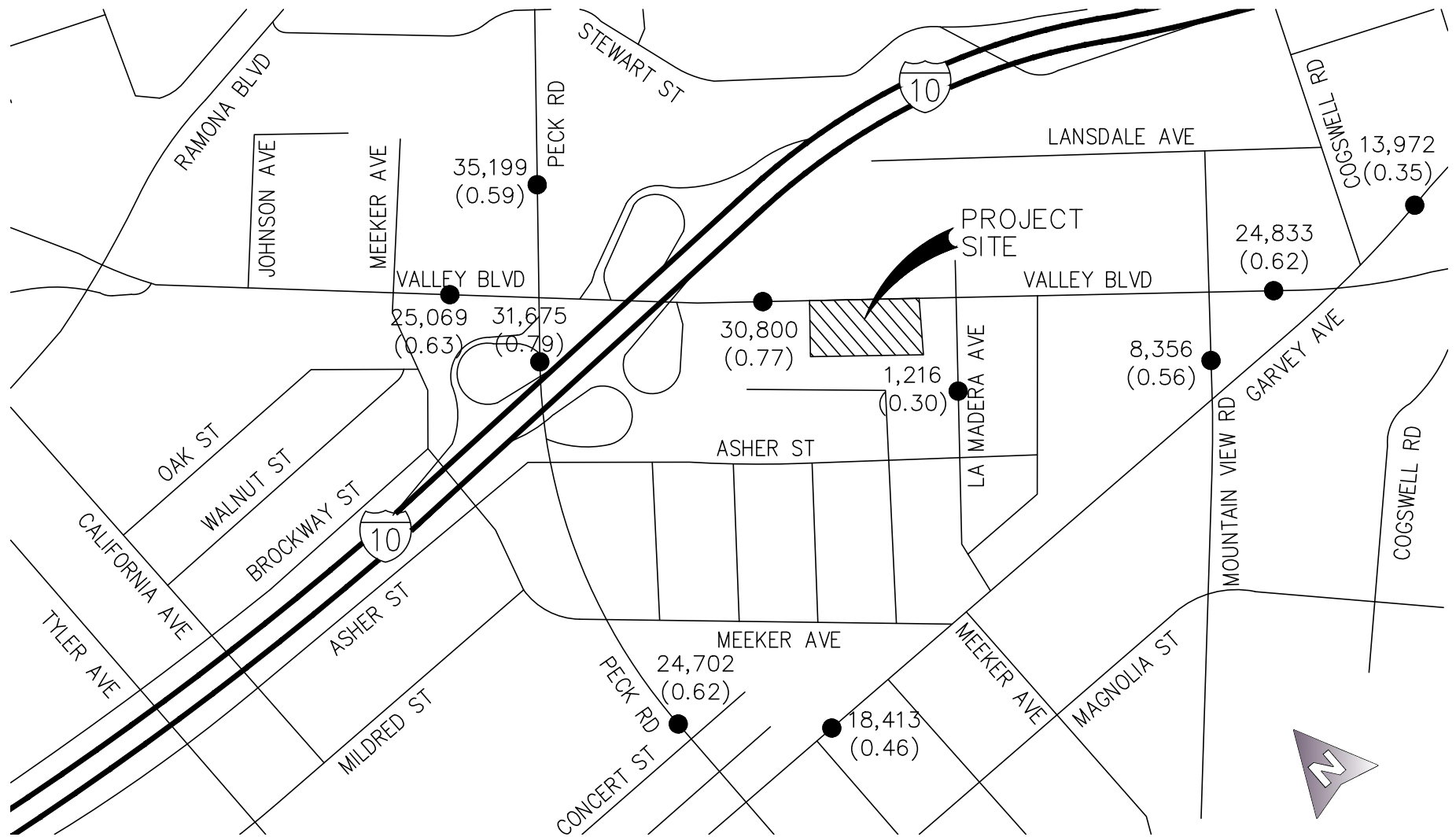


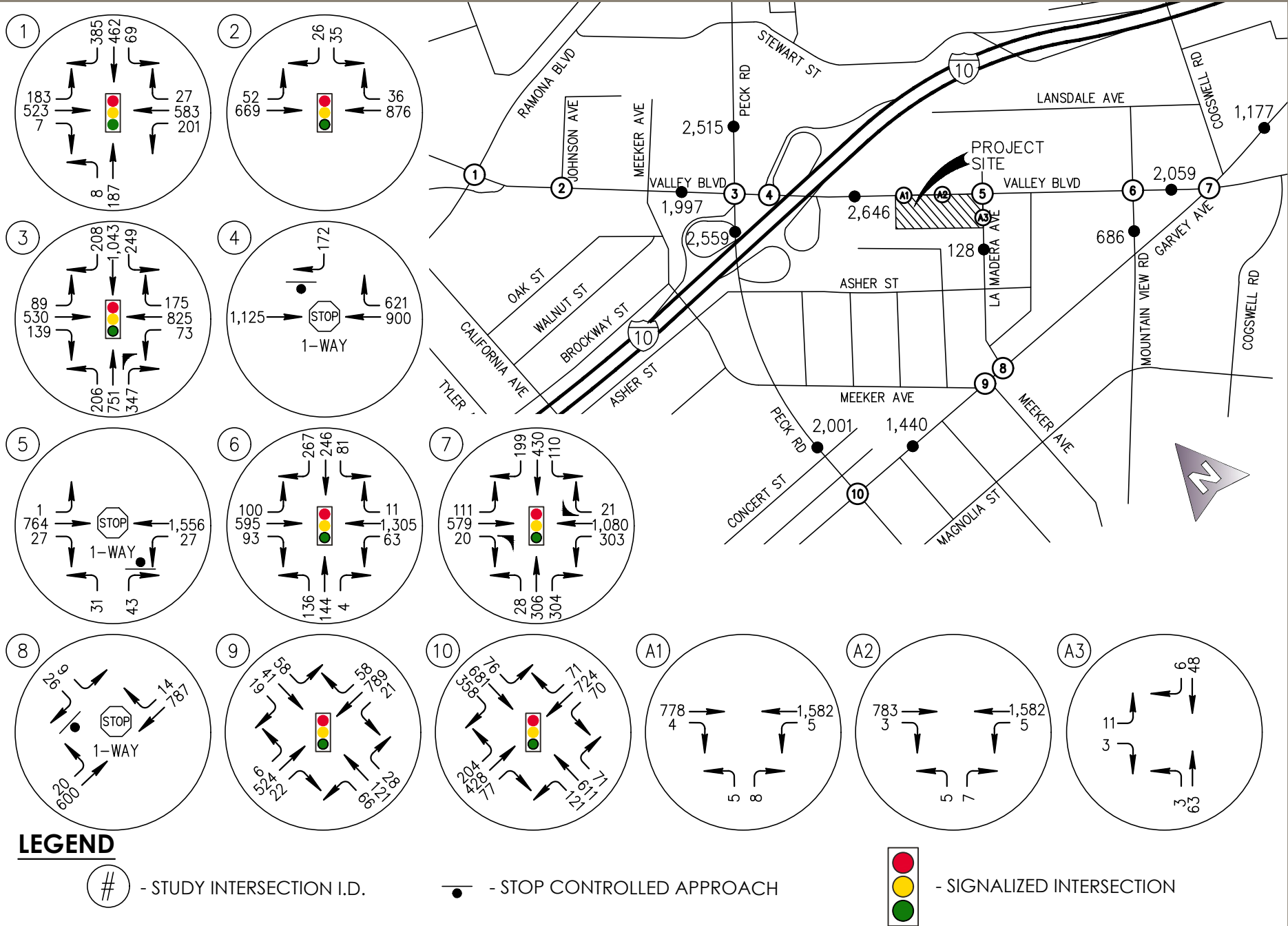


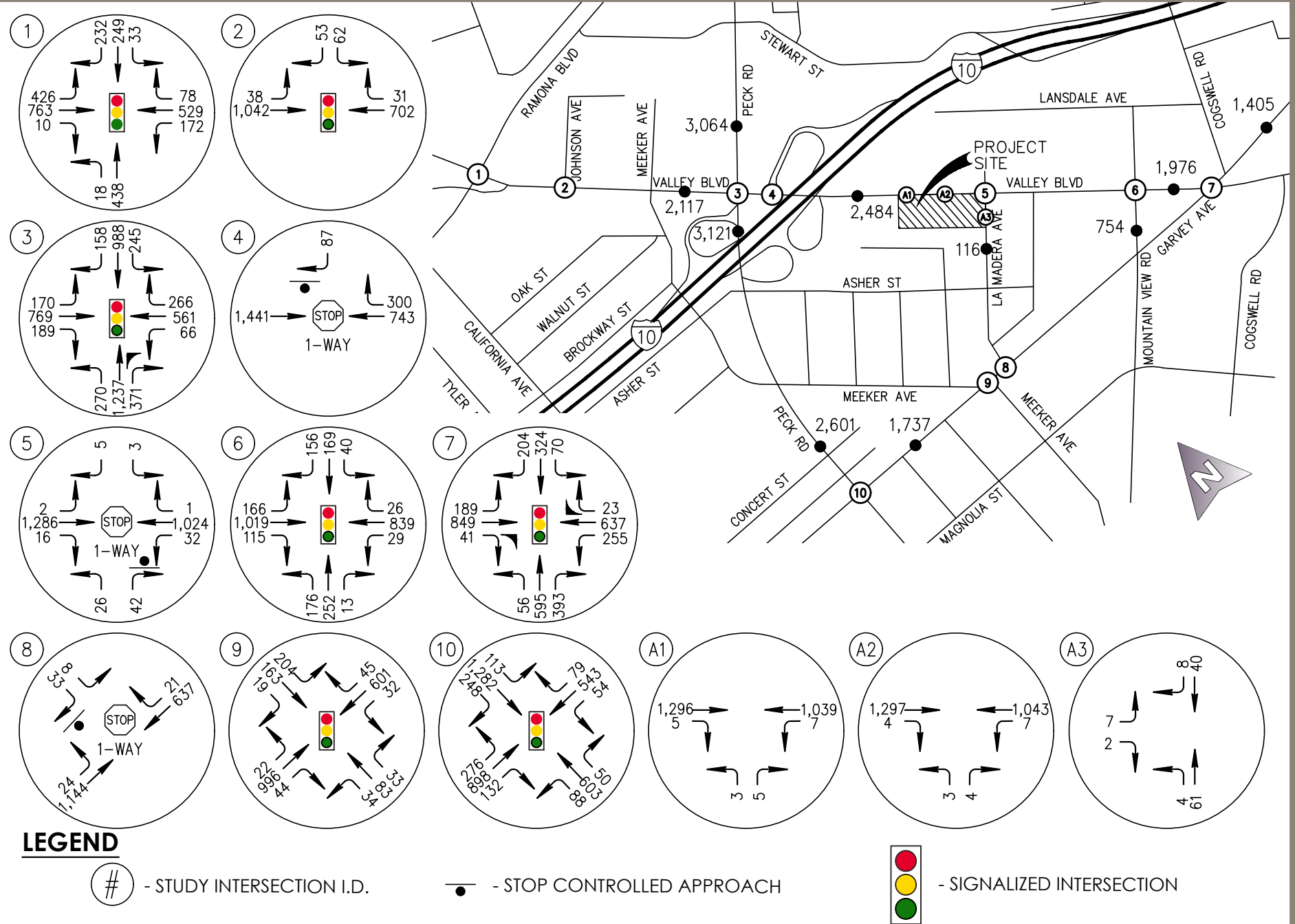


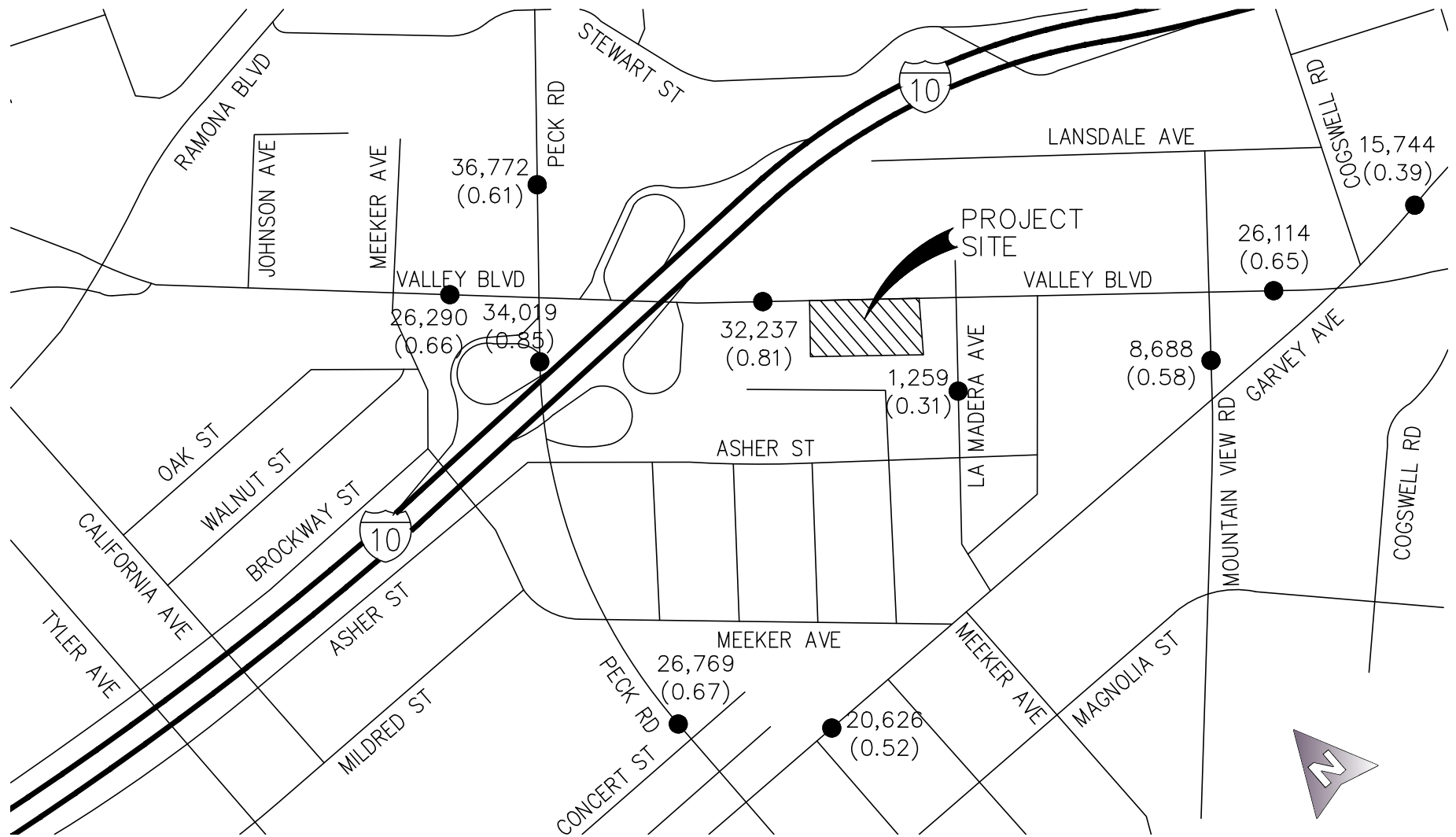












4.0 TRAFFIC ANALYSIS

To evaluate level of service at study area intersections with Existing 2018 and Baseline 2022 with Project conditions, the Intersection Capacity Utilization (ICU) method has been used for signalized intersections and the HCM operations method for unsignalized intersections. The target level of service to be maintained throughout the project study area has been established by the City of El Monte as Level of Service D. Los Angeles County specifies the significance of potential impacts of an intersection in the *Traffic Impact Analysis Report Guidelines*, December, 2013. The project's significant transportation impact is determined based on the criteria presented in the tables below.

Significant Impact Threshold for Signalized Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91-more	0.01 or more

Significant Impact Threshold for Non Signalized Intersections	
Level of Service	Delay Increase
E	2 seconds
F	1 second

4.1 EXISTING (2018) AND BASELINE 2022 CONDITIONS

Table 2 in Section 2 of this report shows that all signalized intersections within the project study area are operating at LOS D or better during existing am and pm peak hours. Table 2 also shows that the three study area unsignalized intersections at the I-10 Westbound Ramp/Valley Boulevard, La Madera Avenue/Valley Boulevard, and La Madera Avenue/Garvey Avenue are operating at acceptable LOS D or better during am/pm peak hours under existing conditions based on worst-approach delay per HCM 6th Edition guidelines.

To analyze Baseline 2022 (no project) conditions on the existing circulation network, an ambient growth factor of 1% per year has been applied to 2018 volumes and cumulative traffic from other development projects in vicinity of the Project have been added. The results of this analysis are shown in Table 3. Table 3 shows that with forecast Baseline 2022 peak hour volumes all of the intersections within the study area will continue to operate at Level of Service D or better. The Baseline 2022 study area intersection and roadway configurations are considered to be the same as the existing (2018) network.



4.2 EXISTING (2018) WITH PROJECT CONDITIONS

Table 6 shows the results of intersection level of service analysis for Existing 2018 with Project traffic volume conditions. Table 6 shows that with forecast Existing 2018 with Project peak hour volumes all of the intersections within the study area will continue to operate at the same Level of Service as the Existing 2018 traffic volume condition.

Figure 12 shows that the roadways surrounding the Project site are predicted to operate below capacity based on 24-hour volumes for Existing 2018 with Project conditions.

4.3 BASELINE 2022 WITH PROJECT CONDITIONS

Table 7 shows the results of intersection level of service analysis for Baseline 2022 with Project traffic volume conditions. Table 7 shows that with forecast Baseline 2022 with Project peak hour volumes, all of the intersections within the study area will continue to operate at Level of Service D or better during both the am and pm peak hour.

Figure 14 shows that the roadways surrounding the Project site are predicted to operate below capacity based on 24-hour volumes for Baseline 2022 with Project conditions.

Baseline 2024 Sensitivity Analysis for Selected Intersections

At the time of preparation of the original traffic study in 2019, the Project opening year was anticipated to be 2022. A Project opening year of 2024 is now considered more realistic. Due to the Covid-19 Pandemic and shifting work patterns it is not expected that current 2021 volumes are higher than those conducted for this study in November 2018 and that these volumes may represent a recent “high water” mark for the study area. However, for a conservative approach, the following three (3) study area intersections that could potentially be impacted by higher opening year volumes have been analyzed under a Baseline Year 2024 scenario:

- 3. Peck Rd (N/S) and Valley Blvd (E/W)
- 7. Garvey Ave (N/S) and Valley Blvd (E/W)
- 10. Peck Rd (N/S) and Garvey Ave (E/W)



The Baseline 2024 scenario considers an additional 2 years of 1% annual growth of ambient traffic volumes prior to the addition of cumulative volumes associated with other identified development projects. The results of this analysis are provided in Table 8 which shows that the intersections most likely to be impacted under a 2024 Project year scenario have no significant impact. Therefore, the original findings of this study are considered valid for all intersections. The ICU LOS calculations for these intersections are included in Appendix E.

4.4 TRAFFIC SIGNAL WARRANT ANALYSIS

Forecast project driveways and unsignalized intersection volumes were analyzed in peak hour signal warrants and do not satisfy minimum thresholds for signalization except for the I-10 westbound Ramp/Valley Boulevard intersection. However, this one-way stop-controlled intersection is currently operating under acceptable level of service and is not recommended that any mitigation including traffic signal installation be implemented.. Traffic signal warrants are included in the Appendices.

4.5 PROJECT FAIR SHARE ANALYSIS

According to City of El Monte General Plan Goal Policy C-2.2 the City desires to maintain a level of service (LOS) D throughout the City, except that LOS E may occur in the following circumstances:

- Intersections/roadways at, or adjacent to, freeway ramps
- Intersections/roadways on major corridors and transit routes
- Intersections/roadways on truck routes
- Intersections/roadways in or adjacent to commercial districts

None of the project study intersections exceed the acceptable LOS D in any of the analysis scenarios and therefore the project fair share contribution is not required.



September 2021

Table 6
Baseline 2022 with Project - Study Area Intersections Level of Service

Signalized Intersections	Baseline 2022				Baseline 2022 with Project							
	AM Peak Hour		PM Peak Hour		AM Peak Hour				PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	Δ	LOS	IMPACT	ICU	Δ	LOS	IMPACT
1. Ramona Blvd/Valley Blvd	0.66	B	0.69	B	0.66	0	B	NO	0.70	0.01	B	NO
2. Johnson Ave/Valley Blvd	0.43	A	0.46	A	0.44	0.01	A	NO	0.47	0.01	A	NO
3. Peck Rd/Valley Blvd	0.88	D	0.86	D	0.88	0	D	NON	0.87	0.01	D	NO
6. Mountain View Rd/Valley Blvd	0.80	C	0.69	B	0.81	0.01	D	NO	0.69	0	B	NO
7. Garvey Ave/Valley Blvd	0.77	C	0.87	D	0.77	0	C	NO	0.88	0.01	D	NO
9. Meeker Ave/Garvey Ave	0.52	A	0.70	B	0.53	0.01	A	NO	0.71	0.01	C	NO
10. Peck Rd/Garvey Ave	0.75	C	0.90	D	0.75	0	C	NO	0.90	0	D	NO

Unsignalized Intersections	Baseline 2022				Baseline 2022 with Project							
	HCM				HCM							
	AM Peak Hour		PM Peak Hour		AM Peak Hour				PM Peak Hour			
	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	Δ	LOS		Delay (sec.)	Δ	LOS	IMPACT
4. I-10 WB Ramp/Valley Blvd (HCM - Sec/Delay)	31.4	D	14.6	B	32.2	0.8	D	NO	14.7	0.1	B	NO
5. La Madera Ave/Valley Blvd (HCM - Sec/Delay)	18.1	C	23.7	C	20.8	2.70	C	NO	29.6	5.9	D	NO
8. La Madera Ave/Garvey Ave (HCM - Sec/Delay)	15.4	C	13.9	C	15.1	0.3	C	NO	13.9	0	B	NO

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September 2021

Table 7
Baseline 2022 with Project - Study Area Intersections Level of Service

Signalized Intersections	Baseline 2022				Baseline 2022 with Project							
	AM Peak Hour		PM Peak Hour		AM Peak Hour				PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	Δ	LOS	IMPACT	ICU	Δ	LOS	IMPACT
1. Ramona Blvd/Valley Blvd	0.66	B	0.69	B	0.66	0	B	NO	0.70	0.01	B	NO
2. Johnson Ave/Valley Blvd	0.43	A	0.46	A	0.44	0.01	A	NO	0.47	0.01	A	NO
3. Peck Rd/Valley Blvd	0.88	D	0.86	D	0.88	0	D	NON	0.87	0.01	D	NO
6. Mountain View Rd/Valley Blvd	0.80	C	0.69	B	0.81	0.01	D	NO	0.69	0	B	NO
7. Garvey Ave/Valley Blvd	0.77	C	0.87	D	0.77	0	C	NO	0.88	0.01	D	NO
9. Meeker Ave/Garvey Ave	0.52	A	0.70	B	0.53	0.01	A	NO	0.71	0.01	C	NO
10. Peck Rd/Garvey Ave	0.75	C	0.90	D	0.75	0	C	NO	0.90	0	D	NO

Unsignalized Intersections	Baseline 2022				Baseline 2022 with Project							
	HCM				HCM							
	AM Peak Hour		PM Peak Hour		AM Peak Hour				PM Peak Hour			
	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	Δ	LOS		Delay (sec.)	Δ	LOS	IMPACT
4. I-10 WB Ramp/Valley Blvd (HCM - Sec/Delay)	31.4	D	14.6	B	32.2	0.8	D	NO	14.7	0.1	B	NO
5. La Madera Ave/Valley Blvd (HCM - Sec/Delay)	18.1	C	23.7	C	20.8	2.70	C	NO	29.6	5.9	D	NO
8. La Madera Ave/Garvey Ave (HCM - Sec/Delay)	15.4	C	13.9	C	15.1	0.3	C	NO	13.9	0	B	NO

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September 2021

Table 8
Baseline 2024 with Project - Selected Study Area Intersections Level of Service

Signalized Intersections	Baseline 2024				Baseline 2024 with Project							
	AM Peak Hour		PM Peak Hour		AM Peak Hour				PM Peak Hour			
	ICU	LOS	ICU	LOS	ICU	Δ	LOS	IMPACT	ICU	Δ	LOS	IMPACT
3. Peck Rd/Valley Blvd	0.89	D	0.88	D	0.90	0.01	D	NO	0.88	0	D	NO
7. Garvey Ave/Valley Blvd	0.79	C	0.90	D	0.79	0	C	NO	0.90	0	D	NO
10. Peck Rd/Garvey Ave	0.76	C	0.92	E	0.76	0	C	NO	0.92	0	E	NO

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5.0 FINDINGS AND RECOMMENDATIONS

5.1 STUDY AREA CIRCULATION IMPACTS

For existing (2018) conditions, all study area intersections are operating at Level of Service D or better based on existing peak hour intersection volumes and improvements. Study area roadways are operating below capacity based on weekday 24-hour roadway volumes and are consistent with the desirable LOS identified at the intersections.

