URBAN CROSSROADS

41 Corporate Park | Suite 300 | Irvine, CA 92606 | (949) 660-1994
www.urbanXroads.com

October 9, 2015

Mr. Jesus "Freddie" Olmos
ECORP CONSULTING, INC.
215 North 5th Street
Redlands, CA 92374

SUBJECT: RIVER WILDERNESS PARK ENTRY IMPROVEMENTS FOCUSED TRAFFIC ASSESSMENT

Dear Mr. Jesus "Freddie" Olmos:

The firm of Urban Crossroads, Inc. is pleased to submit this Focused Traffic Assessment for the River Wilderness Park Entry Improvements (referred to as "Project"), which is located along State Route 39 (SR-39) on the northern boundary of the City of Azusa, as shown on Exhibit 1-A.

The purpose of this assessment is to provide trip generation estimates for the proposed Project and evaluate the proposed roundabout at the intersection of SR-39 and Old San Gabriel Canyon Road for Existing (2015), Existing plus Project (E+P), Opening Year (2021) and Opening Year (2028) Without and With Project traffic conditions. In addition, the intersection sight distance and stopping sight distance at the proposed roundabout has also been evaluated.

SUMMARY OF FINDINGS

The Project is anticipated to generate a total of 640 trips per day with approximately 26 AM peak hour trips and 52 PM peak hour trips.

Operations analysis has been performed for the proposed roundabout based on Existing (2015) and Existing plus Project peak hour traffic volumes using SIDRA Intersection 6 software using Highway Capacity Manual (HCM) 2010 methodology. In addition lane capacities were adjusted based on A and B factors per the Caltrans *Roundabout Geometric Design Guidance, Final Report* (June 2007). Based on the results of this analysis, the proposed roundabout is anticipated to operate at LOS "A" during both AM and PM peak hours for Existing (2015), Existing plus Project (E+P), Opening Year (2021) and Opening Year (2028) Without and With Project traffic conditions.

Intersection and stopping sight distance have been evaluated for the proposed roundabout based on guidance in Report 672 *Roundabouts: An Informational Guide (Second Edition)* published by the NCHRP and the FHWA. It is recommended that no more than the minimum required intersection sight distance be provided on each approach. Landscaping can be effective in restricting sight distance to the minimum requirements. Adequate visibility for vehicular and pedestrian traffic should be provided at the intersection by limiting sight obstructions within the limited use are. Any landscaping within the limited use area should not exceed 3.5 feet in height

for intersection sight distance and 2 feet for stopping sight distance. The limited use area should be kept clear of any landscaping or any other obstructions that may impede the visibility of the driver.

PROJECT OVERVIEW

The Azusa River Wilderness Park (Park) is envisioned as an 89-acre park along State Route 39 (SR-39) on the northern boundary of the City of Azusa. The Park consists of several parcels acquired by the Water Conservation Authority (WCA) through agreements with the Rivers and Mountains Conservancy (RMC) and the City of Azusa, along SR-39 and the San Gabriel River. The Azusa River Wilderness Park area consists of five separate parcels (El Encanto Property, Taylor Property, Rainbow Ranch Equestrian Facility, Canyon Inn Property, and a private parcel south of the Canyon Inn Property). These parcels were acquired with the overall goal of developing them into a park resource that would help enhance flood protection, water supply, natural habitat, recreation, open space, and economic development.

In November of 2008, the WCA acquired the approximately 32-acre Canyon Inn Property as part of the Azusa River Wilderness Park. The Azusa River Wilderness Park would encompass the Canyon Inn Property as well as adjacent properties under WCA ownership and be developed with the intent to provide a better outdoor visitor experience while restoring natural habitats and increasing trail access and educational experiences. The proposed Project would involve improvements to the 32-acre Canyon Inn Property and would be part of the Canyon Inn River Wilderness Park Site Programming, Planning, & Concept Report (Report). The Proposed Project would help achieve the conceptual goals of the Report to expand and improve the existing facilities while restoring and reusing the area's natural features. The proposed Project would improve the entry to the Azusa River Wilderness Park within the 32-acre Canyon Inn Property as shown on Exhibit 1-B. The Project would include constructing a roundabout, extending the San Gabriel River Bike Trail and Old San Gabriel Canyon Road, installing new utility lines (water and sewer), and building new park amenities. The Project would provide a gateway into the Azusa River Wilderness Park that would be open to visitors of the San Gabriel Mountains and Angeles National Forest. The Project would also help serve as a regional connection to the Rio Hondo and the Los Angeles River in addition to serving as a local connection to the San Gabriel River Bike Trail, Fish Canyon Trail, Forest Service station, Robert Creek Trail, Garcia Trail, and Glendora Ridge Motorway. The Project amenities is anticipated to be added in phases. Opening Year 2021 (interim) and Opening Year 2028 (build-out) have been considered for the purposes of this traffic analysis.