For Existing 2018 with Project conditions (theoretical) the study area intersections are predicted to continue to operate at Level of Service D or better during both peak hours. For Baseline 2022 (no project) conditions, study area intersections are expected to operate at the same Level of Services as Existing 2018 (no project) conditions except for Peck Road/Garvey Avenue intersection during AM peak hour when it now operates in LOS C instead of LOS B. For 2022 with Project conditions all study area intersections are expected to operate in LOS D or better. A sensitivity analysis for selected intersections also confirmed that a Project opening year of 2024 results in no significant impact.

The City General Plan states that the desirable LOS to be maintained throughout the City is LOS D, but identifies several circumstances in which LOS E may be acceptable. This study has not identified any project area intersections to operate below the acceptable LOS and therefore no mitigation measures and fair share analysis are required.

5.2 TRAFFIC SIGNAL WARRANT ANALYSIS

No existing unsignalized intersections or new project access driveways included in this study satisfy minimum thresholds for signalization except for the I-10 westbound Ramp/Valley Boulevard intersection. However, this one-way stop-controlled intersection is currently operating under acceptable level of service and is not recommended that any mitigation including traffic signal installation be implemented.

5.3 ON-SITE CIRCULATION

There are no concerns regarding on-site circulation or queuing associated with the proposed project. The project access driveways and parking aisles are appropriately sized, spaced, and



VALLEY BOULEVARD MULTI-FAMILY RESIDENTIAL PROJECT TRAFFIC IMPACT STUDY

Findings and Recommendations
September 2021

configured for the project volumes and will be designed in accordance with applicable agency standards. Sight-distance requirements at project access driveways will be provided per agency standards. It is recommended that on-street parking, where allowed, be prohibited by red curb marking within 20 feet (min.) of project driveways. Site parking supply provides 191 parking spaces and exceeds the City parking code requirement of 175 spaces. The Recreational Center will utilize proposed guest parking spaces to meet its parking needs.



Appendix A

Existing Peak Hour Intersection Turning Movements Counts and Roadway Link ADT's



Tuesday, November 13, 2018

Location: El Monte

PROJECT: SC1989

ADT1 Valley between Peck and Meeker.

Prepared by AimTD tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
0:00	18	19			12:00	248	229		
0:15	15	20			12:15	248	186		
0:30	13	20			12:30	199	220		
0:45	14	60	19	78	12:45	199	894	219	854
1:00	7	9			13:00	192	220		
1:15	12	8			13:15	246	219		
1:30	17	8			13:30	235	206		
1:45	7	43	14	39	13:45	205	878	206	851
2:00	14	13			14:00	215	193		
2:15	3	6			14:15	191	200		
2:30	13	8			14:30	274	210		
2:45	8	38	12	39	14:45	215	895	216	819
3:00	8	6			15:00	268	175		
3:15	10	9			15:15	251	212		
3:30	14	12			15:30	264	193		
3:45	10	42	15	42	15:45	227	1010	206	786
4:00	8	12			16:00	271	197		
4:15	15	15			16:15	276	186		
4:30	27	20			16:30	307	172		
4:45	19	69	34	81	16:45	284	1138	185	740
5:00	23	39			17:00	306	180		
5:15	42	58			17:15	274	164		
5:30	47	85			17:30	276	190		
5:45	46	158	91	273	17:45	247	1103	239	773
6:00	51	74			18:00	280	203		
6:15	71	126			18:15	288	192		
6:30	96	162			18:30	238	177		
6:45	81	299	148	510	18:45	178	984	148	720
7:00	99	194			19:00	196	110		
7:15	114	211			19:15	166	115		
7:30	150	267			19:30	121	101		
7:45	221	584	260	932	19:45	123	606	103	429
8:00	180	262			20:00	141	98		
8:15	156	280			20:15	110	83		
8:30	166	246			20:30	94	73		
8:45	161	663	316	1104	20:45	111	456	70	324
9:00	157	221			21:00	130	56		
9:15	183	212			21:15	85	62		
9:30	160	229			21:30	78	67		
9:45	180	680	191	853	21:45	45	338	38	223
10:00	149	178			22:00	77	38		
10:15	173	209			22:15	61	36		
10:30	166	181			22:30	37	33		
10:45	173	661	197	765	22:45	31	206	40	147
11:00	178	226			23:00	29	25		
11:15	192	193			23:15	25	31		
11:30	210	205			23:30	20	12		
11:45	206	786	192	816	23:45	16	90	20	88
Total Vol.	4083	5532				8598	6754		

					Daily Totals				
					NB	SB	EB	WB	Combined
					12681	12286			24967
AM					PM				
Split %	42.5%	57.5%	38.5%		56.0%	44.0%	61.5%		
Peak Hour	11:30	8:00	7:30		16:15	12:30	17:30		
Volume	912	1104	1776		1173	878	1915		
P.H.F.	0.92	0.87	0.92		0.94	1.00	0.99		

Tuesday, November 13, 2018

Location: El Monte

PROJECT: SC1989

ADT2 Peck south of Valley.**Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
0:00	69	20			12:00	278	130		
0:15	30	14			12:15	318	140		
0:30	54	17			12:30	278	163		
0:45	44	197	16	67	12:45	303	1177	120	553
1:00	32	13			13:00	288	133		
1:15	31	15			13:15	330	164		
1:30	31	12			13:30	327	138		
1:45	35	129	21	61	13:45	326	1271	158	593
2:00	24	7			14:00	309	153		
2:15	22	4			14:15	303	174		
2:30	23	3			14:30	340	177		
2:45	19	88	8	22	14:45	358	1310	185	689
3:00	15	8			15:00	369	185		
3:15	29	12			15:15	372	206		
3:30	30	14			15:30	370	189		
3:45	33	107	12	46	15:45	359	1470	176	756
4:00	28	10			16:00	397	188		
4:15	51	23			16:15	438	199		
4:30	60	30			16:30	427	200		
4:45	63	202	37	100	16:45	437	1699	170	757
5:00	65	38			17:00	414	203		
5:15	84	37			17:15	392	252		
5:30	128	64			17:30	409	228		
5:45	133	410	72	211	17:45	393	1608	195	878
6:00	130	57			18:00	400	185		
6:15	159	85			18:15	374	172		
6:30	201	117			18:30	384	169		
6:45	214	704	142	401	18:45	345	1503	139	665
7:00	232	147			19:00	324	147		
7:15	245	172			19:15	279	130		
7:30	309	220			19:30	241	105		
7:45	322	1108	245	784	19:45	291	1135	120	502
8:00	304	204			20:00	270	102		
8:15	278	196			20:15	236	92		
8:30	275	241			20:30	219	86		
8:45	297	1154	238	879	20:45	203	928	84	364
9:00	233	164			21:00	185	89		
9:15	222	162			21:15	188	71		
9:30	268	165			21:30	164	81		
9:45	278	1001	167	658	21:45	142	679	77	318
10:00	255	151			22:00	152	62		
10:15	236	149			22:15	157	37		
10:30	245	137			22:30	113	48		
10:45	257	993	128	565	22:45	122	544	53	200
11:00	256	142			23:00	120	32		
11:15	258	131			23:15	76	40		
11:30	284	153			23:30	79	27		
11:45	269	1067	129	555	23:45	66	341	25	124
Total Vol.	7160	4349			11509	13665	6399		20064

Daily Totals

NB	SB	EB	WB	Combined
20825	10748			31573

AM**PM**

Split %	62.2%	37.8%	36.5%	68.1%	31.9%	63.5%
Peak Hour	7:30	7:45	7:30	16:15	17:00	16:45
Volume	1213	886	2078	1716	878	2505
P.H.F.	0.94	0.90	0.92	0.99	0.87	0.97

Tuesday, November 13, 2018

Location: El Monte

PROJECT: SC1989

ADT3 Peck north of Valley.

Prepared by AimTD tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
0:00	53	37			12:00	246	243		
0:15	21	31			12:15	234	240		
0:30	41	34			12:30	262	261		
0:45	26	141	22	124	12:45	261	1003	242	986
1:00	22	20			13:00	226	240		
1:15	22	24			13:15	299	284		
1:30	29	18			13:30	261	227		
1:45	27	100	25	87	13:45	272	1058	273	1024
2:00	16	28			14:00	279	262		
2:15	17	12			14:15	238	261		
2:30	17	19			14:30	276	300		
2:45	17	67	20	79	14:45	312	1105	290	1113
3:00	14	17			15:00	334	294		
3:15	23	23			15:15	311	276		
3:30	21	35			15:30	306	282		
3:45	23	81	26	101	15:45	358	1309	266	1118
4:00	19	34			16:00	397	308		
4:15	22	60			16:15	369	327		
4:30	38	64			16:30	367	308		
4:45	51	130	68	226	16:45	376	1509	287	1230
5:00	45	96			17:00	370	316		
5:15	56	134			17:15	360	336		
5:30	85	160			17:30	404	339		
5:45	68	254	173	563	17:45	388	1522	276	1267
6:00	102	185			18:00	380	258		
6:15	121	214			18:15	323	247		
6:30	143	247			18:30	324	255		
6:45	146	512	266	912	18:45	288	1315	198	958
7:00	158	324			19:00	271	230		
7:15	182	360			19:15	213	198		
7:30	243	358			19:30	199	170		
7:45	269	852	328	1370	19:45	223	906	179	777
8:00	230	344			20:00	212	160		
8:15	235	327			20:15	184	133		
8:30	224	321			20:30	166	147		
8:45	240	929	319	1311	20:45	140	702	120	560
9:00	200	290			21:00	141	159		
9:15	175	250			21:15	134	132		
9:30	216	246			21:30	124	135		
9:45	191	782	281	1067	21:45	114	513	132	558
10:00	195	255			22:00	125	97		
10:15	183	237			22:15	117	72		
10:30	209	263			22:30	109	89		
10:45	232	819	244	999	22:45	90	441	71	329
11:00	204	222			23:00	88	57		
11:15	196	245			23:15	55	77		
11:30	263	249			23:30	42	45		
11:45	228	891	261	977	23:45	52	237	38	217
Total Vol.	5558	7816				11620	10137		

					Daily Totals				
					NB	SB	EB	WB	Combined
					17178	17953			35131
AM					PM				
Split %	41.6%	58.4%	38.1%		53.4%	46.6%	61.9%		
Peak Hour	7:30	7:15	7:30		17:15	16:45	17:00		
Volume	977	1390	2334		1532	1278	2789		
P.H.F.	0.91	0.97	0.97		0.95	0.94	0.94		

Tuesday, November 13, 2018

Location: El Monte

PROJECT: SC1989

ADT4 Valley between Peck and La Madera.**Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
0:00	36	27			12:00	203	285		
0:15	21	17			12:15	248	212		
0:30	23	25			12:30	204	281		
0:45	29	109	20	89	12:45	208	863	256	1034
1:00	15	16			13:00	195	266		
1:15	24	15			13:15	214	278		
1:30	18	14			13:30	221	261		
1:45	13	70	15	60	13:45	212	842	249	1054
2:00	22	13			14:00	222	236		
2:15	7	13			14:15	207	223		
2:30	16	9			14:30	228	266		
2:45	9	54	18	53	14:45	237	894	263	988
3:00	12	10			15:00	259	240		
3:15	15	17			15:15	272	253		
3:30	23	21			15:30	267	251		
3:45	10	60	29	77	15:45	254	1052	252	996
4:00	14	35			16:00	280	235		
4:15	19	46			16:15	303	232		
4:30	29	64			16:30	321	237		
4:45	22	84	81	226	16:45	309	1213	247	951
5:00	30	97			17:00	297	261		
5:15	49	109			17:15	303	247		
5:30	60	147			17:30	313	310		
5:45	64	203	146	499	17:45	266	1179	266	1084
6:00	66	179			18:00	263	275		
6:15	84	249			18:15	305	238		
6:30	74	350			18:30	293	224		
6:45	103	327	362	1140	18:45	229	1090	205	942
7:00	115	386			19:00	235	163		
7:15	154	409			19:15	205	171		
7:30	166	406			19:30	150	149		
7:45	209	644	381	1582	19:45	162	752	137	620
8:00	207	334			20:00	128	122		
8:15	203	332			20:15	134	104		
8:30	182	361			20:30	128	101		
8:45	175	767	299	1326	20:45	133	523	89	416
9:00	171	250			21:00	140	100		
9:15	172	247			21:15	106	84		
9:30	153	252			21:30	105	84		
9:45	192	688	212	961	21:45	76	427	87	355
10:00	159	204			22:00	94	72		
10:15	167	223			22:15	91	73		
10:30	183	228			22:30	68	72		
10:45	178	687	233	888	22:45	48	301	54	271
11:00	176	248			23:00	61	48		
11:15	168	205			23:15	52	41		
11:30	197	289			23:30	48	26		
11:45	209	750	258	1000	23:45	31	192	30	145
Total Vol.	4443	7901				9328	8856		
				12344					18184
					Daily Totals				
					NB	SB	EB	WB	Combined
					13771	16757			30528
AM					PM				
Split %	36.0%	64.0%		40.4%	51.3%	48.7%			59.6%
Peak Hour	11:45	7:00		7:15	16:15	17:15			16:45
Volume	864	1582		2266	1230	1098			2287
P.H.F.	0.87	0.97		0.96	0.97	0.89			0.92

Tuesday, November 13, 2018

Location: El Monte

PROJECT: SC1989

ADT5 La Madera south of Valley.

Prepared by AimTD tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
0:00	0	4			12:00	8	8		
0:15	0	0			12:15	8	4		
0:30	0	2			12:30	8	4		
0:45	0	0	0	6	12:45	4	28	8	24
1:00	0	0			13:00	6	9		
1:15	0	2			13:15	8	10		
1:30	0	0			13:30	8	6		
1:45	3	3	0	2	13:45	13	35	6	31
2:00	0	0			14:00	3	11		
2:15	0	0			14:15	10	12		
2:30	0	0			14:30	11	11		
2:45	2	2	0	0	14:45	12	36	9	43
3:00	0	0			15:00	14	13		
3:15	0	0			15:15	9	12		
3:30	0	0			15:30	6	5		
3:45	0	0	0	0	15:45	4	33	4	34
4:00	0	0			16:00	4	6		
4:15	2	0			16:15	9	9		
4:30	4	0			16:30	12	10		
4:45	2	8	0	0	16:45	9	34	10	35
5:00	3	2			17:00	17	8		
5:15	8	4			17:15	11	12		
5:30	5	0			17:30	19	15		
5:45	6	22	3	9	17:45	8	55	17	52
6:00	6	0			18:00	15	14		
6:15	7	2			18:15	10	13		
6:30	11	7			18:30	9	10		
6:45	7	31	3	12	18:45	5	39	5	42
7:00	10	3			19:00	9	3		
7:15	13	12			19:15	4	5		
7:30	17	5			19:30	4	9		
7:45	18	58	15	35	19:45	6	23	6	23
8:00	9	10			20:00	6	9		
8:15	5	14			20:15	3	4		
8:30	14	13			20:30	2	8		
8:45	3	31	4	41	20:45	2	13	5	26
9:00	6	3			21:00	5	6		
9:15	7	8			21:15	5	6		
9:30	7	5			21:30	2	4		
9:45	12	32	5	21	21:45	3	15	5	21
10:00	5	4			22:00	4	4		
10:15	8	4			22:15	5	3		
10:30	2	8			22:30	0	6		
10:45	5	20	8	24	22:45	0	9	3	16
11:00	3	5			23:00	2	3		
11:15	9	6			23:15	0	4		
11:30	4	6			23:30	0	2		
11:45	8	24	4	21	23:45	0	2	0	9
Total Vol.	231	171		402		322	356		678

Daily Totals

NB	SB	EB	WB	Combined
553	527			1080

AM

PM

Split %	57.5%	42.5%	37.2%	47.5%	52.5%	62.8%
Peak Hour	7:00	7:45	7:15	16:45	17:30	17:15
Volume	58	52	99	56	59	111
P.H.F.	0.81	0.87	0.75	0.71	0.87	0.82

Tuesday, November 13, 2018

Location: El Monte

PROJECT: SC1989

ADT6 Mountain View between Garvey and Valley.**Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB	WB		PM Period	NB	SB	EB	WB	
0:00	6	3				12:00	74	62			
0:15	4	0				12:15	87	68			
0:30	2	4				12:30	89	59			
0:45	3	15	2	9	24	12:45	74	324	69	258	582
1:00	3	2				13:00	84	63			
1:15	6	7				13:15	80	63			
1:30	2	2				13:30	66	65			
1:45	0	11	0	11	22	13:45	73	303	69	260	563
2:00	0	6				14:00	75	59			
2:15	0	2				14:15	85	70			
2:30	0	2				14:30	79	59			
2:45	0	0	5	15	15	14:45	86	325	75	263	588
3:00	2	0				15:00	89	71			
3:15	2	0				15:15	91	66			
3:30	2	4				15:30	108	71			
3:45	2	8	0	4	12	15:45	107	395	70	278	673
4:00	0	5				16:00	96	73			
4:15	0	3				16:15	91	72			
4:30	5	5				16:30	102	76			
4:45	3	8	7	20	28	16:45	105	394	69	290	684
5:00	6	13				17:00	103	64			
5:15	12	7				17:15	118	82			
5:30	9	12				17:30	106	68			
5:45	17	44	14	46	90	17:45	104	431	96	310	741
6:00	20	14				18:00	115	62			
6:15	23	19				18:15	87	89			
6:30	20	25				18:30	83	61			
6:45	42	105	44	102	207	18:45	83	368	53	265	633
7:00	45	62				19:00	72	54			
7:15	50	86				19:15	60	46			
7:30	61	93				19:30	63	33			
7:45	89	245	83	324	569	19:45	49	244	41	174	418
8:00	67	79				20:00	51	34			
8:15	68	77				20:15	41	19			
8:30	52	71				20:30	43	30			
8:45	43	230	74	301	531	20:45	35	170	31	114	284
9:00	58	39				21:00	37	19			
9:15	45	45				21:15	32	21			
9:30	44	47				21:30	25	18			
9:45	48	195	44	175	370	21:45	31	125	9	67	192
10:00	40	46				22:00	17	21			
10:15	65	51				22:15	15	12			
10:30	58	39				22:30	21	14			
10:45	51	214	41	177	391	22:45	14	67	14	61	128
11:00	63	50				23:00	12	8			
11:15	54	56				23:15	9	5			
11:30	66	60				23:30	12	8			
11:45	71	254	60	226	480	23:45	9	42	0	21	63
Total Vol.	1329	1410			2739		3188	2361			5549

Daily Totals

NB	SB	EB	WB	Combined
4517	3771			8288

AM**PM**

Split %	48.5%	51.5%	33.0%	57.5%	42.5%	67.0%
Peak Hour	11:45	7:15	7:30	17:15	17:30	17:15
Volume	321	341	617	443	315	751
P.H.F.	0.90	0.92	0.90	0.92	0.82	0.94

PROJECT: SC1989

Prepared by AimTD tel. 714 253 7888

				Daily Totals				
				NB	SB	EB	WB	Combined
				11642	13050	24692		
AM				PM				
Split %	37.8%	62.2%	41.3%	53.8%	46.2%	58.7%		
Peak Hour	11:45	7:00	7:00	16:15	12:30	16:15		
Volume	692	1293	1912	1042	851	1798		
P.H.F.	0.89	0.96	0.94	0.97	0.91	0.99		

Tuesday, November 13, 2018				Location: El Monte				PROJECT: SC1989							
ADT8 Garvey east of Valley.								Prepared by AimTD tel. 714 253 7888							
AM Period	NB	SB	EB	WB		PM Period		NB	SB	EB	WB				
0:30			17	14		12:00				88	99				
0:15			12	9		12:15				83	77				
0:30			4	10		12:30				106	80				
0:45			11	44	6 39 83	12:45				91	368	93 349 717			
1:00			5	14		13:00				97	101				
1:15			8	4		13:15				124	91				
1:30			6	7		13:30				108	100				
1:45			10	29	7 32 61	13:45				102	431	92 384 815			
2:00			6	3		14:00				115	78				
2:15			6	8		14:15				104	100				
2:30			5	4		14:30				111	98				
2:45			4	21	12 27 48	14:45				138	468	124 400 868			
3:00			4	4		15:00				134	118				
3:15			15	5		15:15				137	103				
3:30			11	24		15:30				166	99				
3:45			12	42	11 44 86	15:45				147	584	102 422 1006			
4:00			8	11		16:00				138	129				
4:15			12	14		16:15				148	118				
4:30			13	21		16:30				171	123				
4:45			20	53	29 75 128	16:45				167	624	122 492 1116			
5:00			26	31		17:00				185	139				
5:15			29	39		17:15				203	131				
5:30			40	58		17:30				199	137				
5:45			49	144	60 188 332	17:45				210	797	142 549 1346			
6:00			34	66		18:00				176	103				
6:15			50	72		18:15				183	84				
6:30			76	98		18:30				154	84				
6:45			66	226	89 325 551	18:45				107	620	78 349 969			
7:00			85	120		19:00				127	85				
7:15			102	146		19:15				87	71				
7:30			93	185		19:30				83	52				
7:45			122	402	157 608 1010	19:45				79	376	77 285 661			
8:00			88	165		20:00				70	50				
8:15			56	121		20:15				69	47				
8:30			80	142		20:30				69	59				
8:45			75	299	107 535 834	20:45				68	276	47 203 479			
9:00			59	102		21:00				61	43				
9:15			70	73		21:15				67	39				
9:30			89	80		21:30				53	43				
9:45			71	289	92 347 636	21:45				38	219	39 164 383			
10:00			76	77		22:00				27	34				
10:15			71	81		22:15				35	32				
10:30			57	92		22:30				27	28				
10:45			77	281	83 333 614	22:45				30	119	19 113 232			
11:00			80	90		23:00				22	24				
11:15			90	98		23:15				26	14				
11:30			90	98		23:30				17	17				
11:45			105	365	91 377 742	23:45				17	82	16 71 153			
Total Vol.			2195		2930	5125			4964		3781	8745			
								Daily Totals							
								NB	SB	EB	WB	Combined			
										7159	6711	13870			
AM				PM											
Split %			42.8%		57.2%	37.0%			56.8%		43.2%	63.0%			
Peak Hour		0:30	0:30	7:15	7:15	7:15			17:00		17:00	17:00			
Volume			405		653	1058			797		549	1346			
P.H.F.			0.83		0.88	0.95			0.95		0.97	0.96			

PROJECT: SC1989

Prepared by AimTD tel. 714 253 7888

					Daily Totals				
					NB	SB	EB	WB	Combined
AM					PM				
Split %	44.1%	55.9%	36.4%		57.1%42.9%63.6%				
Peak Hour	11:45	7:15	7:15		17:0014:1517:00				
Volume	555	781	1269		9486211545				
P.H.F.	0.99	0.84	0.84		0.940.830.94				

Tuesday, November 13, 2018

Location: El Monte

PROJECT: SC1989

ADT10 Peck between Concert and Bodger.

Prepared by AimTD tel. 714 253 7888

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
0:00	25	25			12:00	165	168		
0:15	14	22			12:15	155	162		
0:30	21	23			12:30	165	190		
0:45	9	69	23	93	12:45	161	646	155	675
1:00	11	11			13:00	172	168		
1:15	10	22			13:15	155	216		
1:30	12	16			13:30	168	193		
1:45	12	45	24	73	13:45	184	679	202	779
2:00	7	10			14:00	138	203		
2:15	4	10			14:15	153	208		
2:30	8	4			14:30	174	205		
2:45	5	24	10	34	14:45	186	651	259	875
3:00	5	13			15:00	175	255		
3:15	15	11			15:15	166	271		
3:30	13	20			15:30	183	253		
3:45	16	49	16	60	15:45	187	711	275	1054
4:00	15	16			16:00	188	300		
4:15	33	27			16:15	171	344		
4:30	36	38			16:30	185	333		
4:45	42	126	40	121	16:45	202	746	377	1354
5:00	39	45			17:00	216	382		
5:15	47	46			17:15	214	369		
5:30	88	74			17:30	209	389		
5:45	69	243	89	254	17:45	170	809	346	1486
6:00	78	72			18:00	179	292		
6:15	92	96			18:15	183	274		
6:30	116	141			18:30	161	257		
6:45	125	411	174	483	18:45	153	676	229	1052
7:00	122	161			19:00	127	193		
7:15	171	206			19:15	92	181		
7:30	218	266			19:30	112	155		
7:45	181	692	293	926	19:45	95	426	158	687
8:00	152	246			20:00	102	151		
8:15	126	256			20:15	75	123		
8:30	137	275			20:30	91	127		
8:45	148	563	258	1035	20:45	75	343	124	525
9:00	130	213			21:00	62	106		
9:15	120	186			21:15	65	97		
9:30	151	208			21:30	56	103		
9:45	155	556	187	794	21:45	54	237	107	413
10:00	148	180			22:00	56	93		
10:15	122	164			22:15	57	73		
10:30	113	172			22:30	40	68		
10:45	128	511	142	658	22:45	37	190	74	308
11:00	146	173			23:00	29	53		
11:15	126	162			23:15	24	48		
11:30	147	180			23:30	25	45		
11:45	131	550	172	687	23:45	15	93	33	179
Total Vol.	3839	5218			9057	6207	9387		15594

Daily Totals

NB	SB	EB	WB	Combined
10046	14605			24651

AM

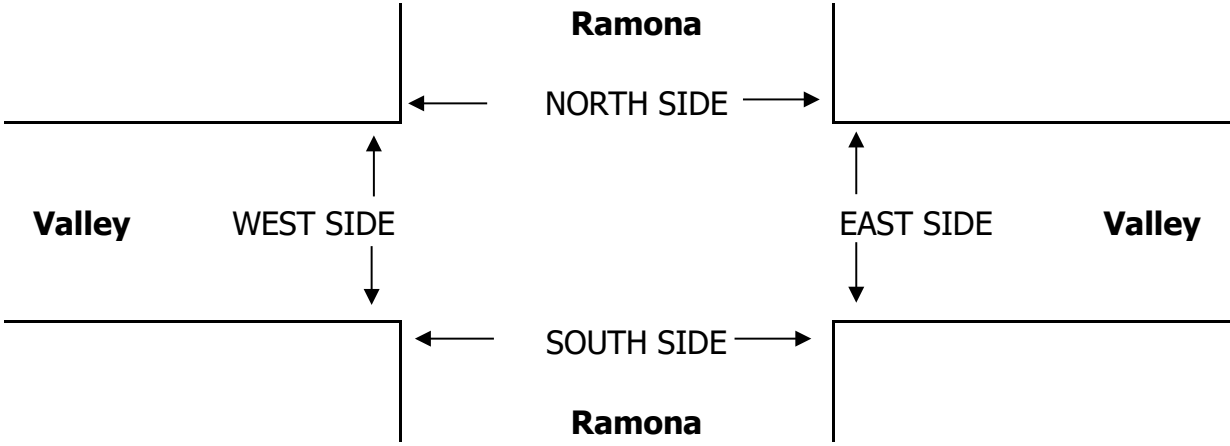
PM

Split %	42.4%	57.6%	36.7%	39.8%	60.2%	63.3%
Peak Hour	7:15	7:45	7:30	16:45	16:45	16:45
Volume	722	1070	1738	841	1517	2358
P.H.F.	0.83	0.91	0.90	0.98	0.97	0.99

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

☒ Add U-Turns to Left Turns

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

[illegible][illegible]

TURNING MOVEMENT COUNTS



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

DATE: Tue, Nov 13, 18	LOCATION: NORTH & SOUTH: EAST & WEST:	El Monte Johnson Valley	PROJECT #: SC1989 LOCATION #: 2 CONTROL: SIGNAL	
NOTES:		AM PM MD OTHER OTHER	▲ N ◀ W S ▼	 E ▶

☐ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Johnson			Johnson			Valley			Valley			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL

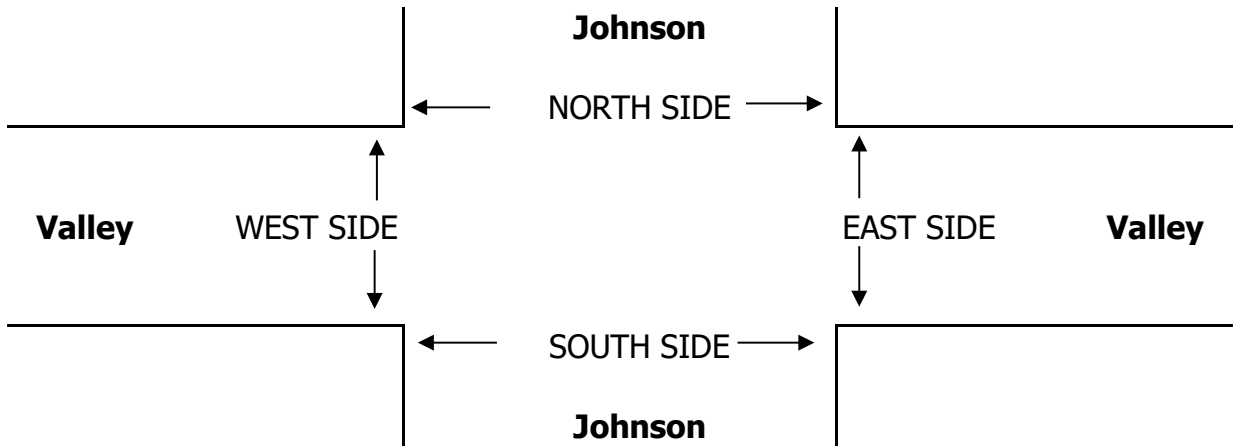
U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

AM	7:00 AM	0	0	0	1	0	2	13	74	0	0	171	19	280
	7:15 AM	0	0	0	3	0	6	11	84	0	0	164	10	278
	7:30 AM	0	0	0	8	0	7	8	150	0	0	190	4	367
	7:45 AM	0	0	0	5	0	9	18	173	0	0	216	15	436
	8:00 AM	0	0	0	9	0	4	13	167	0	0	230	8	431
	8:15 AM	0	0	0	8	0	3	8	145	0	0	193	5	362
	8:30 AM	0	0	0	12	0	9	11	146	0	0	197	7	382
	8:45 AM	0	0	0	9	0	6	15	140	0	0	216	3	389
	VOLUMES	0	0	0	55	0	46	97	1,079	0	0	1,577	71	2,930
	APPROACH %	0%	0%	0%	54%	0%	46%	8%	92%	0%	0%	96%	4%	
	APP/DEPART	0	/	168	101	/	0	1,179	/	1,136	1,650	/	1,626	0
	BEGIN PEAK HR	7:45 AM												
	VOLUMES	0	0	0	34	0	25	50	631	0	0	836	35	1,613
	APPROACH %	0%	0%	0%	58%	0%	42%	7%	93%	0%	0%	96%	4%	
PEAK HR FACTOR	0.000			0.702			0.893			0.912			0.925	
APP/DEPART	0	/	85	59	/	0	682	/	666	872	/	862	0	

0	0	2	0	2
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	1	1
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	3	2	5

PM	4:00 PM	0	0	0	16	0	18	10	226	0	0	140	4	414
	4:15 PM	0	0	0	12	0	11	8	256	0	0	155	5	447
	4:30 PM	0	0	0	13	0	22	8	236	0	0	179	6	464
	4:45 PM	0	0	0	17	0	8	15	235	0	0	173	9	457
	5:00 PM	0	0	0	18	0	10	6	269	0	0	154	10	467
	5:15 PM	0	0	0	13	0	7	2	236	0	0	168	4	430
	5:30 PM	0	0	0	13	0	13	7	243	0	0	177	4	457
	5:45 PM	0	0	0	12	0	8	3	208	0	0	160	7	398
	VOLUMES	0	0	0	114	0	97	59	1,909	0	0	1,306	49	3,537
	APPROACH %	0%	0%	0%	54%	0%	46%	3%	97%	0%	0%	96%	4%	
	APP/DEPART	0	/	108	211	/	0	1,969	/	2,025	1,357	/	1,404	0
	BEGIN PEAK HR	4:15 PM												
VOLUMES	0	0	0	60	0	51	37	996	0	0	661	30	1,836	
APPROACH %	0%	0%	0%	54%	0%	46%	4%	96%	0%	0%	96%	4%		
PEAK HR FACTOR	0.000				0.793				0.939				0.930	0.983
APP/DEPART	0	/	67	111	/	0	1,033	/	1,057	692	/	712	0	

0	0	0	1	1
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
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0	0	1	0	1
0	0	1	2	3

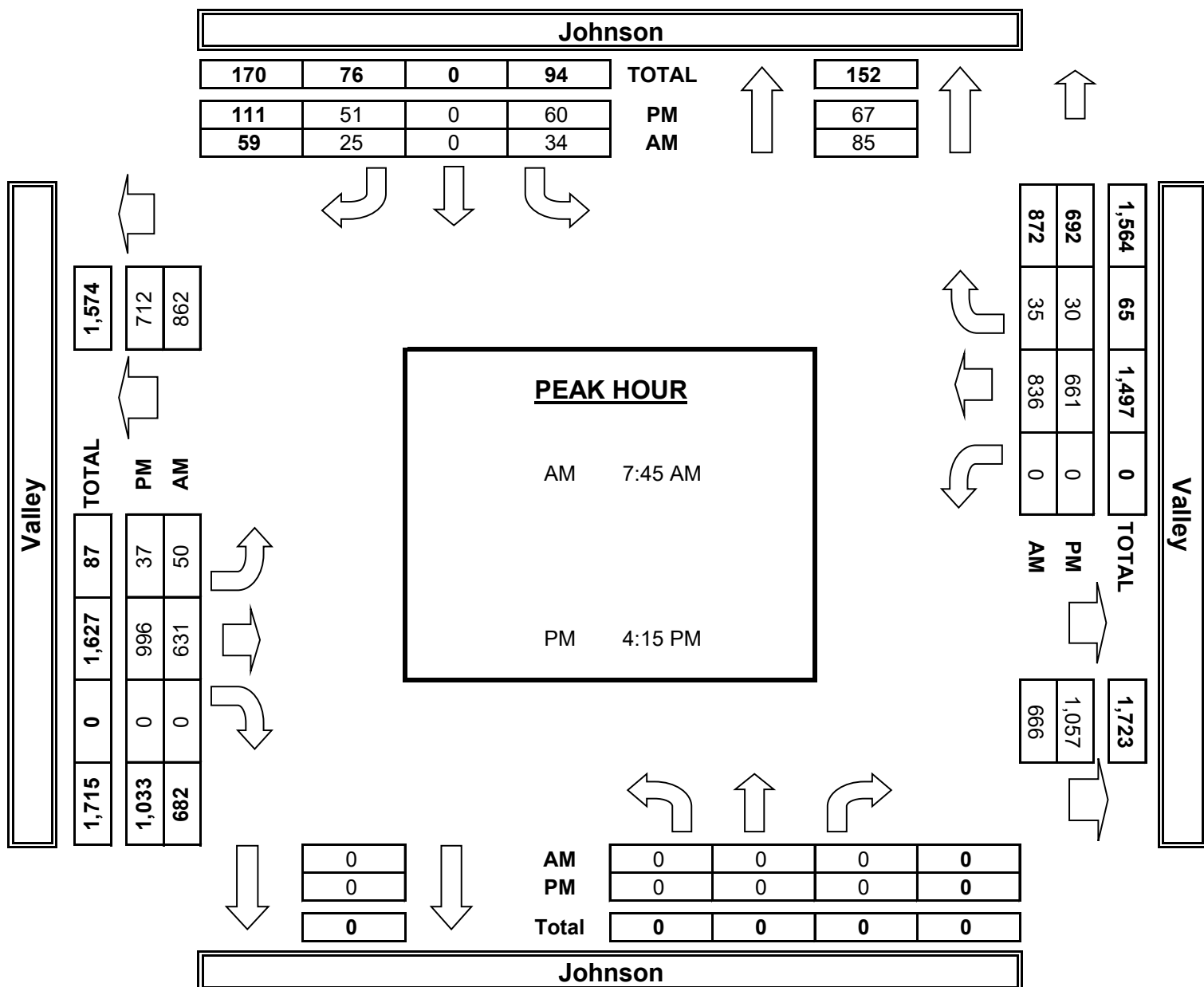
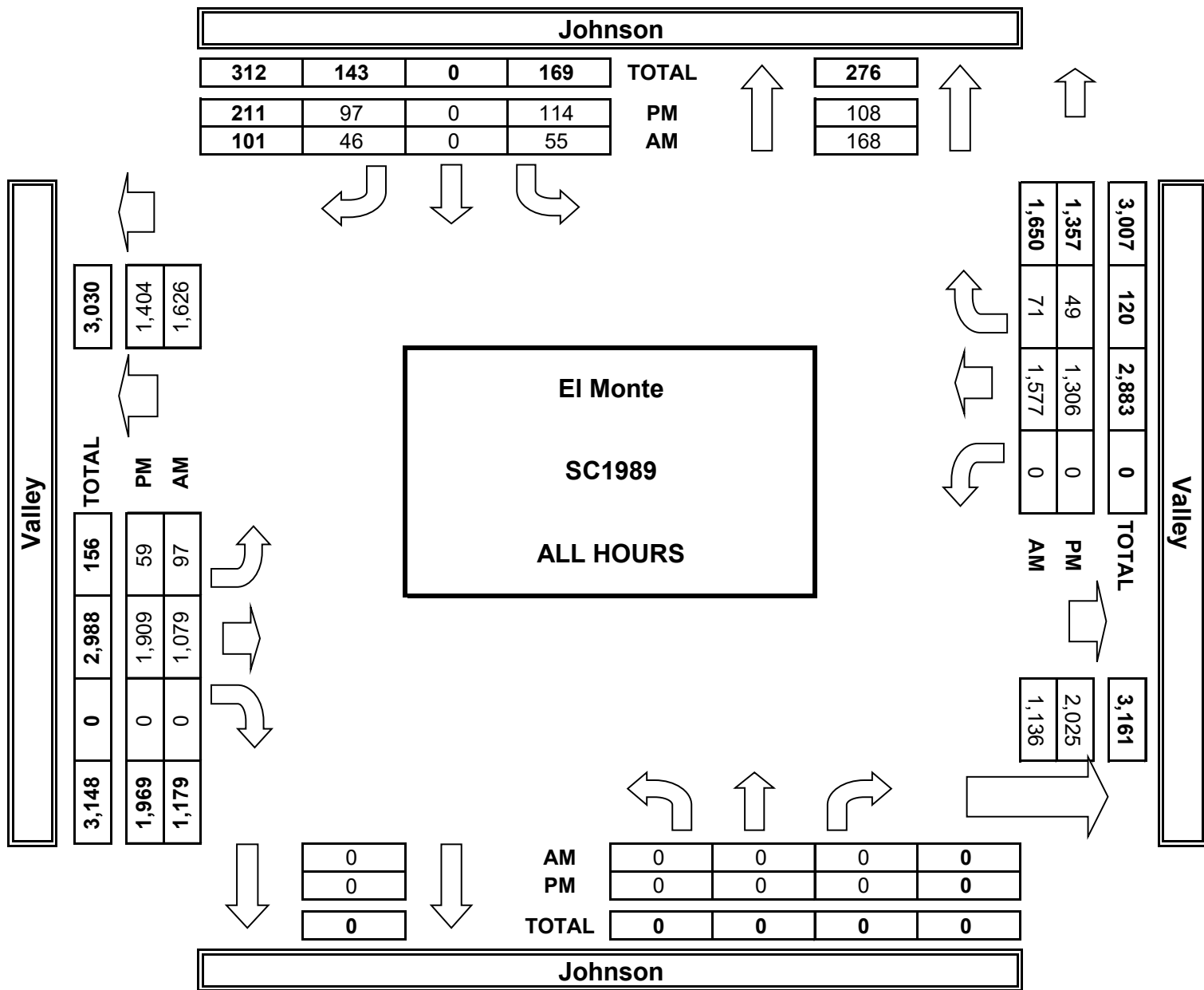


AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
	TOTAL
	AM BEGIN PEAK HR
PM	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
	TOTAL
	PM BEGIN PEAK HR

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
4:15 PM				

[illegible][illegible]

TURNING MOVEMENT COUNTS



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

DATE: Tue, Nov 13, 18	LOCATION: NORTH & SOUTH: EAST & WEST:	El Monte Peck Valley	PROJECT #: LOCATION #: CONTROL:	SC1989 3 SIGNAL	
NOTES:			AM PM MD OTHER OTHER	▲ N ◀ W S ▼	E ▶

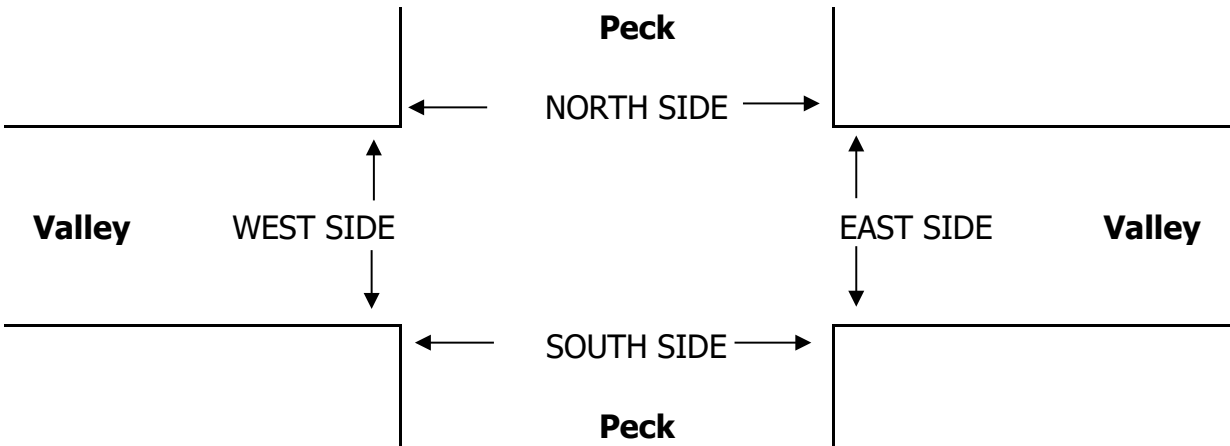
☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Peck			Peck			Valley			Valley			
LANES:	NL 1	NT 3	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

AM	7:00 AM	54	140	68	40	205	33	10	73	18	19	114	35	809
	7:15 AM	55	138	66	44	258	43	10	93	15	16	141	51	930
	7:30 AM	46	155	80	53	265	59	22	97	24	14	199	40	1,054
	7:45 AM	54	215	77	52	258	52	24	158	37	14	197	44	1,182
	8:00 AM	41	164	73	76	226	45	25	124	30	22	193	42	1,061
	8:15 AM	41	182	86	58	257	46	15	121	40	21	200	39	1,106
	8:30 AM	48	149	69	51	245	33	27	93	37	11	237	53	1,053
	8:45 AM	43	156	86	44	220	42	18	114	33	21	196	53	1,026
	VOLUMES	382	1,299	605	418	1,934	353	151	873	234	138	1,477	357	8,221
	APPROACH %	17%	57%	26%	15%	71%	13%	12%	69%	19%	7%	75%	18%	
	APP/DEPART	2,286	/	1,812	2,705	/	2,479	1,258	/	1,899	1,972	/	2,031	0
PM	BEGIN PEAK HR	7:30 AM												
	VOLUMES	182	716	316	239	1,006	202	86	500	131	71	789	165	4,403
	APPROACH %	15%	59%	26%	17%	70%	14%	12%	70%	18%	7%	77%	16%	
	PEAK HR FACTOR	0.877			0.960			0.818			0.986			0.931
	APP/DEPART	1,214	/	971	1,447	/	1,287	717	/	1,056	1,025	/	1,089	0
	4:00 PM	29	219	68	66	210	49	41	170	47	11	111	77	1,098
	4:15 PM	46	267	104	66	203	39	39	166	44	14	115	50	1,153
	4:30 PM	58	292	73	53	216	38	37	249	56	19	105	61	1,257
4:45 PM	59	290	95	51	213	51	42	217	49	20	80	84	1,251	
5:00 PM	74	319	86	54	242	38	37	211	53	10	115	64	1,303	
5:15 PM	63	252	86	67	241	34	40	163	52	22	107	63	1,190	
5:30 PM	61	277	72	59	234	39	53	202	39	15	142	68	1,261	
5:45 PM	44	340	96	54	228	42	35	158	38	17	166	58	1,276	
VOLUMES	434	2,256	680	470	1,787	330	324	1,536	378	128	941	525	9,789	
APPROACH %	13%	67%	20%	18%	69%	13%	14%	69%	17%	8%	59%	33%		
APP/DEPART	3,370	/	3,106	2,587	/	2,475	2,238	/	2,689	1,594	/	1,519	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	242	1,188	340	234	945	153	165	734	182	64	530	253	5,030	
APPROACH %	14%	67%	19%	18%	71%	11%	15%	68%	17%	8%	63%	30%		
PEAK HR FACTOR	0.922			0.974			0.898			0.879			0.965	
APP/DEPART	1,770	/	1,606	1,332	/	1,294	1,081	/	1,310	847	/	820	0	