EXISTING (2015) TRAFFIC VOLUMES

Manual AM and PM peak hour turning movement counts were conducted at the intersection of SR-39 / Old San Gabriel Canyon Road in May 2015. The raw manual peak hour turning movement

and ADT traffic count data sheets are included in Attachment "A". Existing (2015) ADT, AM and PM peak hour intersection volumes are shown on Exhibit 2.

EXHIBIT 1-A LOCATION MAP

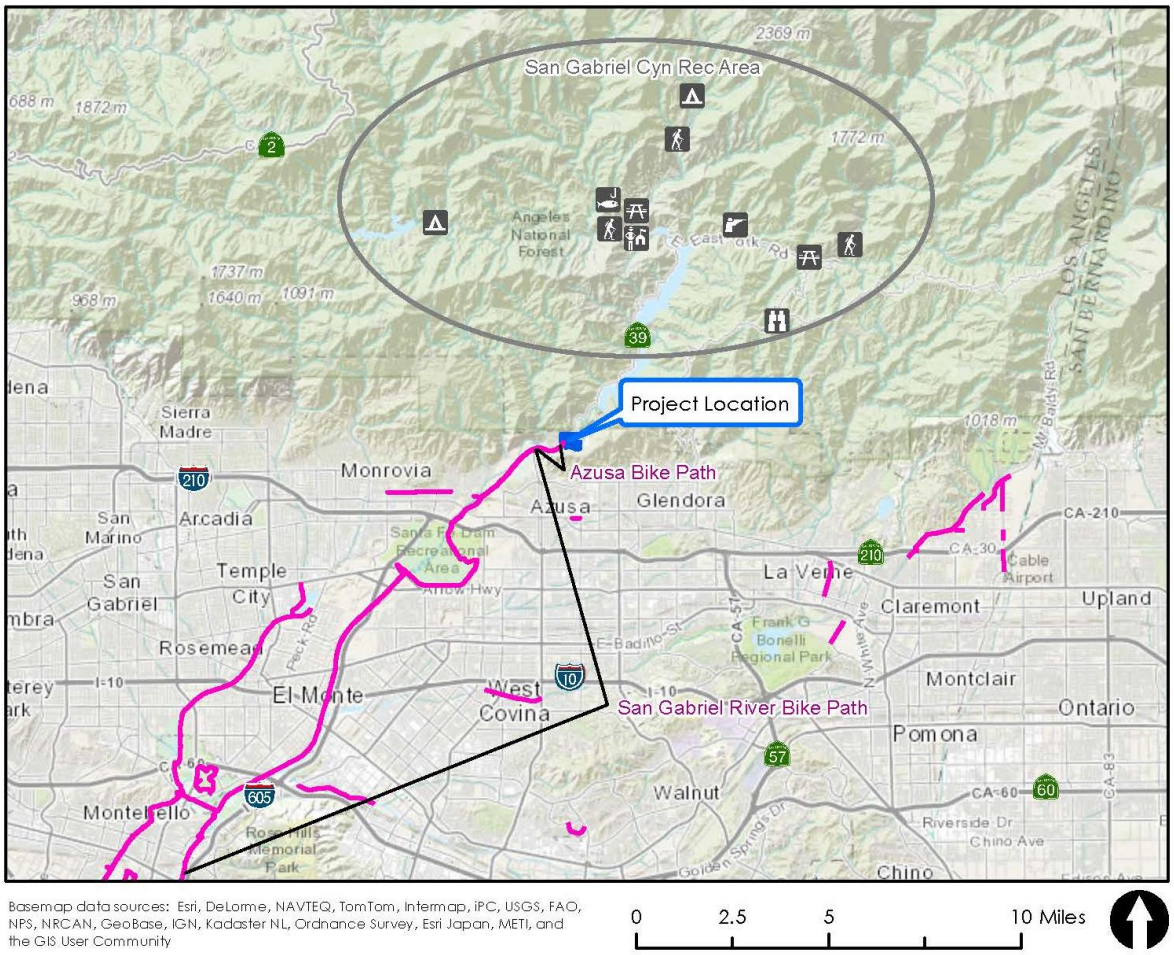


EXHIBIT 1-B SITE PLAN

PROJECT TRIP GENERATION AND DISTRIBUTION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. The proposed Project site will consist of approximately 32 acre Regional Park. Traffic generation rates for the proposed Project have been derived from (Not So) Brief Guide of Vehicular Traffic General Rates for the San Diego Region (April 2002) published by San Diego association of Governments (SANDAG). The trip generation rates used for this analysis are shown in Table 1. The rates published by SANDAG are more conservative compared to rates in ITE Trip Generation manual. As such, trip generation rates published by SANDAG have been used to provide a conservative estimate for Project trips.

A summary of the proposed Project's trip generation is also shown on Table 1. The Project is anticipated to generate a total of 640 trips per day with approximately 26 AM peak hour trips and 52 PM peak hour trips.

Based on existing travel patterns and roadway network, the Project trip distribution was estimated to be 95% to the south on SR-39 and 5% to the north on SR-39.

TABLE 1: PROJECT TRIP GENERATION

Project Trip Generation Rates

Land Use	Units[1]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Regional Park (Developed)[2]	AC	N/A	0.40	0.40	0.80	0.80	0.80	1.60	20.00

Park Trip Generation Summary

Land Use[1]	Quantity	Units	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Regional Park (Developed)[2]	32	AC	13	13	26	26	26	52	640

[1] AC = Acres

[2] Rates from (Not So) Brief Guide of Vehicular Traffic Generation for San Diego Region (SANDAG, April 2002) used.

EXISTING PLUS PROJECT TRAFFIC VOLUMES

The Existing plus Project (E+P) traffic volumes were derived by adding the Project traffic to Existing (2015) volumes. E+P ADT, AM and PM peak hour intersection volumes are shown on Exhibit 3.

OPENING YEAR (2021) AND OPENING YEAR (2028) TRAFFIC VOLUMES

Future year traffic forecasts have been based upon background (ambient) growth at 2% per year for 2021 and 2028 traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways.