7	0	0	0	7
15	0	0	1	16
24	1	0	0	25
35	0	0	1	36
31	0	0	0	31
29	1	0	0	30
26	0	1	0	27
20	0	0	3	23
187	2	1	5	195



AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
	TOTAL
	AM BEGIN PEAK HR
PM	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
	TOTAL
	PM BEGIN PEAK HR

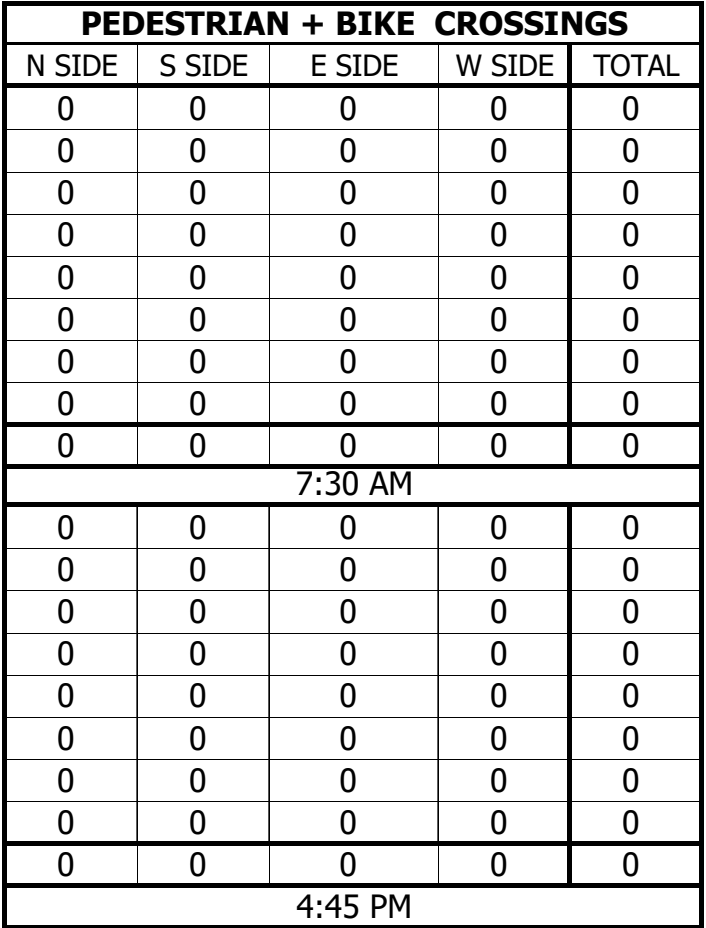
PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
7:30 AM				
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
5:00 PM				

[illegible][illegible]

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

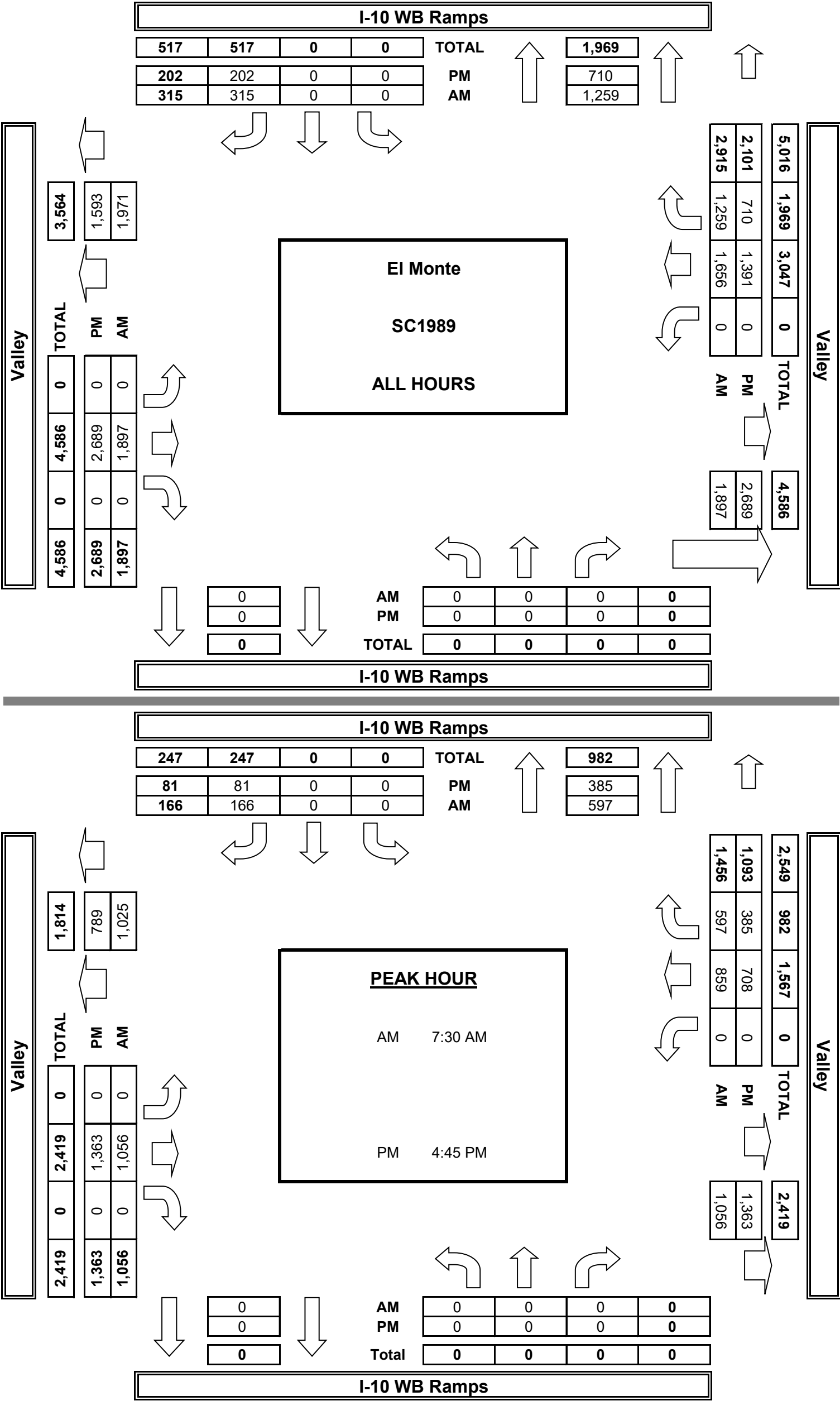
☒ Add U-Turns to Left Turns

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

[illegible][illegible]

AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
	TOTAL
	AM BEGIN PEAK HR
PM	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
	TOTAL
	PM BEGIN PEAK HR

AimTD LLC
TURNING MOVEMENT COUNTS



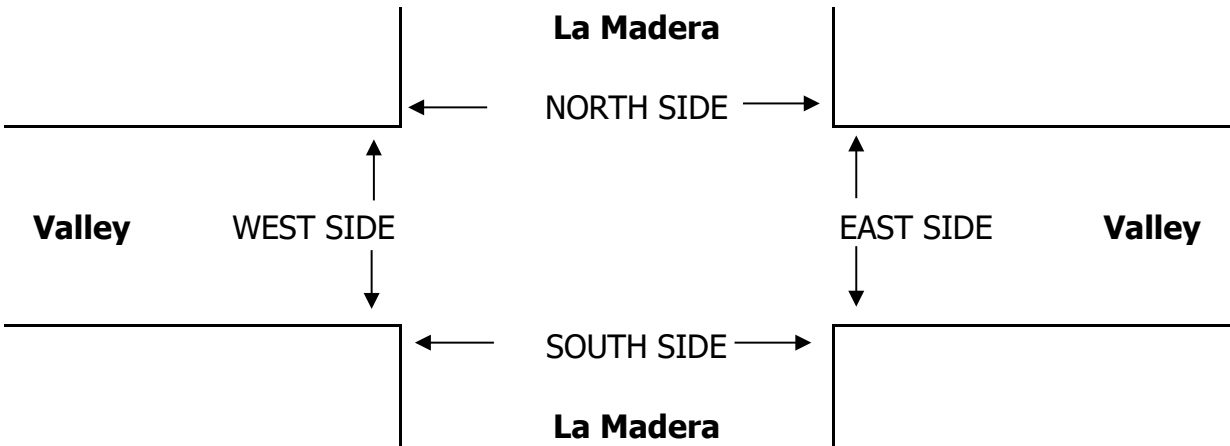
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

PROJECT #: SC1989
LOCATION #: 5
CONTROL: STOP N/S

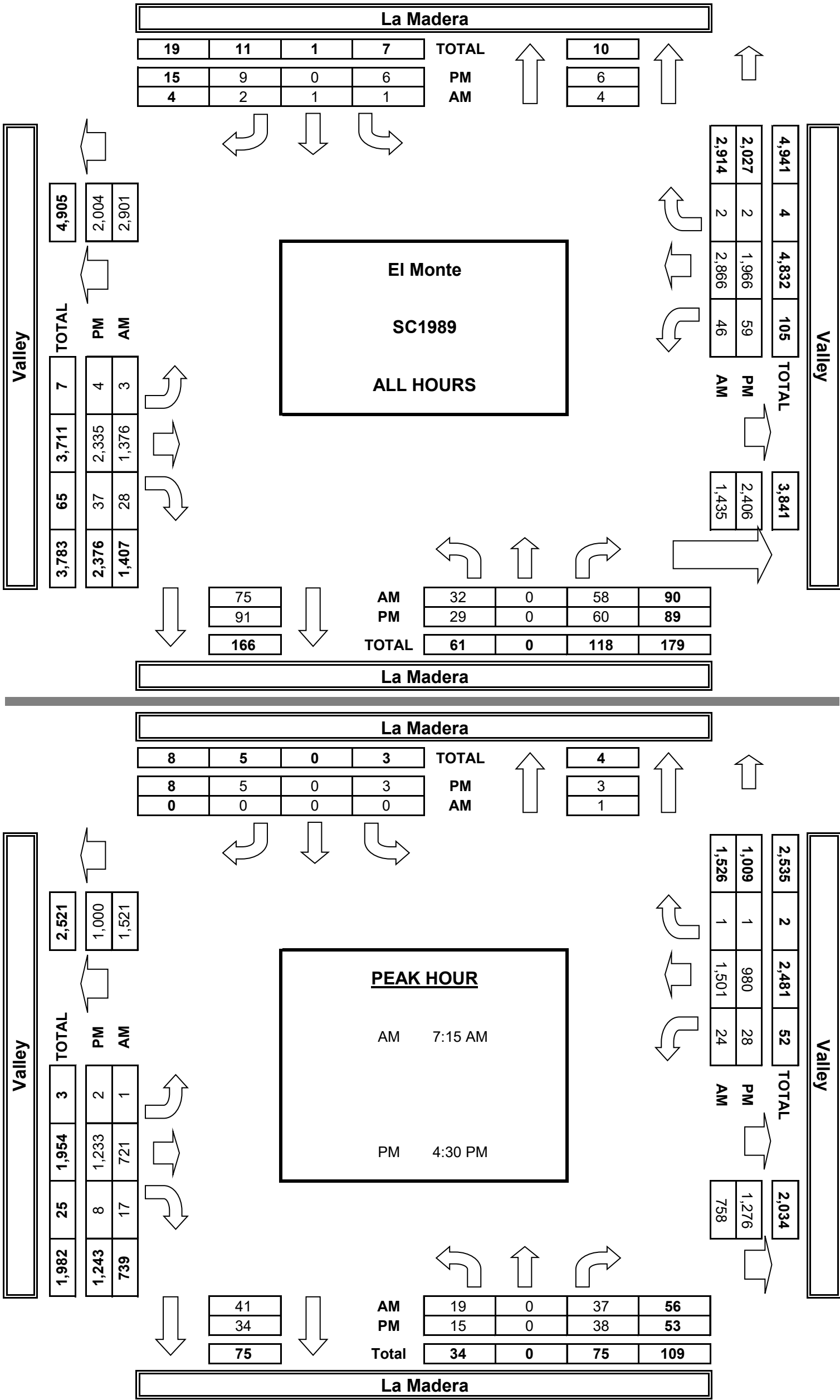
☒ Add U-Turns to Left Turns

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

0	0	0	1	1
0	0	0	0	0
0	0	0	2	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	5	5

[illegible]

AimTD LLC
TURNING MOVEMENT COUNTS



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

DATE: Tue, Nov 13, 18	LOCATION: NORTH & SOUTH: EAST & WEST:	El Monte Mountain View Valley	PROJECT #: LOCATION #: CONTROL:	SC1989 6 SIGNAL
NOTES:			AM PM MD OTHER OTHER	▲ N ◀ W S ▼ E ▶

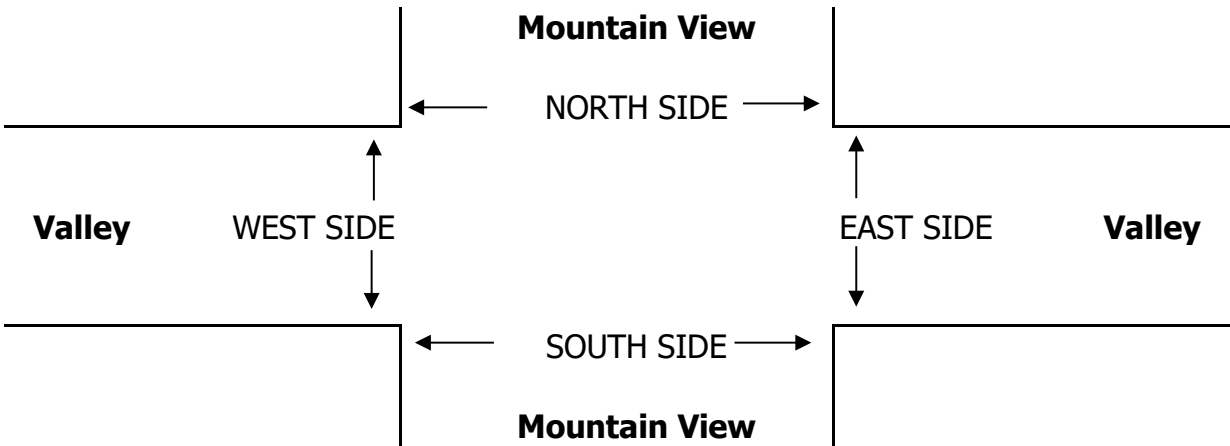
☒ Add U-Turns to Left Turns

	NORTHBOUND Mountain View			SOUTHBOUND Mountain View			EASTBOUND Valley			WESTBOUND Valley			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

AM	7:00 AM	31	29	1	24	63	75	18	126	26	11	340	1	745
	7:15 AM	32	31	2	31	51	80	17	119	30	17	346	1	757
	7:30 AM	31	35	0	11	73	57	29	152	17	21	301	3	730
	7:45 AM	35	45	1	13	52	47	33	159	13	12	269	6	685
	8:00 AM	35	26	3	8	48	55	20	170	18	13	253	4	653
	8:15 AM	28	25	1	11	38	51	30	145	26	19	241	3	618
	8:30 AM	31	32	0	10	26	46	29	148	14	21	254	5	616
	8:45 AM	18	19	1	7	22	56	20	143	17	17	234	2	556
	VOLUMES	241	242	9	115	373	467	196	1,162	161	131	2,238	25	5,360
	APPROACH %	49%	49%	2%	12%	39%	49%	13%	76%	11%	5%	93%	1%	
APP/DEPART	492	/	461	955	/	665	1,519	/	1,286	2,394	/	2,948	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	129	140	4	79	239	259	97	556	86	61	1,256	11	2,917	
APPROACH %	47%	51%	1%	14%	41%	45%	13%	75%	12%	5%	95%	1%		
PEAK HR FACTOR	0.843			0.890			0.901			0.912			0.963	
APP/DEPART	273	/	247	577	/	386	739	/	639	1,328	/	1,645	0	
PM	4:00 PM	50	51	4	11	38	39	28	210	29	7	113	5	585
	4:15 PM	48	50	8	15	40	37	52	253	31	12	144	9	699
	4:30 PM	39	65	4	6	32	49	46	238	29	15	168	7	698
	4:45 PM	47	48	6	8	33	43	39	222	29	7	183	3	668
	5:00 PM	38	60	4	12	44	39	45	261	38	8	177	8	734
	5:15 PM	53	74	2	12	42	30	32	250	27	3	231	4	760
	5:30 PM	29	63	1	7	45	39	45	239	16	10	210	10	714
	5:45 PM	31	54	6	14	44	26	47	223	8	23	177	5	658
	VOLUMES	335	465	35	85	318	302	334	1,896	207	85	1,403	51	5,516
	APPROACH %	40%	56%	4%	12%	45%	43%	14%	78%	8%	6%	91%	3%	
	APP/DEPART	835	/	849	705	/	610	2,437	/	2,016	1,539	/	2,041	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	167	245	13	39	164	151	161	972	110	28	801	25	2,876
	APPROACH %	39%	58%	3%	11%	46%	43%	13%	78%	9%	3%	94%	3%	
PEAK HR FACTOR	0.824			0.932			0.903			0.897			0.946	
APP/DEPART	425	/	430	354	/	302	1,243	/	1,024	854	/	1,120	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	1	0	1

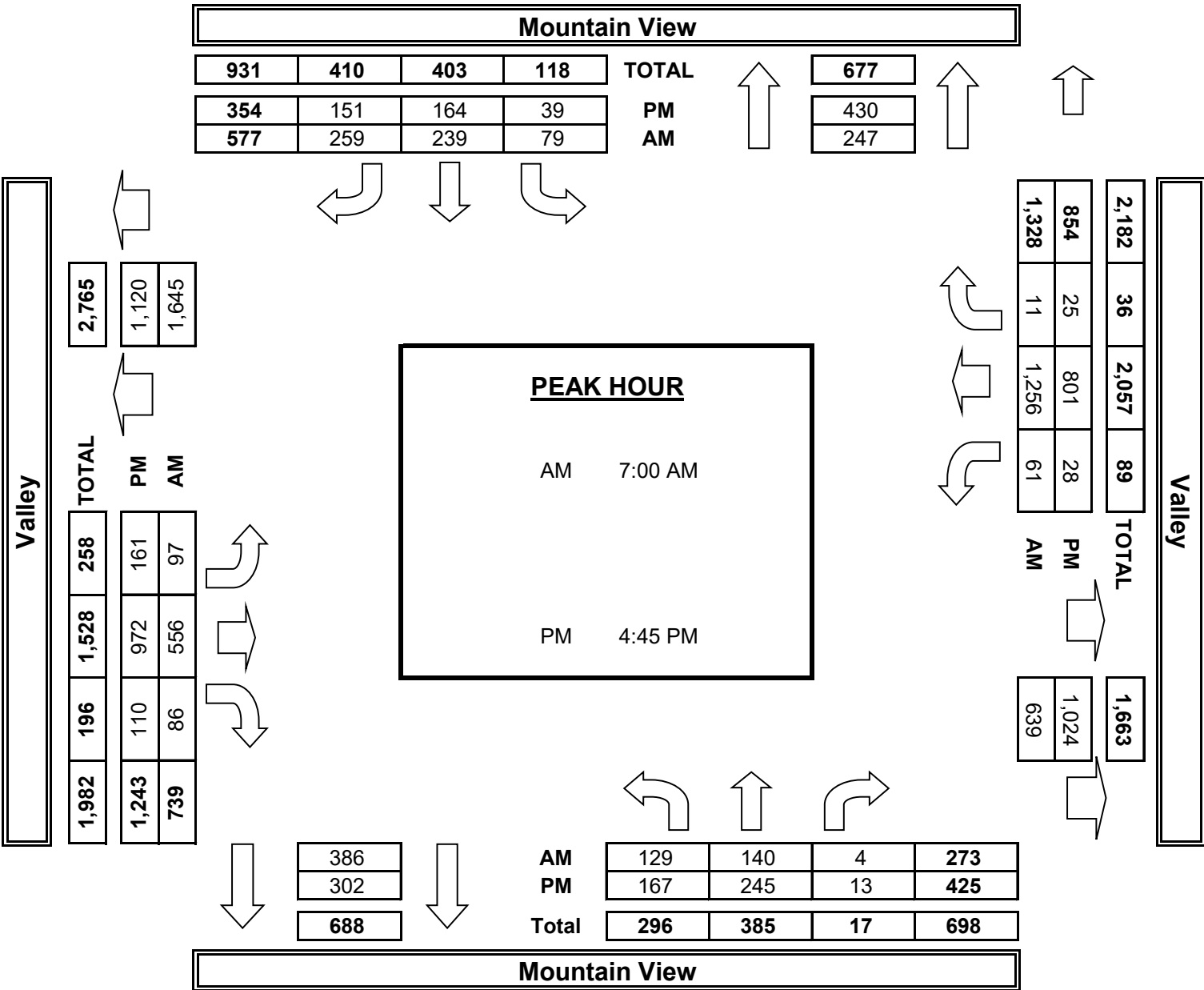
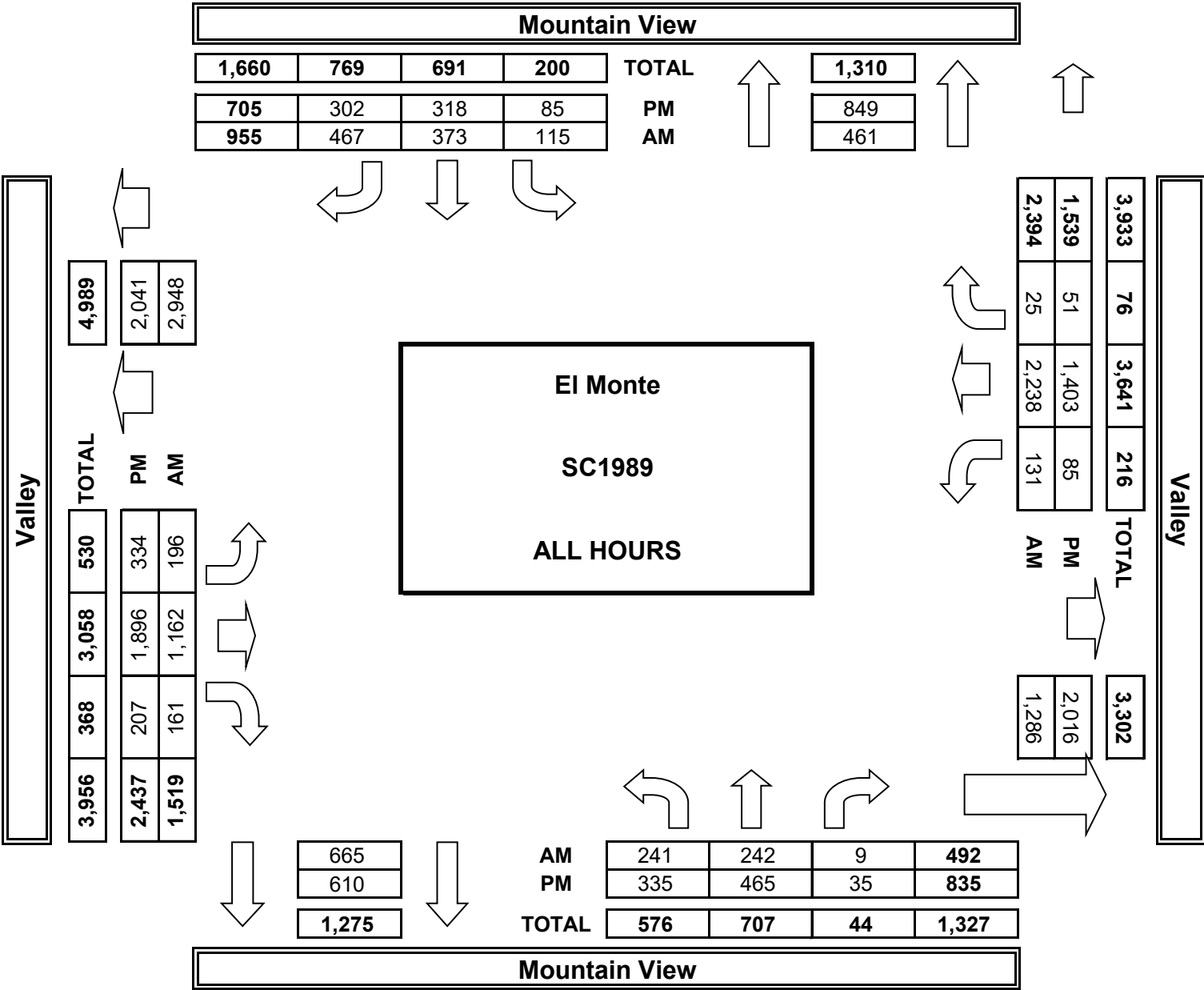


AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
	TOTAL
	AM BEGIN PEAK HR
PM	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
	TOTAL
	PM BEGIN PEAK HR

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
7:00 AM				
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
4:45 PM				

[illegible][illegible]

AimTD LLC
TURNING MOVEMENT COUNTS



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

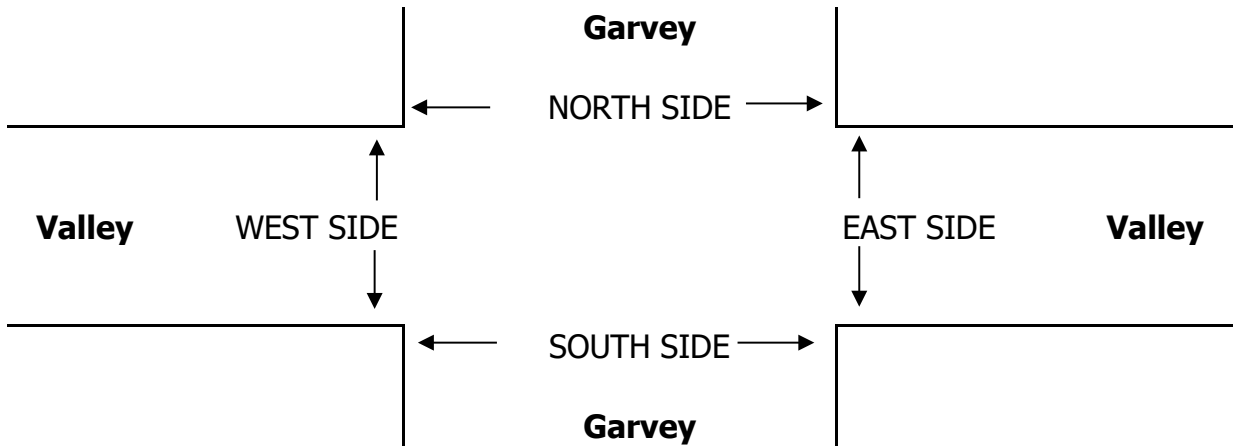
PROJECT #: SC1989
LOCATION #: 7
CONTROL: SIGNAL

☒ Add U-Turns to Left Turns

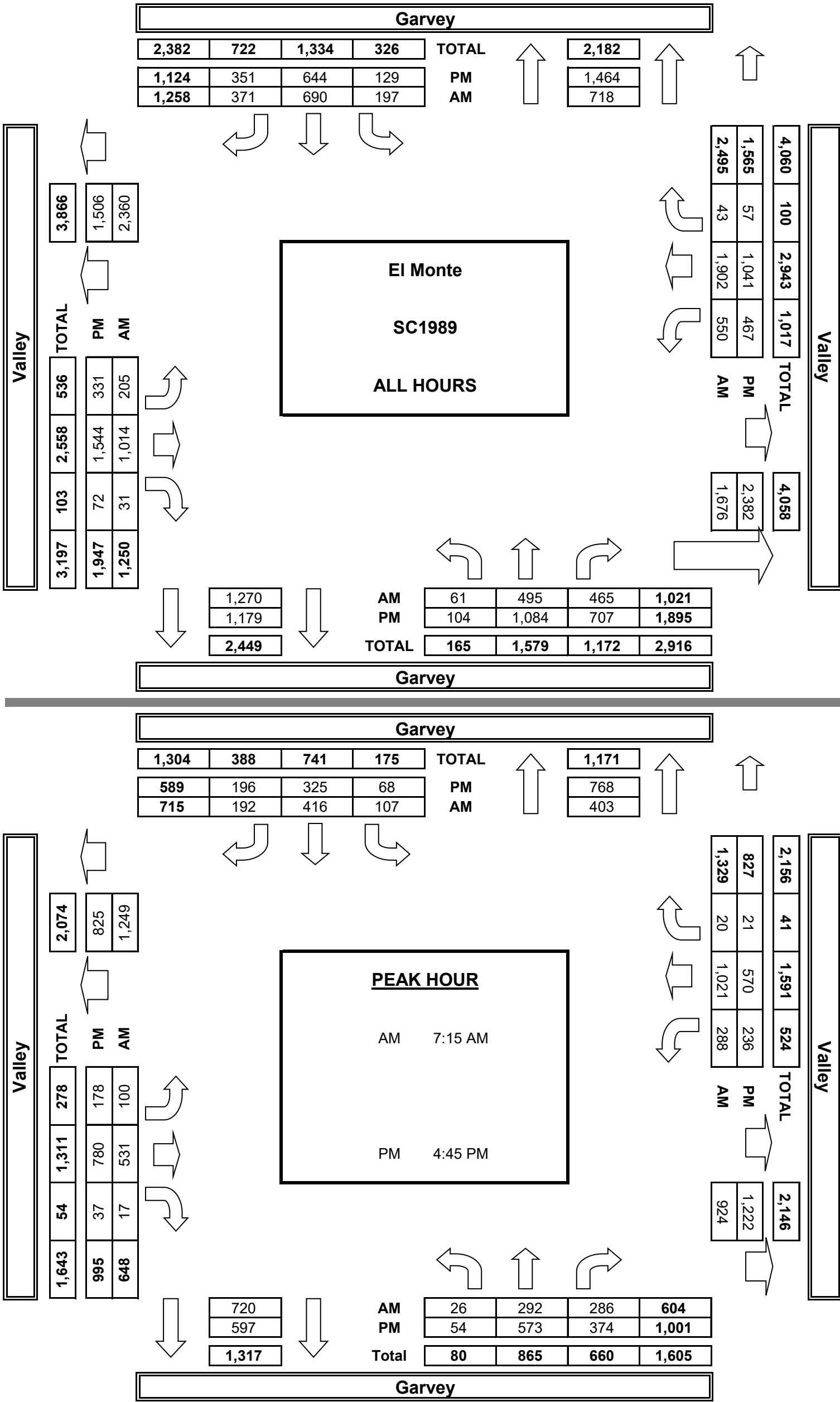
U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

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0	0	1	0	1
0	0	3	0	3
0	0	2	1	3
0	0	5	0	5
0	0	4	0	4
0	0	2	0	2
0	1	26	1	28

0	0	2	0	2
0	1	1	0	2
0	0	1	2	3
0	0	2	1	3
0	0	0	0	0
0	0	3	0	3
0	1	0	0	1
0	0	1	1	2
0	2	10	4	16

[illegible][illegible]

AimTD LLC
TURNING MOVEMENT COUNTS



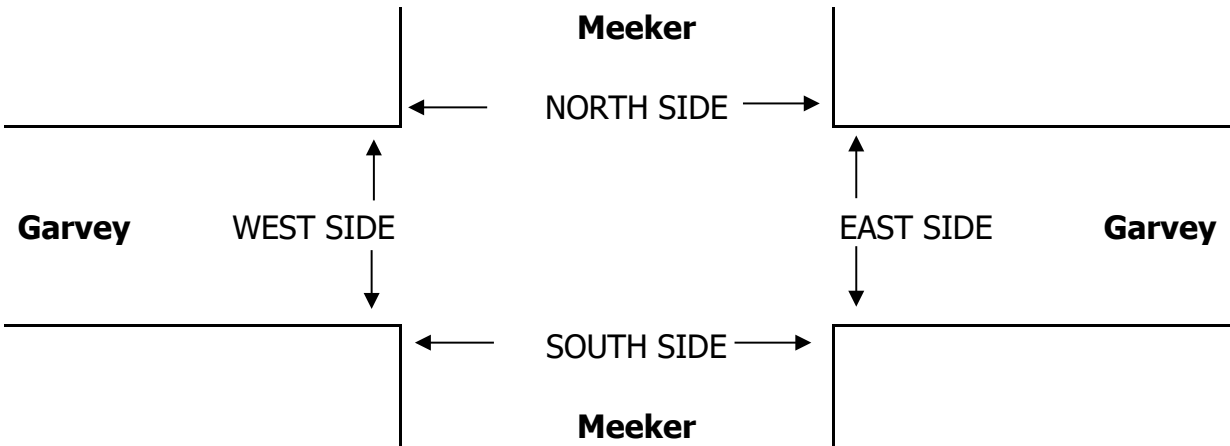
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

PROJECT #: SC1989
LOCATION #: 8
CONTROL: SIGNAL

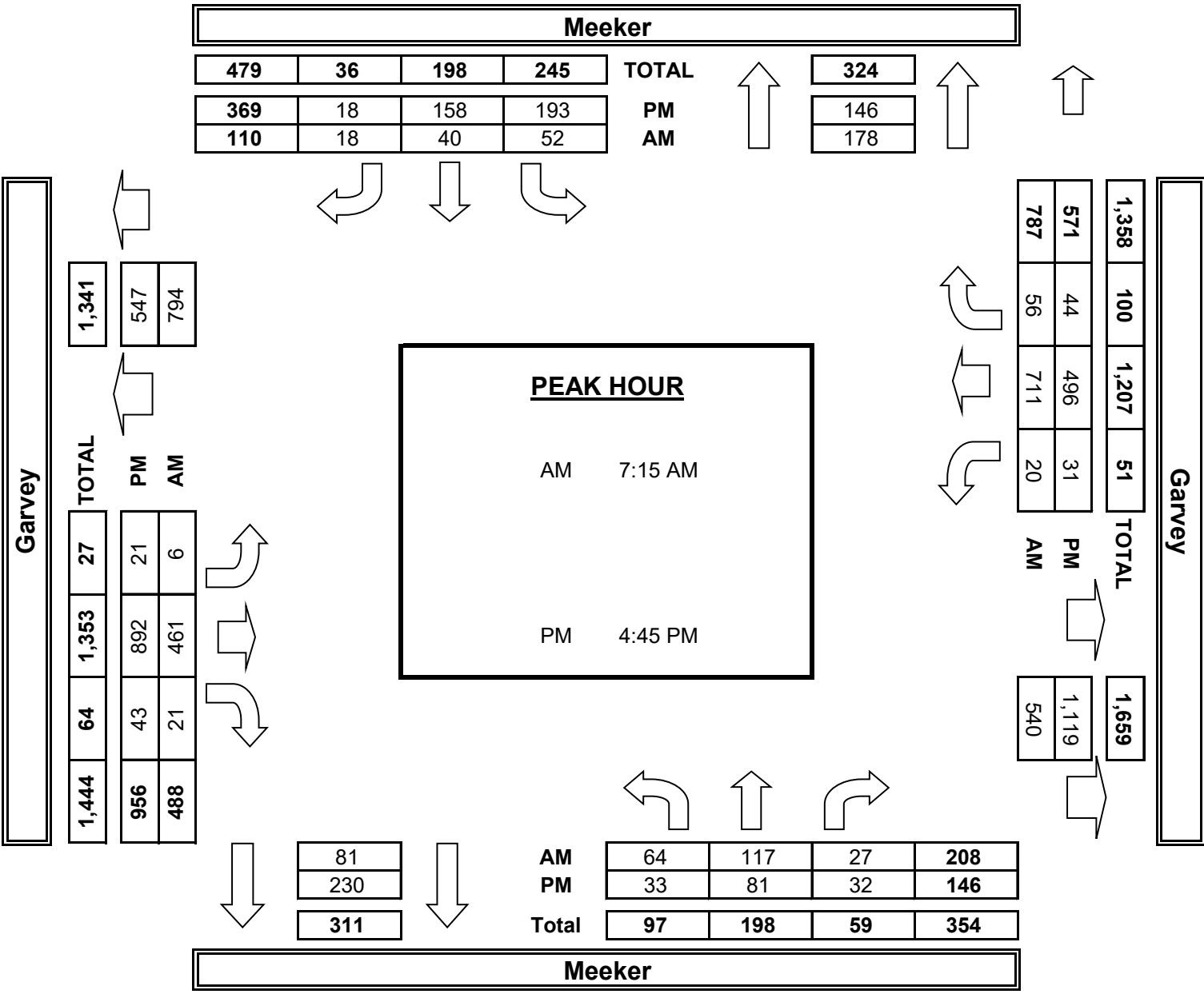
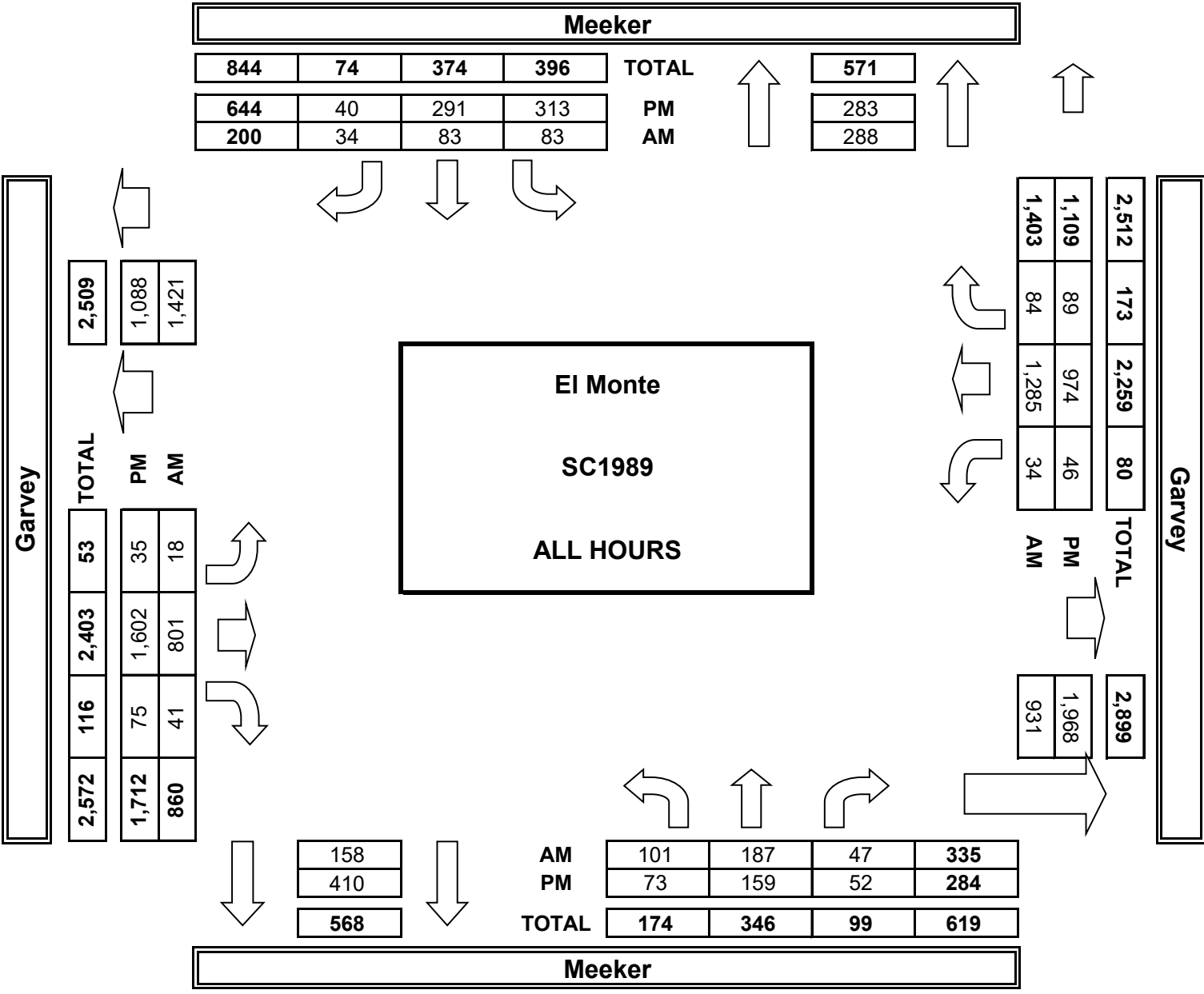
☒ Add U-Turns to Left Turns

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	1	0	0	1
0	1	1	2	4

[illegible]

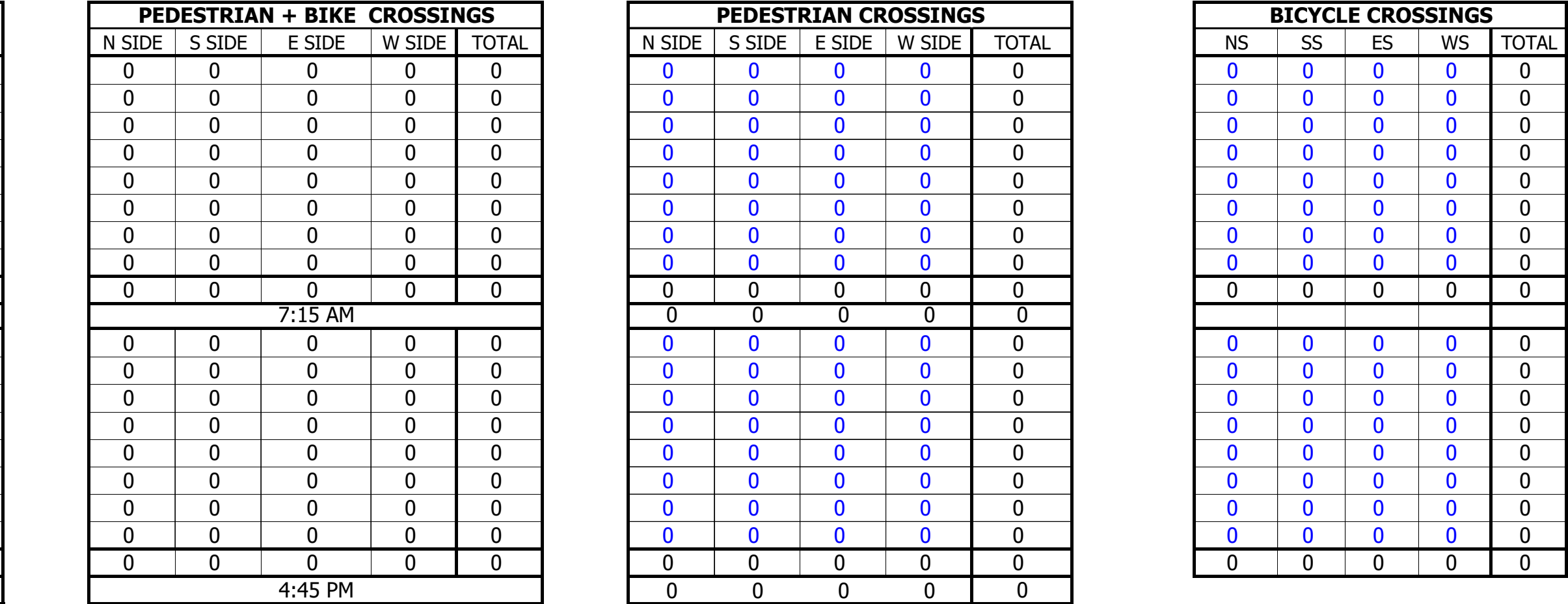
AimTD LLC
TURNING MOVEMENT COUNTS



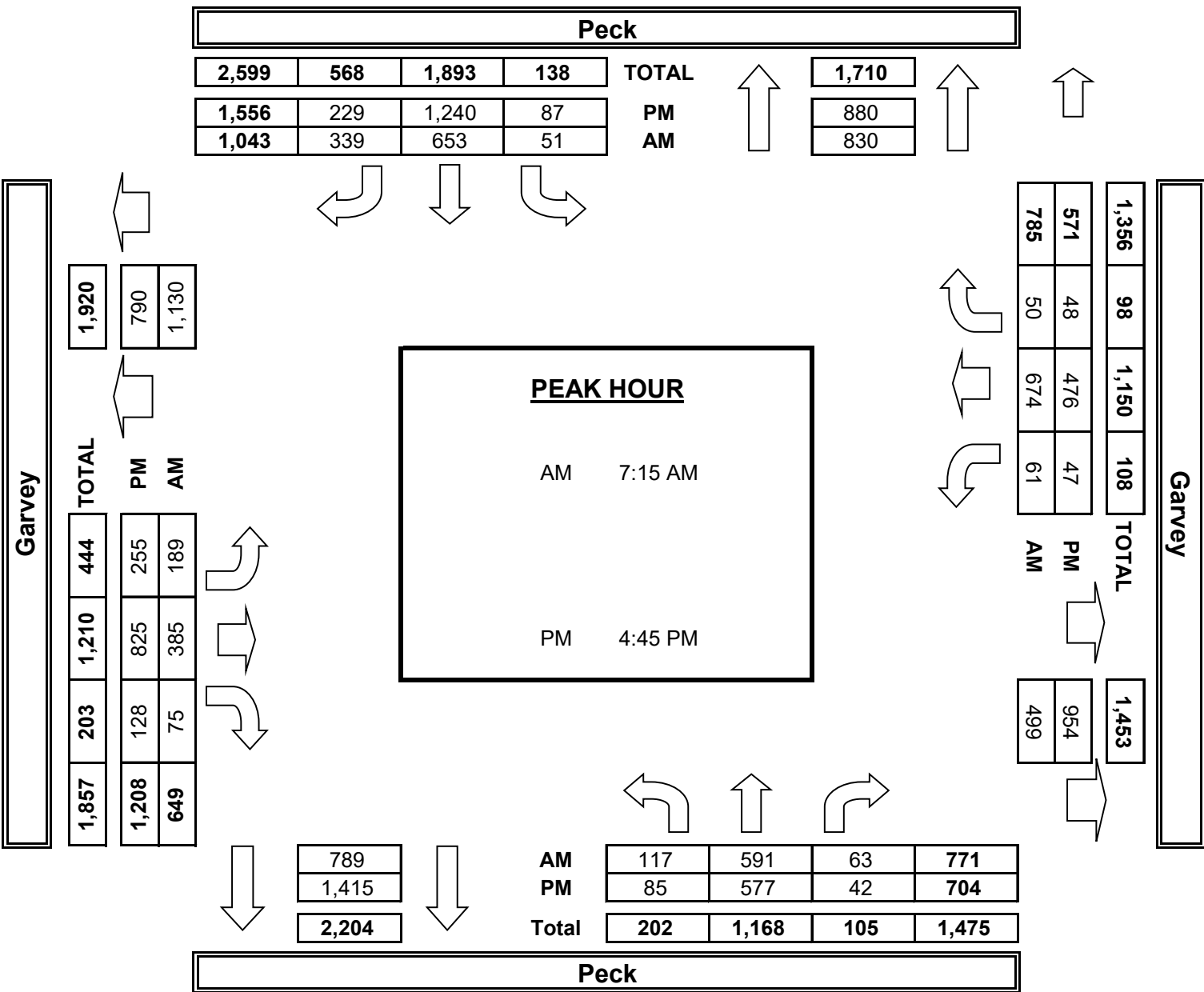
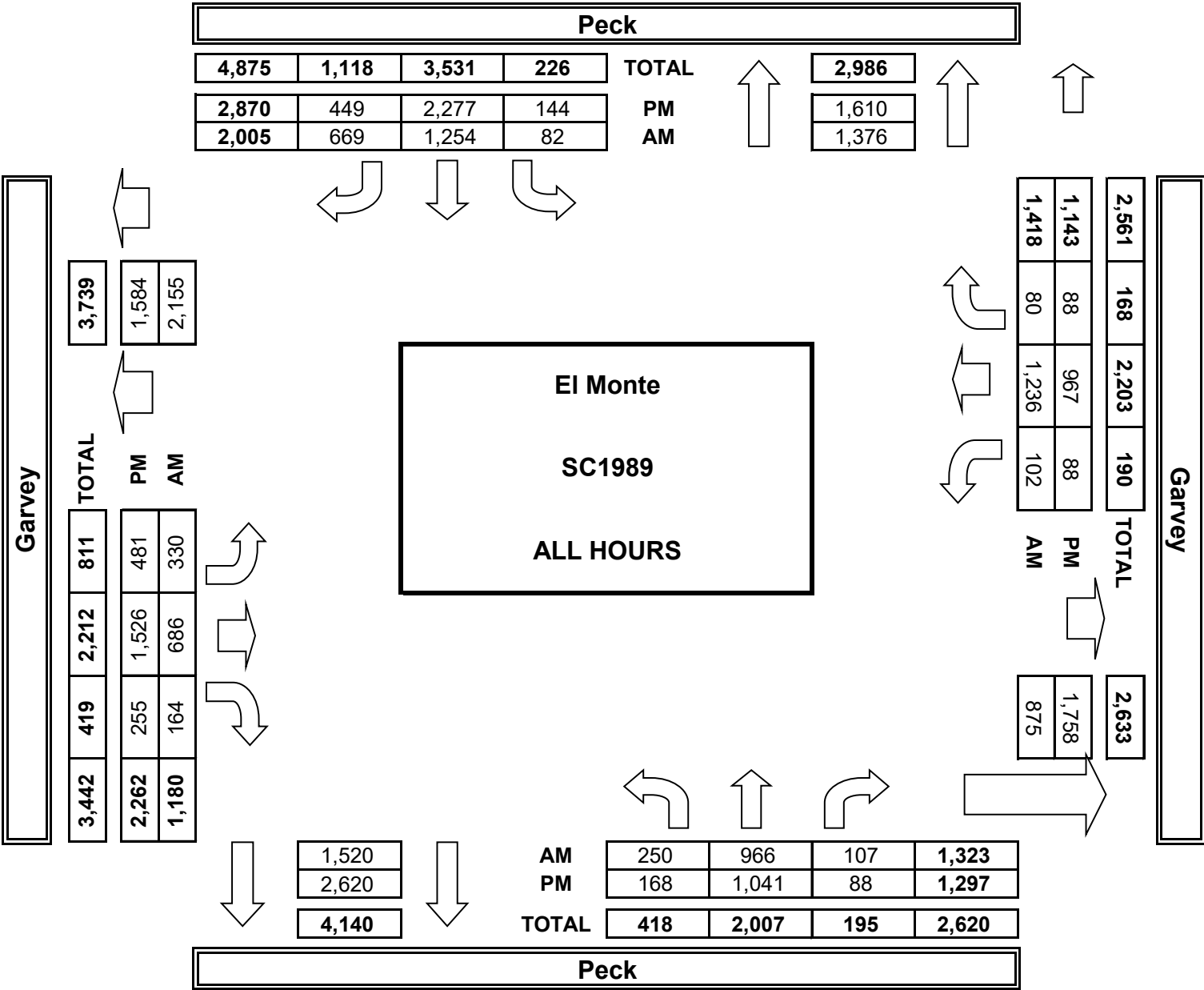
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

☒ Add U-Turns to Left Turns

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

[illegible][illegible]

AimTD LLC
TURNING MOVEMENT COUNTS

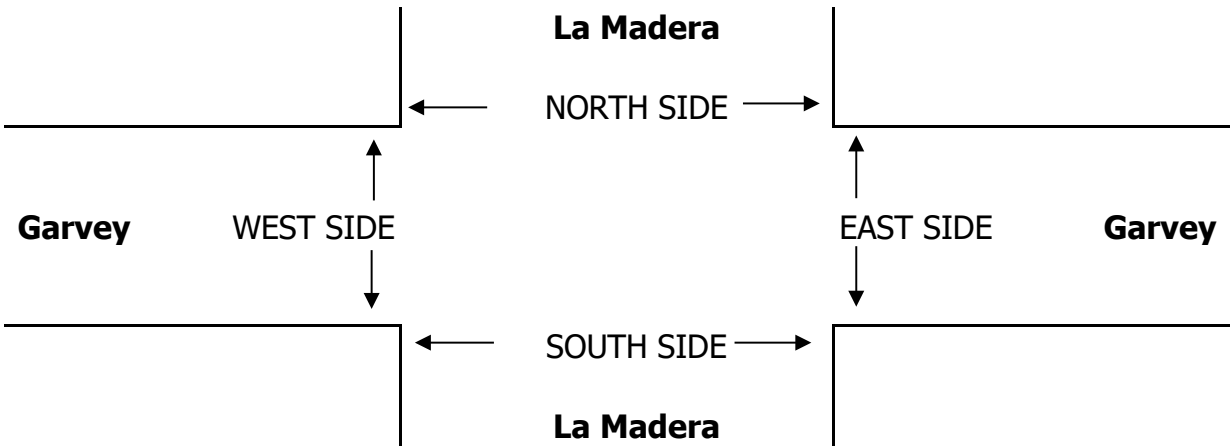


PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

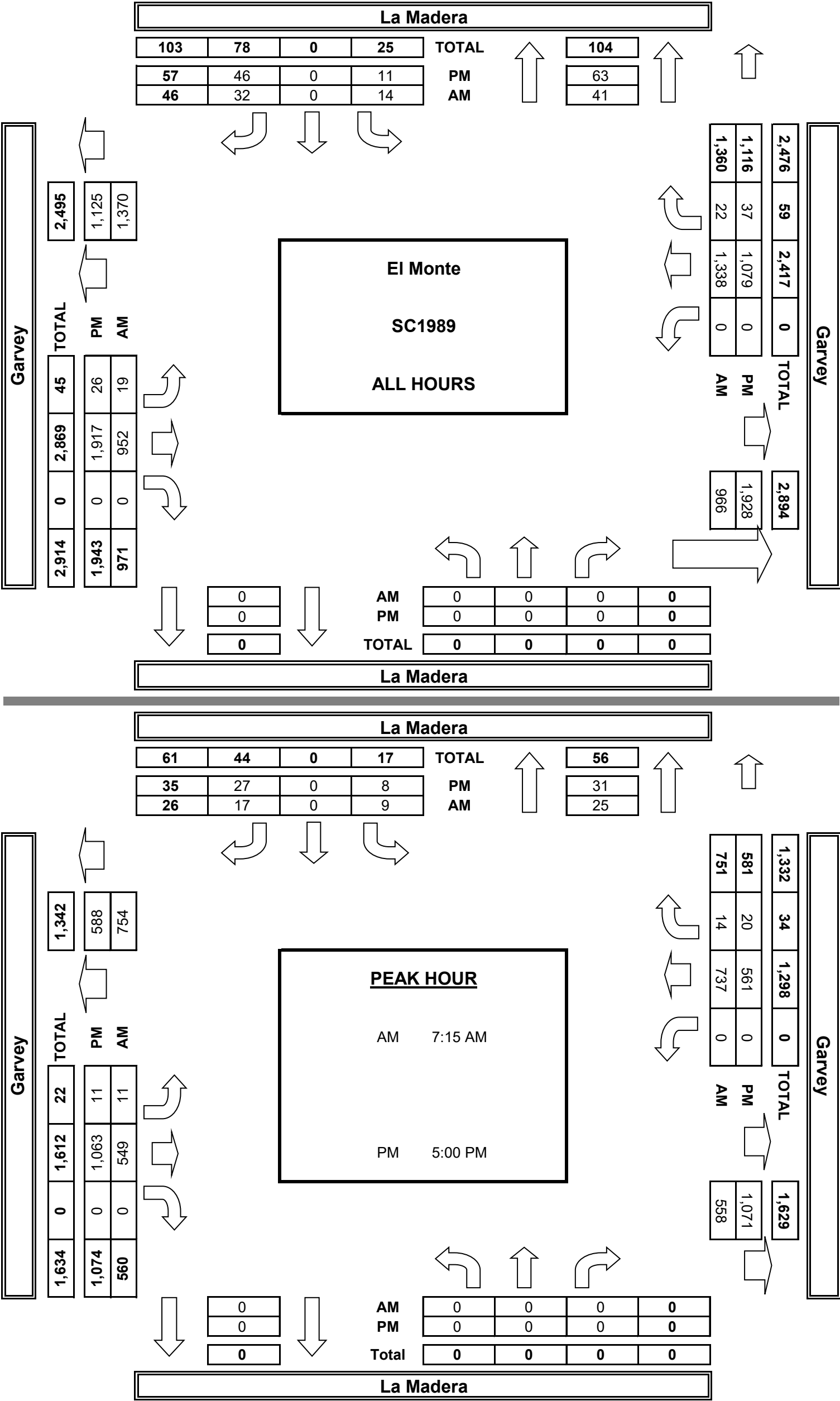
PROJECT #: SC1989
LOCATION #: 10
CONTROL: STOP S

☒ Add U-Turns to Left Turns

U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

[illegible][illegible]

AimTD LLC
TURNING MOVEMENT COUNTS



Appendix B

Level of Service Computation Reports (ICU Calculations)



EXISTING WEEKDAY AM/PM PEAK HOUR

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 1. Ramona Blvd (N/S) and Valley Blvd (E/W)

CONDITION: Existing Peak Hours: Wed, November 13, 2018

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	8	17	0.01 *	0.01 *
NT	2	3200	179	422	0.06	0.13
NR	0	0	0	0	0.00	0.00
SL	1	1600	67	32	0.04	0.02
ST	2	3200	447	238	0.26 *	0.14 *
SR	0	0	374	225	0.23	0.14
EL	1	1600	178	414	0.11 *	0.26 *
ET	2	3200	497	728	0.16	0.23
ER	1	1600	7	10	0.00	0.01
WL	1	1600	192	158	0.12	0.10
WT	2	3200	554	502	0.17 *	0.16 *
WR	1	1600	26	76	0.02	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.65	0.67
LOS	B	B

NOTE:

ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 2. Johnson Ave (N/S) and Valley Blvd (E/W)

CONDITION: Existing Peak Hours: Wednesday, November 13, 2018 **DATE:** 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	0	0	0.00	0.00
NT	0	0	0	0	0.00 *	0.00 *
NR	0	0	0	0	0.00	0.00
SL	1	1600	34	60	0.02 *	0.04 *
ST	0	0	0	0	0.00	0.00
SR	1	1600	25	51	0.02	0.03
EL	1	1600	50	37	0.03 *	0.02
ET	2	3200	631	996	0.20	0.31 *
ER	0	0	0	0	0.00	0.00
WL	0	0	0	0	0.00	0.00 *
WT	2	3200	836	661	0.27 *	0.22
WR	0	0	35	30	0.02	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.42	0.45
LOS	A	A

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 3. Peck Rd (N/S) and Valley Blvd (E/W)

CONDITION: Existing Peak Hours: Wednesday, November 13, 201 **DATE:** 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	182	242	0.11 *	0.15 *
NT	3	4800	716	1188	0.15	0.25
NR (F)	1	1600	316	340	0.20	0.21
SL	1	1600	239	234	0.15	0.15
ST	2	3200	1006	945	0.31 *	0.30 *
SR	1	1600	202	153	0.13	0.10
EL	1	1600	86	165	0.05 *	0.10 *
ET	2	3200	500	734	0.16	0.23
ER	1	1600	131	182	0.08	0.11
WL	1	1600	71	64	0.04	0.04
WT	2	3200	789	530	0.25 *	0.17 *
WR(d)	1	1600	165	253	0.10	0.16

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.82	0.82
LOS	D	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 6. Mountain View Rd (N/S) and Valley Blvd (E/W)

CONDITION: Existing Peak Hours: Wednesday, November 13, 2018 **DATE:** 22-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	129	167	0.08 *	0.10 *
NT	1	1600	140	245	0.09	0.16
NR	0	0	4	13	0.00	0.01
SL	1	1600	79	39	0.05	0.02
ST	1	1600	239	164	0.15 *	0.10 *
SR (d)	1	1600	259	151	0.16	0.09
EL	1	1600	97	161	0.06 *	0.10 *
ET	2	3200	556	972	0.20	0.34
ER	0	0	86	110	0.05	0.07
WL	1	1600	61	28	0.04	0.02
WT	2	3200	1256	801	0.40 *	0.26 *
WR	0	0	11	25	0.01	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.79	0.66
LOS	C	B

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 7. Garvey Ave (N/S) and Valley Blvd (E/W)

CONDITION: Existing Peak Hours: Wednesday, November 13, 201

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	26	54	0.02	0.03
NT	2	3200	292	573	0.18 *	0.30 *
NR	0	0	286	374	0.18	0.23
SL	1	1600	107	68	0.07 *	0.04 *
ST	2	3200	416	325	0.19	0.16
SR	0	0	192	196	0.12	0.12
EL	1	1600	100	178	0.06 *	0.11
ET	2	3200	531	780	0.17	0.24 *
ER (F)	1	1600	17	37	0.01	0.02
WL	1	1600	288	236	0.18	0.15 *
WT	2	3200	1021	570	0.32 *	0.18
WR (F)	1	1600	20	21	0.01	0.01

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.73	0.83
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 9. Meeker Ave (N/S) and Garvey Ave (E/W)

CONDITION: Existing Peak Hours: Wednesday, November 13, 201

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	64	33	0.04	0.02 *
NT	1	1600	117	81	0.13 *	0.09
NR	0	0	27	32	0.02	0.02
SL	0	0	52	193	0.03 *	0.12
ST	1	1600	40	158	0.07	0.23 *
SR	0	0	18	18	0.01	0.01
EL	1	1600	6	21	0.00 *	0.01
ET	2	3200	461	892	0.15	0.29 *
ER	0	0	21	43	0.01	0.03
WL	1	1600	20	31	0.01	0.02 *
WT	2	3200	711	496	0.24 *	0.17
WR	0	0	56	44	0.04	0.03

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.50	0.66
LOS	A	B

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 10. Peck Rd (N/S) and Garvey Ave (E/W)

CONDITION: Existing Peak Hours: Wednesday, November 13, 201

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	117	85	0.07 *	0.05 *
NT	2	3200	591	577	0.18	0.18
NR(d)	1	1600	63	42	0.04	0.03
SL	1	1600	51	87	0.03	0.05
ST	2	3200	653	1240	0.20 *	0.39 *
SR(d)	1	1600	339	229	0.21	0.14
EL	1	1600	189	255	0.12 *	0.16 *
ET	2	3200	385	825	0.12	0.26
ER(d)	1	1600	75	128	0.05	0.08
WL	1	1600	61	47	0.04	0.03
WT	2	3200	674	476	0.21 *	0.15 *
WR(d)	1	1600	50	48	0.03	0.03

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.70	0.85
LOS	B	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

BASELINE (2022) WEEKDAY AM/PM PEAK HOUR

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 1. Ramona Blvd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022 **DATE:** 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	8	18	0.01 *	0.01 *
NT	2	3200	187	438	0.06	0.14
NR	0	0	0	0	0.00	0.00
SL	1	1600	69	33	0.04	0.02
ST	2	3200	462	249	0.26 *	0.15 *
SR	0	0	385	232	0.24	0.15
EL	1	1600	183	426	0.11 *	0.27 *
ET	2	3200	519	758	0.16	0.24
ER	1	1600	7	10	0.00	0.01
WL	1	1600	201	172	0.13	0.11
WT	2	3200	577	525	0.18 *	0.16 *
WR	1	1600	27	78	0.02	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.66	0.69
LOS	B	B

NOTE:

ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 2. Johnson Ave (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	0	0	0.00	0.00
NT	0	0	0	0	0.00 *	0.00 *
NR	0	0	0	0	0.00	0.00
SL	1	1600	35	62	0.02 *	0.04 *
ST	0	0	0	0	0.00	0.00
SR	1	1600	26	53	0.02	0.03
EL	1	1600	52	38	0.03 *	0.02
ET	2	3200	665	1037	0.21	0.32 *
ER	0	0	0	0	0.00	0.00
WL	0	0	0	0	0.00	0.00 *
WT	2	3200	870	698	0.28 *	0.23
WR	0	0	36	31	0.02	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.43	0.46
LOS	A	A

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 3. Peck Rd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	206	270	0.13 *	0.17 *
NT	3	4800	751	1237	0.16	0.26
NR (F)	1	1600	343	366	0.21	0.23
SL	1	1600	246	241	0.15	0.15
ST	2	3200	1043	988	0.33 *	0.31 *
SR	1	1600	208	158	0.13	0.10
EL	1	1600	89	170	0.06 *	0.11 *
ET	2	3200	526	764	0.16	0.24
ER	1	1600	139	189	0.09	0.12
WL	1	1600	73	66	0.05	0.04
WT	2	3200	819	557	0.26 *	0.17 *
WR(d)	1	1600	171	264	0.11	0.17

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.88	0.86
LOS	D	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 6. Mountain View Rd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022

DATE: 22-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	133	172	0.08 *	0.11 *
NT	1	1600	144	252	0.09	0.17
NR	0	0	4	13	0.00	0.01
SL	1	1600	81	40	0.05	0.03
ST	1	1600	246	169	0.15 *	0.11 *
SR (d)	1	1600	267	156	0.17	0.10
EL	1	1600	100	166	0.06 *	0.10 *
ET	2	3200	582	1009	0.21	0.35
ER	0	0	89	113	0.06	0.07
WL	1	1600	63	29	0.04	0.02
WT	2	3200	1301	834	0.41 *	0.27 *
WR	0	0	11	26	0.01	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.80	0.69
LOS	C	B

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 7. Garvey Ave (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	28	56	0.02	0.04
NT	2	3200	306	595	0.19 *	0.31 *
NR	0	0	304	393	0.19	0.25
SL	1	1600	110	70	0.07 *	0.04 *
ST	2	3200	430	342	0.20	0.17
SR	0	0	199	204	0.12	0.13
EL	1	1600	105	185	0.07 *	0.12
ET	2	3200	571	842	0.18	0.26 *
ER (F)	1	1600	20	41	0.01	0.03
WL	1	1600	303	255	0.19	0.16 *
WT	2	3200	1076	632	0.34 *	0.20
WR (F)	1	1600	21	23	0.01	0.01

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.77	0.87
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 9. Meeker Ave (N/S) and Garvey Ave (E/W)

CONDITION: Baseline 2022

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	66	34	0.04	0.02 *
NT	1	1600	121	83	0.13 *	0.09
NR	0	0	28	33	0.02	0.02
SL	0	0	54	199	0.03 *	0.12
ST	1	1600	41	163	0.07	0.24 *
SR	0	0	19	19	0.01	0.01
EL	1	1600	6	22	0.00 *	0.01
ET	2	3200	519	989	0.17	0.32 *
ER	0	0	22	44	0.01	0.03
WL	1	1600	21	32	0.01	0.02 *
WT	2	3200	781	596	0.26 *	0.20
WR	0	0	58	45	0.04	0.03

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.52	0.70
LOS	A	B

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 10. Peck Rd (N/S) and Garvey Ave (E/W)

CONDITION: Baseline 2022

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	121	88	0.08 *	0.06 *
NT	2	3200	611	603	0.19	0.19
NR(d)	1	1600	68	46	0.04	0.03
SL	1	1600	76	113	0.05	0.07
ST	2	3200	681	1282	0.21 *	0.40 *
SR(d)	1	1600	358	248	0.22	0.16
EL	1	1600	204	276	0.13 *	0.17 *
ET	2	3200	425	894	0.13	0.28
ER(d)	1	1600	77	132	0.05	0.08
WL	1	1600	66	52	0.04	0.03
WT	2	3200	720	541	0.23 *	0.17 *
WR(d)	1	1600	71	79	0.04	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.75	0.90
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

**EXISTING WITH PROJECT
WEEKDAY AM/PM PEAK HOUR**

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 1. Ramona Blvd (N/S) and Valley Blvd (E/W)

CONDITION: Existing with Project Peak Hours **DATE:** 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	8	17	0.01 *	0.01 *
NT	2	3200	179	422	0.06	0.13
NR	0	0	0	0	0.00	0.00
SL	1	1600	67	32	0.04	0.02
ST	2	3200	447	238	0.26 *	0.14 *
SR	0	0	374	225	0.23	0.14
EL	1	1600	178	414	0.11 *	0.26 *
ET	2	3200	501	733	0.16	0.23
ER	1	1600	7	10	0.00	0.01
WL	1	1600	192	158	0.12	0.10
WT	2	3200	560	506	0.18 *	0.16 *
WR	1	1600	26	76	0.02	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.66	0.67
LOS	B	B

NOTE:

ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 2. Johnson Ave (N/S) and Valley Blvd (E/W)

CONDITION: Existing with Project Peak Hours **DATE:** 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	0	0	0.00	0.00
NT	0	0	0	0	0.00 *	0.00 *
NR	0	0	0	0	0.00	0.00
SL	1	1600	34	60	0.02 *	0.04 *
ST	0	0	0	0	0.00	0.00
SR	1	1600	25	51	0.02	0.03
EL	1	1600	50	37	0.03 *	0.02
ET	2	3200	635	1001	0.20	0.31 *
ER	0	0	0	0	0.00	0.00
WL	0	0	0	0	0.00	0.00 *
WT	2	3200	842	665	0.27 *	0.22
WR	0	0	35	30	0.02	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.42	0.45
LOS	A	A

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 3. Peck Rd (N/S) and Valley Blvd (E/W)

CONDITION: Existing with Project Peak Hours **DATE:** 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	182	242	0.11 *	0.15 *
NT	3	4800	716	1188	0.15	0.25
NR (F)	1	1600	320	345	0.20	0.22
SL	1	1600	242	238	0.15	0.15
ST	2	3200	1006	945	0.31 *	0.30 *
SR	1	1600	202	153	0.13	0.10
EL	1	1600	86	165	0.05 *	0.10 *
ET	2	3200	504	739	0.16	0.23
ER	1	1600	131	182	0.08	0.11
WL	1	1600	71	64	0.04	0.04
WT	2	3200	795	534	0.25 *	0.17 *
WR(d)	1	1600	169	255	0.11	0.16

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.82	0.82
LOS	D	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 6. Mountain View Rd (N/S) and Valley Blvd (E/W)

CONDITION: Existing with Project Peak Hours

DATE: 23-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	132	171	0.08 *	0.11 *
NT	1	1600	140	245	0.09	0.16
NR	0	0	4	13	0.00	0.01
SL	1	1600	79	39	0.05	0.02
ST	1	1600	239	164	0.15 *	0.10 *
SR (d)	1	1600	259	151	0.16	0.09
EL	1	1600	97	161	0.06 *	0.10 *
ET	2	3200	569	982	0.21	0.34
ER	0	0	90	112	0.06	0.07
WL	1	1600	61	28	0.04	0.02
WT	2	3200	1260	806	0.40 *	0.26 *
WR	0	0	11	25	0.01	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.79	0.67
LOS	C	B

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 7. Garvey Ave (N/S) and Valley Blvd (E/W)

CONDITION: Existing with Project Peak Hours

DATE: 23-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	26	54	0.02	0.03
NT	2	3200	292	573	0.18 *	0.30 *
NR	0	0	286	374	0.18	0.23
SL	1	1600	107	68	0.07 *	0.04 *
ST	2	3200	416	325	0.19	0.16
SR	0	0	192	196	0.12	0.12
EL	1	1600	106	182	0.07 *	0.11
ET	2	3200	539	787	0.17	0.25 *
ER (F)	1	1600	17	37	0.01	0.02
WL	1	1600	288	236	0.18	0.15 *
WT	2	3200	1025	575	0.32 *	0.18
WR (F)	1	1600	20	21	0.01	0.01

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.74	0.84
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 9. Meeker Ave (N/S) and Garvey Ave (E/W)

CONDITION: Existing with Project Peak Hours

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	64	33	0.04	0.02 *
NT	1	1600	117	81	0.13 *	0.09
NR	0	0	27	32	0.02	0.02
SL	0	0	56	198	0.04 *	0.12
ST	1	1600	40	158	0.07	0.23 *
SR	0	0	18	18	0.01	0.01
EL	1	1600	6	21	0.00 *	0.01
ET	2	3200	456	899	0.15	0.29 *
ER	0	0	21	43	0.01	0.03
WL	1	1600	20	31	0.01	0.02 *
WT	2	3200	719	501	0.24 *	0.17
WR	0	0	56	44	0.04	0.03

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.51	0.66
LOS	A	B

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 10. Peck Rd (N/S) and Garvey Ave (E/W)

CONDITION: Existing with Project Peak Hours

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	117	85	0.07 *	0.05 *
NT	2	3200	591	577	0.18	0.18
NR(d)	1	1600	66	46	0.04	0.03
SL	1	1600	51	87	0.03	0.05
ST	2	3200	653	1240	0.20 *	0.39 *
SR(d)	1	1600	339	229	0.21	0.14
EL	1	1600	189	255	0.12 *	0.16 *
ET	2	3200	388	829	0.12	0.26
ER(d)	1	1600	75	128	0.05	0.08
WL	1	1600	65	49	0.04	0.03
WT	2	3200	678	478	0.21 *	0.15 *
WR(d)	1	1600	50	48	0.03	0.03

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.70	0.85
LOS	B	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

**BASELINE (2022) WITH PROJECT
WEEKDAY AM/PM PEAK HOUR**

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 1. Ramona Blvd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022 with Project **DATE:** 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	8	18	0.01 *	0.01 *
NT	2	3200	187	438	0.06	0.14
NR	0	0	0	0	0.00	0.00
SL	1	1600	69	33	0.04	0.02
ST	2	3200	462	249	0.26 *	0.15 *
SR	0	0	385	232	0.24	0.15
EL	1	1600	183	426	0.11 *	0.27 *
ET	2	3200	523	763	0.16	0.24
ER	1	1600	7	10	0.00	0.01
WL	1	1600	201	172	0.13	0.11
WT	2	3200	583	529	0.18 *	0.17 *
WR	1	1600	27	78	0.02	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.66	0.70
LOS	B	B

NOTE:

ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 2. Johnson Ave (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022 with Project

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	0	0	0.00	0.00
NT	0	0	0	0	0.00 *	0.00 *
NR	0	0	0	0	0.00	0.00
SL	1	1600	35	62	0.02 *	0.04 *
ST	0	0	0	0	0.00	0.00
SR	1	1600	26	53	0.02	0.03
EL	1	1600	52	38	0.03 *	0.02
ET	2	3200	669	1042	0.21	0.33 *
ER	0	0	0	0	0.00	0.00
WL	0	0	0	0	0.00	0.00 *
WT	2	3200	876	702	0.29 *	0.23
WR	0	0	36	31	0.02	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.44	0.47
LOS	A	A

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 3. Peck Rd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022 with Project

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	206	270	0.13 *	0.17 *
NT	3	4800	751	1237	0.16	0.26
NR (F)	1	1600	347	371	0.22	0.23
SL	1	1600	249	245	0.16	0.15
ST	2	3200	1043	988	0.33 *	0.31 *
SR	1	1600	208	158	0.13	0.10
EL	1	1600	89	170	0.06 *	0.11 *
ET	2	3200	530	769	0.17	0.24
ER	1	1600	139	189	0.09	0.12
WL	1	1600	73	66	0.05	0.04
WT	2	3200	825	561	0.26 *	0.18 *
WR(d)	1	1600	175	266	0.11	0.17

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.88	0.87
LOS	D	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 6. Mountain View Rd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022 with Project

DATE: 23-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	136	176	0.09 *	0.11 *
NT	1	1600	144	252	0.09	0.17
NR	0	0	4	13	0.00	0.01
SL	1	1600	81	40	0.05	0.03
ST	1	1600	246	169	0.15 *	0.11 *
SR (d)	1	1600	267	156	0.17	0.10
EL	1	1600	100	166	0.06 *	0.10 *
ET	2	3200	595	1019	0.22	0.35
ER	0	0	93	115	0.06	0.07
WL	1	1600	63	29	0.04	0.02
WT	2	3200	1305	839	0.41 *	0.27 *
WR	0	0	11	26	0.01	0.02

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.81	0.69
LOS	D	B

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 7. Garvey Ave (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2022 with Project

DATE: 23-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	28	56	0.02	0.04
NT	2	3200	306	595	0.19 *	0.31 *
NR	0	0	304	393	0.19	0.25
SL	1	1600	110	70	0.07 *	0.04 *
ST	2	3200	430	342	0.20	0.17
SR	0	0	199	204	0.12	0.13
EL	1	1600	111	189	0.07 *	0.12
ET	2	3200	579	849	0.18	0.27 *
ER (F)	1	1600	20	41	0.01	0.03
WL	1	1600	303	255	0.19	0.16 *
WT	2	3200	1080	637	0.34 *	0.20
WR (F)	1	1600	21	23	0.01	0.01

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.77	0.88
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 9. Meeker Ave (N/S) and Garvey Ave (E/W)

CONDITION: Baseline 2022 with Project

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	0	0	66	34	0.04	0.02 *
NT	1	1600	121	83	0.13 *	0.09
NR	0	0	28	33	0.02	0.02
SL	0	0	58	204	0.04 *	0.13
ST	1	1600	41	163	0.07	0.24 *
SR	0	0	19	19	0.01	0.01
EL	1	1600	6	22	0.00 *	0.01
ET	2	3200	524	996	0.17	0.33 *
ER	0	0	22	44	0.01	0.03
WL	1	1600	21	32	0.01	0.02 *
WT	2	3200	789	601	0.26 *	0.20
WR	0	0	58	45	0.04	0.03

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.53	0.71
LOS	A	C

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 10. Peck Rd (N/S) and Garvey Ave (E/W)

CONDITION: Baseline 2022 with Project

DATE: 19-Apr-19

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	121	88	0.08 *	0.06 *
NT	2	3200	611	603	0.19	0.19
NR(d)	1	1600	71	50	0.04	0.03
SL	1	1600	76	113	0.05	0.07
ST	2	3200	681	1282	0.21 *	0.40 *
SR(d)	1	1600	358	248	0.22	0.16
EL	1	1600	204	276	0.13 *	0.17 *
ET	2	3200	428	898	0.13	0.28
ER(d)	1	1600	77	132	0.05	0.08
WL	1	1600	70	54	0.04	0.03
WT	2	3200	724	543	0.23 *	0.17 *
WR(d)	1	1600	71	79	0.04	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.75	0.90
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

Appendix C

Level of Service Computation Reports (HCM Calculations)

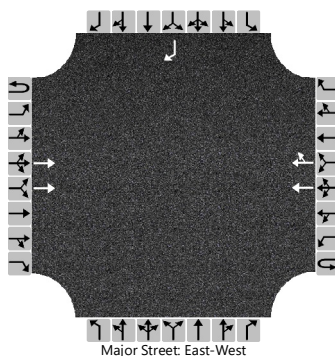


EXISTING WEEKDAY AM/PM PEAK HOUR

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	JDP	Intersection	Valley Blvd/I-10 SB Off
Agency/Co.	City of El Monte	Jurisdiction	CalTrans
Date Performed	4/1/2019	East/West Street	Valley Boulevard
Analysis Year	2018	North/South Street	I-10 SB Off-Ramp
Time Analyzed	Existing- AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Valley Blvd Multi-Family Residential		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1056				859	597								166
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																180
Capacity, c (veh/h)																330
v/c Ratio																0.55
95% Queue Length, Q ₉₅ (veh)																3.1
Control Delay (s/veh)																28.3
Level of Service (LOS)																D
Approach Delay (s/veh)													28.3			
Approach LOS													D			

HCS7 Two-Way Stop-Control Report

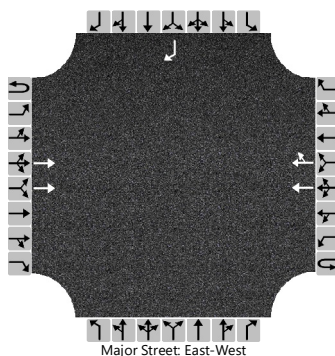
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Existing- PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/I-10 SB Off
Jurisdiction	CalTrans
East/West Street	Valley Boulevard
North/South Street	I-10 SB Off-Ramp
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1363				708	285								81
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																88
Capacity, c (veh/h)																484
v/c Ratio																0.18
95% Queue Length, Q ₉₅ (veh)																0.7
Control Delay (s/veh)																14.1
Level of Service (LOS)																B
Approach Delay (s/veh)													14.1			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

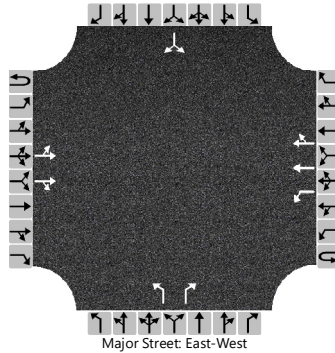
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Existing-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Valley Boulevard
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		1	721	17	0	24	1501	1		19		37		0		0
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1				26				21		40			0	
Capacity, c (veh/h)		403				811				174		596				
v/c Ratio		0.00				0.03				0.12		0.07				
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				0.4		0.2				
Control Delay (s/veh)		14.0				9.6				28.5		11.5				
Level of Service (LOS)		B				A				D		B				
Approach Delay (s/veh)	0.1				0.2				17.2							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

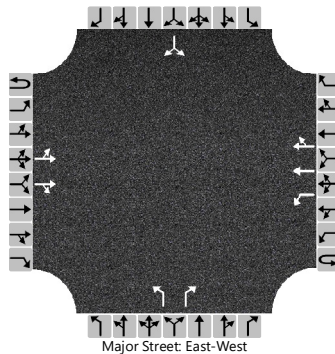
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Existing-PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Valley Boulevard
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		2	1233	8	0	28	980	1		15		38		3		5
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				30				16		41			9	
Capacity, c (veh/h)		661				501				115		394			243	
v/c Ratio		0.00				0.06				0.14		0.10			0.04	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2				0.5		0.3			0.1	
Control Delay (s/veh)		10.5				12.6				41.3		15.2			20.4	
Level of Service (LOS)		B				B				E		C			C	
Approach Delay (s/veh)	0.1				0.4				22.6				20.4			
Approach LOS									C				C			

HCS7 Two-Way Stop-Control Report

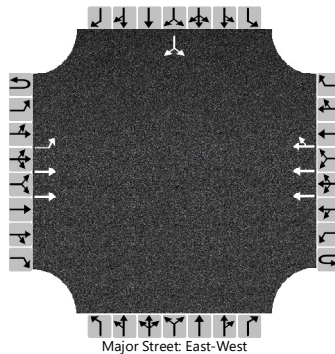
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Existing-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	11	549				737	14						9		17
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12													28	
Capacity, c (veh/h)		486													395	
v/c Ratio		0.02													0.07	
95% Queue Length, Q ₉₅ (veh)		0.1													0.2	
Control Delay (s/veh)		12.6													14.8	
Level of Service (LOS)		B													B	
Approach Delay (s/veh)	0.2												14.8			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

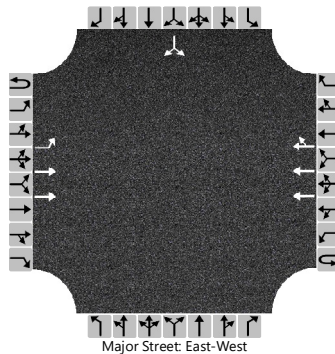
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Existing-PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	11	1063				561	20						8		27
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12													38	
Capacity, c (veh/h)		594													478	
v/c Ratio		0.02													0.08	
95% Queue Length, Q ₉₅ (veh)		0.1													0.3	
Control Delay (s/veh)		11.2													13.2	
Level of Service (LOS)		B													B	
Approach Delay (s/veh)	0.1												13.2			
Approach LOS													B			

BASELINE (2022) WEEKDAY AM/PM PEAK HOUR

HCS7 Two-Way Stop-Control Report

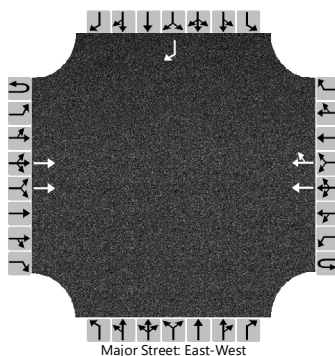
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline- AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/I-10 SB Off
Jurisdiction	CalTrans
East/West Street	Valley Boulevard
North/South Street	I-10 SB Off-Ramp
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1115				890	615								172
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																187
Capacity, c (veh/h)																317
v/c Ratio																0.59
95% Queue Length, Q ₉₅ (veh)																3.5
Control Delay (s/veh)																31.4
Level of Service (LOS)																D
Approach Delay (s/veh)													31.4			
Approach LOS													D			

HCS7 Two-Way Stop-Control Report

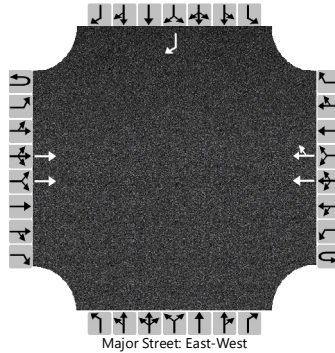
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline- PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/I-10 SB Off
Jurisdiction	CalTrans
East/West Street	Valley Boulevard
North/South Street	I-10 SB Off-Ramp
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1427				737	296								87
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																95
Capacity, c (veh/h)																468
v/c Ratio																0.20
95% Queue Length, Q ₉₅ (veh)																0.7
Control Delay (s/veh)																14.6
Level of Service (LOS)																B
Approach Delay (s/veh)													14.6			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

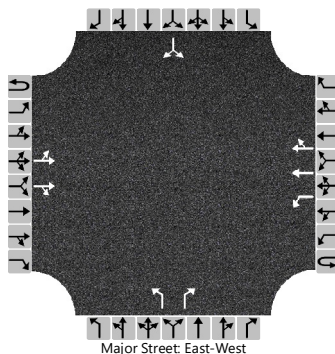
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Valley Boulevard
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		1	752	18	0	25	1552	1		20		38		0		0
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

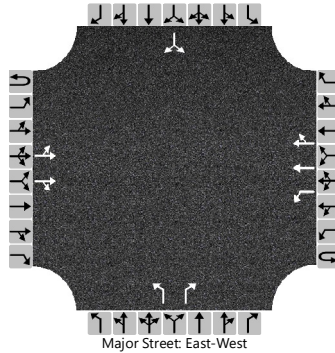
Flow Rate, v (veh/h)		1				27				22		41			0	
Capacity, c (veh/h)		384				786				164		581				
v/c Ratio		0.00				0.03				0.13		0.07				
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				0.4		0.2				
Control Delay (s/veh)		14.4				9.7				30.2		11.7				
Level of Service (LOS)		B				A				D		B				
Approach Delay (s/veh)	0.1				0.2				18.1							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	JDP	Intersection	Valley Blvd/La Madera Ave
Agency/Co.	City of El Monte	Jurisdiction	City of El Monte
Date Performed	4/1/2019	East/West Street	Valley Boulevard
Analysis Year	2018	North/South Street	La Madera Ave
Time Analyzed	Baseline-PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Valley Blvd Multi-Family Residential		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		2	1277	8	0	29	1018	1		15		39		3		5
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				32				16		42			9	
Capacity, c (veh/h)		638				480				107		380			229	
v/c Ratio		0.00				0.07				0.15		0.11			0.04	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2				0.5		0.4			0.1	
Control Delay (s/veh)		10.7				13.0				44.5		15.6			21.4	
Level of Service (LOS)		B				B				E		C			C	
Approach Delay (s/veh)	0.2				0.4				23.7				21.4			
Approach LOS									C				C			

HCS7 Two-Way Stop-Control Report

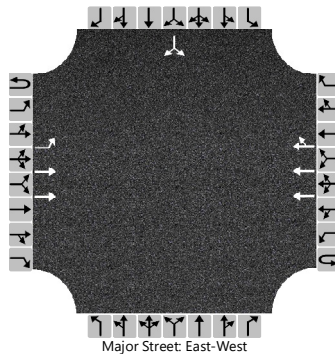
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	11	600				787	14						9		18
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12													29	
Capacity, c (veh/h)		458													375	
v/c Ratio		0.03													0.08	
95% Queue Length, Q ₉₅ (veh)		0.1													0.3	
Control Delay (s/veh)		13.1													15.4	
Level of Service (LOS)		B													C	
Approach Delay (s/veh)	0.2												15.4			
Approach LOS													C			

HCS7 Two-Way Stop-Control Report

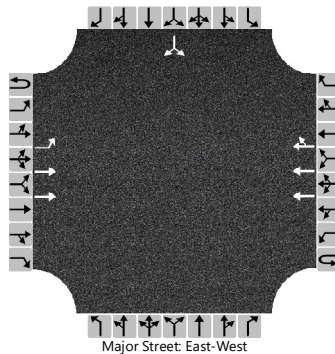
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline-PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	11	1144				637	21						8		28
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12													39	
Capacity, c (veh/h)		543													443	
v/c Ratio		0.02													0.09	
95% Queue Length, Q ₉₅ (veh)		0.1													0.3	
Control Delay (s/veh)		11.8													13.9	
Level of Service (LOS)		B													B	
Approach Delay (s/veh)	0.1												13.9			
Approach LOS													B			

**EXISTING WITH PROJECT
WEEKDAY AM/PM PEAK HOUR**

HCS7 Two-Way Stop-Control Report

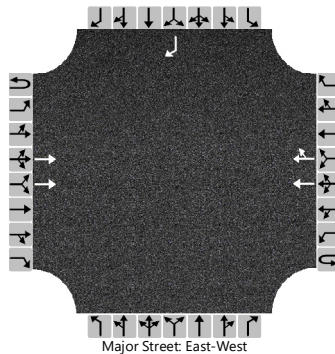
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Ex with Project-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/I-10 SB Off
Jurisdiction	CalTrans
East/West Street	Valley Boulevard
North/South Street	I-10 SB Off-Ramp
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1066				869	603								166
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

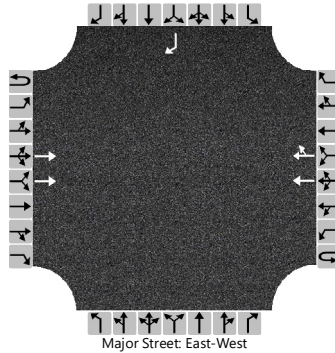
Flow Rate, v (veh/h)																180
Capacity, c (veh/h)																326
v/c Ratio																0.55
95% Queue Length, Q ₉₅ (veh)																3.2
Control Delay (s/veh)																28.9
Level of Service (LOS)																D
Approach Delay (s/veh)													28.9			
Approach LOS													D			

HCS7 Two-Way Stop-Control Report

General Information

Analyst	JDP	Intersection	Valley Blvd/I-10 SB Off
Agency/Co.	City of El Monte	Jurisdiction	CalTrans
Date Performed	4/1/2019	East/West Street	Valley Boulevard
Analysis Year	2018	North/South Street	I-10 SB Off-Ramp
Time Analyzed	Ex with Project-PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Valley Blvd Multi-Family Residential		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1377				714	289								81
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																88
Capacity, c (veh/h)																480
v/c Ratio																0.18
95% Queue Length, Q ₉₅ (veh)																0.7
Control Delay (s/veh)																14.2
Level of Service (LOS)																B
Approach Delay (s/veh)													14.2			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

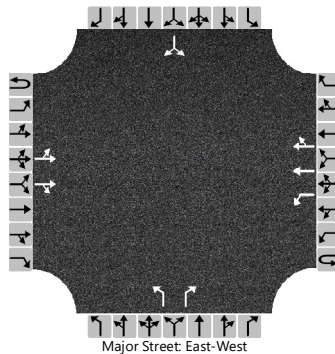
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Ex with Project-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Valley Boulevard
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		1	733	26	0	26	1505	1		30		42		0		0
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1				28				33		46			0	
Capacity, c (veh/h)		401				795				170		586				
v/c Ratio		0.00				0.04				0.19		0.08				
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				0.7		0.3				
Control Delay (s/veh)		14.0				9.7				31.1		11.7				
Level of Service (LOS)		B				A				D		B				
Approach Delay (s/veh)	0.1				0.2				19.8							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

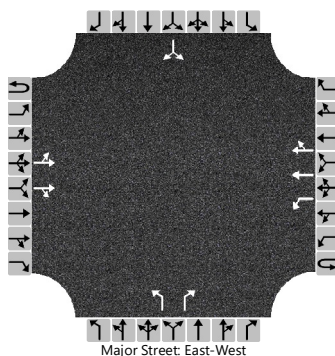
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Ex with Project-PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Valley Boulevard
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		2	1242	16	0	31	986	1		26		41		3		5
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				34				28		45			9	
Capacity, c (veh/h)		657				493				113		389			237	
v/c Ratio		0.00				0.07				0.25		0.11			0.04	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2				0.9		0.4			0.1	
Control Delay (s/veh)		10.5				12.8				47.4		15.4			20.7	
Level of Service (LOS)		B				B				E		C			C	
Approach Delay (s/veh)	0.1				0.4				27.9				20.7			
Approach LOS									D				C			

HCS7 Two-Way Stop-Control Report

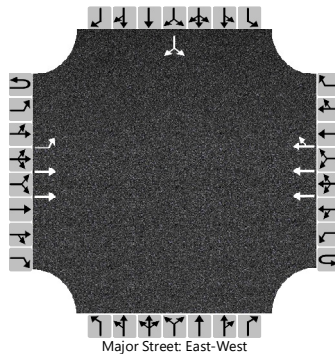
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Ex with Project-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	20	549				737	14						9		25
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22													37	
Capacity, c (veh/h)		486													414	
v/c Ratio		0.04													0.09	
95% Queue Length, Q ₉₅ (veh)		0.1													0.3	
Control Delay (s/veh)		12.8													14.5	
Level of Service (LOS)		B													B	
Approach Delay (s/veh)	0.4												14.5			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

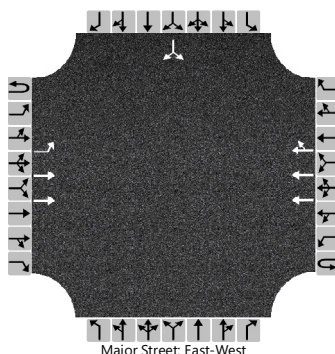
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Ex with Project-PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	24	1063				561	20						8		32
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		26													43	
Capacity, c (veh/h)		594													482	
v/c Ratio		0.04													0.09	
95% Queue Length, Q ₉₅ (veh)		0.1													0.3	
Control Delay (s/veh)		11.3													13.2	
Level of Service (LOS)		B													B	
Approach Delay (s/veh)	0.3												13.2			
Approach LOS													B			

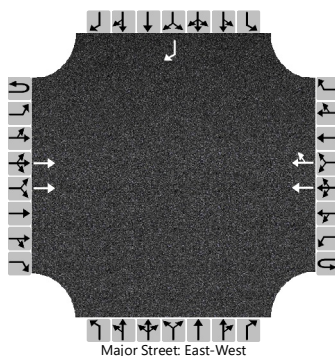
**BASELINE (2022) WITH PROJECT
WEEKDAY AM/PM PEAK HOUR**

HCS7 Two-Way Stop-Control Report

General Information

Analyst	JDP	Intersection	Valley Blvd/I-10 SB Off
Agency/Co.	City of El Monte	Jurisdiction	CalTrans
Date Performed	4/1/2019	East/West Street	Valley Boulevard
Analysis Year	2018	North/South Street	I-10 SB Off-Ramp
Time Analyzed	Baseline w/ Proj- AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Valley Blvd Multi-Family Residential		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1125				900	621								172
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																187
Capacity, c (veh/h)																313
v/c Ratio																0.60
95% Queue Length, Q ₉₅ (veh)																3.6
Control Delay (s/veh)																32.2
Level of Service (LOS)																D
Approach Delay (s/veh)													32.2			
Approach LOS													D			

HCS7 Two-Way Stop-Control Report

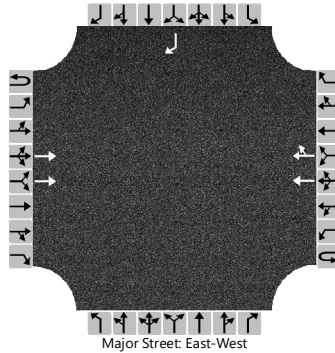
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline w/ Proj- PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/I-10 SB Off
Jurisdiction	CalTrans
East/West Street	Valley Boulevard
North/South Street	I-10 SB Off-Ramp
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	2	0		0	0	0		0	0	1
Configuration			T				T	TR								R
Volume (veh/h)			1441				743	300								87
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																95
Capacity, c (veh/h)																464
v/c Ratio																0.20
95% Queue Length, Q ₉₅ (veh)																0.8
Control Delay (s/veh)																14.7
Level of Service (LOS)																B
Approach Delay (s/veh)													14.7			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

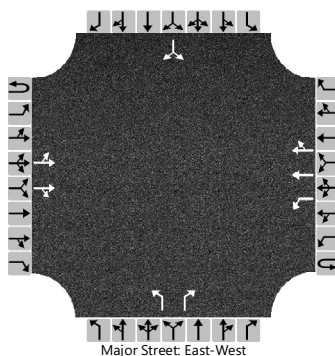
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline w/ Proj- AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Valley Boulevard
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		1	764	27	0	27	1556	1		31		43		0		0
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1				29				34		47			0	
Capacity, c (veh/h)		382				771				161		571				
v/c Ratio		0.00				0.04				0.21		0.08				
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				0.8		0.3				
Control Delay (s/veh)		14.4				9.9				33.3		11.9				
Level of Service (LOS)		B				A				D		B				
Approach Delay (s/veh)	0.1				0.2				20.8							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

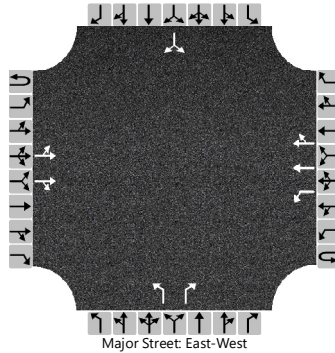
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline w/ Proj-PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Valley Blvd/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Valley Boulevard
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		1	0	1		0	1	0
Configuration		LT		TR		L	T	TR		L		R			LR	
Volume (veh/h)		2	1286	16	0	32	1024	1		26		42		3		5
Percent Heavy Vehicles (%)		0			3	3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No							
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5		6.9
Critical Headway (sec)		4.10				4.16				7.56		6.96		7.56		6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.20				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				35				28		46			9	
Capacity, c (veh/h)		634				472				104		375			223	
v/c Ratio		0.00				0.07				0.27		0.12			0.04	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2				1.0		0.4			0.1	
Control Delay (s/veh)		10.7				13.2				51.8		15.9			21.8	
Level of Service (LOS)		B				B				F		C			C	
Approach Delay (s/veh)	0.2				0.4				29.6				21.8			
Approach LOS									D				C			

HCS7 Two-Way Stop-Control Report

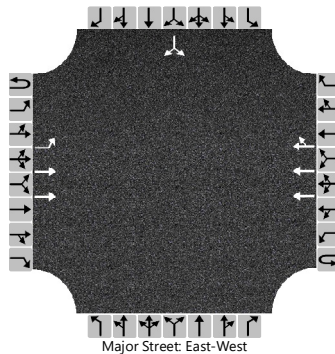
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline w/ Proj-AM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	20	600				787	14						9		26
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22													38	
Capacity, c (veh/h)		458													394	
v/c Ratio		0.05													0.10	
95% Queue Length, Q ₉₅ (veh)		0.1													0.3	
Control Delay (s/veh)		13.3													15.1	
Level of Service (LOS)		B													C	
Approach Delay (s/veh)	0.4												15.1			
Approach LOS													C			

HCS7 Two-Way Stop-Control Report

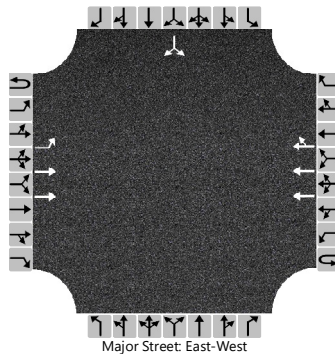
General Information

Analyst	JDP
Agency/Co.	City of El Monte
Date Performed	4/1/2019
Analysis Year	2018
Time Analyzed	Baseline w/ Proj-PM Peak
Intersection Orientation	East-West
Project Description	Valley Blvd Multi-Family Residential

Site Information

Intersection	Garvey Ave/La Madera Ave
Jurisdiction	City of El Monte
East/West Street	Garvey Avenue
North/South Street	La Madera Ave
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	3	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	24	1144				637	21						8		33
Percent Heavy Vehicles (%)	3	0												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		5.3												6.4		7.1
Critical Headway (sec)		5.30												5.76		7.16
Base Follow-Up Headway (sec)		3.1												3.8		3.9
Follow-Up Headway (sec)		3.10												3.83		3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		26													45	
Capacity, c (veh/h)		543													448	
v/c Ratio		0.05													0.10	
95% Queue Length, Q ₉₅ (veh)		0.2													0.3	
Control Delay (s/veh)		12.0													13.9	
Level of Service (LOS)		B													B	
Approach Delay (s/veh)	0.2												13.9			
Approach LOS													B			

Appendix D

Traffic Signal Warrant Analysis



HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- AM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-AM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: 4. Valley Boulevard and I-10 SB Off-Ramp
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Divided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0
 Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0
 Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):
 Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	0	0	1
Lane Usage		T			TR							R

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	1125	0	0	900	621	0	0	0	0	0	172
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	2646	172	2818	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	0	0	0	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2646	172	2818	1	1	1	1	1	0	1	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[X]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[X]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/22/2019 6:38:13 PM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- PM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-PM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: 4. Valley Boulevard and I-10 SB Off-Ramp
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Undivided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	0	0	1
Lane Usage		T			TR							R

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	0	0	0	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	1441	0	0	743	300	0	0	0	0	0	87
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	0	0	0	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	2484	87	2571	No	No	Yes	Yes	Yes	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2484	87	2571	0	0	1	1	1	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/22/2019 6:40:54 PM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- AM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-AM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: 5. Valley Boulevard and La Madera Avenue
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Undivided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane Usage	LTR			L	TR		L		R	LR		

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	1	764	27	27	1556	1	31	0	43	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	2376	74	2450	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	0	0	0	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2376	74	2450	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 2:16:07 PM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- PM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-PM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: 5. Valley Boulevard and La Madera Avenue
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Undivided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0
 Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0
 Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):
 Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane Usage	LTR			L	TR		L		R	LR		

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	0	0	0	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	2	1286	16	32	1024	1	26	0	42	3	0	5
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	0	0	0	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	2361	68	2437	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2361	68	2437	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 2:17:27 PM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- AM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-AM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: 8. Garvey Avenue and La Madera Avenue
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Undivided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	3	0	0	0	0	0	0	0
Lane Usage	L	T			TR						LR	

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	20	600	0	0	787	14	0	0	0	9	0	26
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	1421	35	1456	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	0	0	0	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	1421	35	1456	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/22/2019 6:47:51 PM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- PM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-PM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: 8. Garvey Avenue and La Madera Avenue
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Undivided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	3	0	0	0	0	0	0	0
Lane Usage	L	T			TR						LR	

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	0	0	0	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	24	1144	0	0	637	21	0	0	0	8	0	33
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	0	0	0	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	1826	41	1867	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	1826	41	1867	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/22/2019 6:49:24 PM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- AM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-AM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: Access 1: Valley Blvd West
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Divided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	0	0	0	0	0	0
Lane Usage		TR		L	T			LR				

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	778	4	5	1582	0	5	0	8	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	2369	13	2382	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	0	0	0	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2369	13	2382	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 10:41:57 AM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- PM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-PM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: Access 1: Valley Blvd West
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Divided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0
 Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0
 Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):
 Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	0	0	0	0	0	0
Lane Usage		TR		L	T			LR				

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	0	0	0	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	1296	5	7	1039	0	3	0	5	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	0	0	0	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	2347	8	2355	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2347	8	2355	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 10:29:13 AM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- AM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-AM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: Access 2: Valley Blvd East
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Divided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0
 Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0
 Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):
 Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	0	0	0	0	0	0
Lane Usage		TR		L	T			LR				

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	783	3	5	1582	0	5	0	7	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	2373	12	2385	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	0	0	0	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2373	12	2385	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 10:40:45 AM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- PM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-PM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: Access 2: Valley Blvd East
 Units: U.S. Customary

General

Major Street Direction: East-West
 Starting Time Interval: 7
 Median Type: Divided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	1	2	0	0	0	0	0	0	0
Lane Usage		TR		L	T			LR				

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	0	0	0	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	1297	4	7	1043	0	3	0	4	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound		Westbound		Northbound		Southbound	
	Gaps	Volume	Gaps	Volume	Gaps	Volume	Gaps	Volume
07 - 08	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	0	0	0	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	2351	7	2358	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	2351	7	2358	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 10:33:01 AM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- AM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-AM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: Access 3: La Madera Ave
 Units: U.S. Customary

General

Major Street Direction: North-South
 Starting Time Interval: 7
 Median Type: Divided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	0	0	0	1	0	0	1	0
Lane Usage	LR						LT			TR		

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	11	0	3	0	0	0	3	63	0	0	48	6
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	0	0	0	0	0	0	0	0	0	0	0	0
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound			Westbound			Northbound			Southbound		
	Gaps	Volume		Gaps	Volume		Gaps	Volume		Gaps	Volume	
07 - 08	0	0		0	0		0	0		0	0	
08 - 09	0	0		0	0		0	0		0	0	
09 - 10	0	0		0	0		0	0		0	0	
10 - 11	0	0		0	0		0	0		0	0	
11 - 12	0	0		0	0		0	0		0	0	
12 - 13	0	0		0	0		0	0		0	0	
13 - 14	0	0		0	0		0	0		0	0	
14 - 15	0	0		0	0		0	0		0	0	
15 - 16	0	0		0	0		0	0		0	0	
16 - 17	0	0		0	0		0	0		0	0	
17 - 18	0	0		0	0		0	0		0	0	
18 - 19	0	0		0	0		0	0		0	0	

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	120	14	134	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	0	0	0	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	120	14	134	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 10:43:59 AM

HCS7 Signal Warrants

Signal Warrants Analysis

File Name: Baseline+Proj- PM.xsw
 Analyst: KP
 Agency: City of El Monte
 Date Performed: 4/22/2019
 Time Analyzed: Baseline with Proj-PM Peak
 Jurisdiction: City of El Monte
 Analysis Year: 2019
 Project Description: Access 3: La Madera Ave
 Units: U.S. Customary

General

Major Street Direction: North-South
 Starting Time Interval: 7
 Median Type: Divided
 Major Street Speed (mi/h): 0
 Nearest Signal (ft): 0

Population <10,000: No
 Coordinated Signal System: No
 Crashes Per Year: 0
 Adequate Trials of Crash Experience Alternatives: No

School Crossing and Roadway Network

Number of Students in Highest Hour: 0
 Number of Adequate Gaps in Period: 0
 Number of Minutes in Period: 0

Two or More Major Routes: No
 Weekend Count: No
 5-year Growth Factor (%): 0

Railroad Crossing

Grade Crossing Approach: None
 Highest Volume Hour with Trains: Unknown
 Distance to Stop Line (ft):

Rail Traffic (trains/day): 4
 High Occupancy Buses (%): 0
 Tractor-Trailer Trucks (%): 10

Geometry and Traffic

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	0	0	0	1	0	0	1	0
Lane Usage	LR						LT			TR		

Traffic Volumes (veh/h)

Hour	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
07 - 08	0	0	0	0	0	0	0	0	0	0	0	0
08 - 09	0	0	0	0	0	0	0	0	0	0	0	0
09 - 10	0	0	0	0	0	0	0	0	0	0	0	0
10 - 11	0	0	0	0	0	0	0	0	0	0	0	0
11 - 12	0	0	0	0	0	0	0	0	0	0	0	0
12 - 13	0	0	0	0	0	0	0	0	0	0	0	0
13 - 14	0	0	0	0	0	0	0	0	0	0	0	0
14 - 15	0	0	0	0	0	0	0	0	0	0	0	0
15 - 16	0	0	0	0	0	0	0	0	0	0	0	0
16 - 17	7	0	2	0	0	0	4	61	0	0	40	8
17 - 18	0	0	0	0	0	0	0	0	0	0	0	0
18 - 19	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes and Gaps (Per Hour)

Hour	Eastbound			Westbound			Northbound			Southbound		
	Gaps	Volume		Gaps	Volume		Gaps	Volume		Gaps	Volume	
07 - 08	0	0		0	0		0	0		0	0	
08 - 09	0	0		0	0		0	0		0	0	
09 - 10	0	0		0	0		0	0		0	0	
10 - 11	0	0		0	0		0	0		0	0	
11 - 12	0	0		0	0		0	0		0	0	
12 - 13	0	0		0	0		0	0		0	0	
13 - 14	0	0		0	0		0	0		0	0	
14 - 15	0	0		0	0		0	0		0	0	
15 - 16	0	0		0	0		0	0		0	0	
16 - 17	0	0		0	0		0	0		0	0	
17 - 18	0	0		0	0		0	0		0	0	
18 - 19	0	0		0	0		0	0		0	0	

Delay

Hour	Eastbound		Westbound		Northbound		Southbound	
	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs	secs/veh	veh-hrs
07 - 08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08 - 09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09 - 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12 - 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 - 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 - 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16 - 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17 - 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 - 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Summary

Hour	Major Volume	Minor Volume	Total Volume	1A 100%	1A 80%	1B 100%	1B 80%	2 100%	3A 100%	3B 100%	4A 100%	4B 100%
07 - 08	0	0	0	No	No	No	No	No	No	No	No	No
08 - 09	0	0	0	No	No	No	No	No	No	No	No	No
09 - 10	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	0	0	0	No	No	No	No	No	No	No	No	No
16 - 17	113	9	122	No	No	No	No	No	No	No	No	No
17 - 18	0	0	0	No	No	No	No	No	No	No	No	No
18 - 19	0	0	0	No	No	No	No	No	No	No	No	No
Total	113	9	122	0	0	0	0	0	0	0	0	0

Results

Warrant 1: Eight-Hour Vehicular Volume	[]
A. Minimum Vehicular Volumes	[]
B. Interruption of Continuous Traffic	[]
80% Vehicular --and-- Interruption Volumes	[]
Warrant 2: Four-Hour Vehicular Volume	[]
Four-Hour Vehicular Volumes	[]
Warrant 3: Peak Hour	[]
A. Peak-Hour Conditions	[]
B. Peak-Hour Vehicular Volume Hours Met	[]
Warrant 4: Pedestrian Volume	[]
A. Four Hour Volumes	[]
B. One-Hour Volumes	[]
Warrant 5: School Crossing	[]
Gaps Same Period	[]
Student Volumes	[]
Nearest Traffic Control Signal	[]
Warrant 6: Coordinated Signal System	[]
Degree of Platooning	[]
Warrant 7: Crash Experience	[]
A. Adequate Trials of Alternatives	[]
B. Reported Crashes	[]
C. 80% Volumes for Warrants 1A, 1B --or-- 4	[]
Warrant 8: Roadway Network	[]
A. Weekday Volume	[]
B. Weekend Volume	[]

Warrant 9: Grade Crossing

[]

A. Grade Crossing within 140 ft --and--

[]

B. Peak-Hour Vehicular Volumes

[]

This text report was created in HCS™ Signal Warrants Version 7.7 on 4/23/2019 10:45:58 AM

Appendix E

Level of Service Computation Reports (ICU Calculations)- Baseline 2024 at Selected Study Intersections



BASELINE (2024) WEEKDAY AM/PM PEAK HOUR

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 3. Peck Rd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2024

DATE: 26-Aug-21

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	212	278	0.13 *	0.17 *
NT	3	4800	774	1272	0.16	0.27
NR (F)	1	1600	354	376	0.22	0.24
SL	1	1600	254	248	0.16	0.16
ST	2	3200	1075	1017	0.34 *	0.32 *
SR	1	1600	215	162	0.13	0.10
EL	1	1600	91	175	0.06 *	0.11 *
ET	2	3200	542	786	0.17	0.25
ER	1	1600	143	195	0.09	0.12
WL	1	1600	75	68	0.05	0.04
WT	2	3200	844	573	0.26 *	0.18 *
WR(d)	1	1600	176	271	0.11	0.17

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.89	0.88
LOS	D	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 7. Garvey Ave (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2024

DATE: 26-Aug-21

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	29	57	0.02	0.04
NT	2	3200	315	612	0.20 *	0.32 *
NR	0	0	313	404	0.20	0.25
SL	1	1600	114	72	0.07 *	0.05 *
ST	2	3200	444	352	0.20	0.18
SR	0	0	205	210	0.13	0.13
EL	1	1600	108	191	0.07 *	0.12
ET	2	3200	588	866	0.18	0.27 *
ER (F)	1	1600	20	42	0.01	0.03
WL	1	1600	312	262	0.20	0.16 *
WT	2	3200	1108	649	0.35 *	0.20
WR (F)	1	1600	21	23	0.01	0.01

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.79	0.90
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 10. Peck Rd (N/S) and Garvey Ave (E/W)

CONDITION: Baseline 2024

DATE: 26-Aug-21

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	124	90	0.08 *	0.06 *
NT	2	3200	630	621	0.20	0.19
NR(d)	1	1600	70	48	0.04	0.03
SL	1	1600	77	115	0.05	0.07
ST	2	3200	701	1319	0.22 *	0.41 *
SR(d)	1	1600	369	255	0.23	0.16
EL	1	1600	210	283	0.13 *	0.18 *
ET	2	3200	437	919	0.14	0.29
ER(d)	1	1600	80	136	0.05	0.09
WL	1	1600	68	54	0.04	0.03
WT	2	3200	742	556	0.23 *	0.17 *
WR(d)	1	1600	72	81	0.05	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.76	0.92
LOS	C	E

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

**BASELINE (2024) WITH PROJECT
WEEKDAY AM/PM PEAK HOUR**

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 3. Peck Rd (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2024 with Project

DATE: 26-Aug-21

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	212	278	0.13 *	0.17 *
NT	3	4800	774	1272	0.16	0.27
NR (F)	1	1600	358	381	0.22	0.24
SL	1	1600	257	252	0.16	0.16
ST	2	3200	1075	1017	0.34 *	0.32 *
SR	1	1600	215	162	0.13	0.10
EL	1	1600	91	175	0.06 *	0.11 *
ET	2	3200	546	791	0.17	0.25
ER	1	1600	143	195	0.09	0.12
WL	1	1600	75	68	0.05	0.04
WT	2	3200	850	577	0.27 *	0.18 *
WR(d)	1	1600	180	273	0.11	0.17

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.90	0.88
LOS	D	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*)
plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 7. Garvey Ave (N/S) and Valley Blvd (E/W)

CONDITION: Baseline 2024 with Project

DATE: 26-Aug-21

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	29	57	0.02	0.04
NT	2	3200	315	612	0.20 *	0.32 *
NR	0	0	313	404	0.20	0.25
SL	1	1600	114	72	0.07 *	0.05 *
ST	2	3200	444	352	0.20	0.18
SR	0	0	205	210	0.13	0.13
EL	1	1600	114	195	0.07 *	0.12
ET	2	3200	596	873	0.19	0.27 *
ER (F)	1	1600	20	42	0.01	0.03
WL	1	1600	312	262	0.20	0.16 *
WT	2	3200	1112	654	0.35 *	0.20
WR (F)	1	1600	21	23	0.01	0.01

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.79	0.90
LOS	C	D

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.

INTERSECTION CAPACITY UTILIZATION CALCULATION WORKSHEET

INTERSECTION 10. Peck Rd (N/S) and Garvey Ave (E/W)

CONDITION: Baseline 2024 with Project

DATE: 26-Aug-21

INTERSECTION CAPACITY UTILIZATION (ICU) ANALYSIS

MOVEMENT	LANES	SAT. CAPACITY (C)	VOLUME		V/C	
			AM	PM	AM	PM
NL	1	1600	124	90	0.08 *	0.06 *
NT	2	3200	630	621	0.20	0.19
NR(d)	1	1600	73	52	0.05	0.03
SL	1	1600	77	115	0.05	0.07
ST	2	3200	701	1319	0.22 *	0.41 *
SR(d)	1	1600	369	255	0.23	0.16
EL	1	1600	210	283	0.13 *	0.18 *
ET	2	3200	440	923	0.14	0.29
ER(d)	1	1600	80	136	0.05	0.09
WL	1	1600	72	56	0.05	0.04
WT	2	3200	746	558	0.23 *	0.17 *
WR(d)	1	1600	72	81	0.05	0.05

CLEARANCE	0.10	0.10
CRITICAL RIGHT	-	-
ICU	0.76	0.92
LOS	C	E

NOTE: ICU is the sum of critical movements denoted by an asterisk (*) plus critical right-turn value if any.