According to information published by the Riverside County Information Technology GIS staff as input to the Southern California Association of Governments (SCAG) Regional Transportation Plan (2012), the population of City of Azusa is projected to increase by 16.2% in the period between 2010 and 2035, a compounded rate of approximately 0.56% annually. During the same period, employment in Western Riverside County is expected to increase by 5.7% or 0.2% compounded annually.

The annual growth rate utilized for the purposes of this analysis would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Azusa for Opening Year (2021) and Opening Year (2028) traffic conditions, especially considering less than 1% annual growth anticipated for the region. As such, the growth in traffic volumes assumed in this traffic

analysis would tend to overstate as opposed to understate the potential impacts to traffic and circulation.

Opening Year (2021) Without Project ADT, AM and PM peak hour intersection volumes are shown on Exhibit 4.

Opening Year (2021) With Project ADT, AM and PM peak hour intersection volumes are shown on Exhibit 5.

Opening Year (2028) Without Project ADT, AM and PM peak hour intersection volumes are shown on Exhibit 6.

Opening Year (2028) With Project ADT, AM and PM peak hour intersection volumes are shown on Exhibit 7.

ROUNDABOUT PARAMETERS

The operational analysis for the roundabout was based on the following design parameters:

- Single lane roundabout (one circulatory lane).
- One approach and one exit lane on all legs of the roundabout.
- Inscribed Circle Diameter (ICD) of 130 feet.
- Circulatory Roadway Width of 20 feet.
- The heavy vehicle percentage based on existing counts was nominal. However, a 2% heavy vehicle percentage was applied on all approaches to provide a conservative analysis.
- Peak Hour Factor (PHF) was based on existing counts for both AM and PM peak hours.
- Capacity model calibrated to California data based on the Caltrans Roundabout Geometric Design Guidance to include the following A and B parameters:

  A = 1440 for single-lane; 1640 for multilane.

  B = 0.0010 for single-lane; 0.0009 for multilane.

CAPACITY ANALYSIS

Operational performance of the proposed roundabout was then evaluated for Existing (2015), E+P, Opening Year (2021) and Opening Year (2028) Without and With Project traffic conditions using the SIDRA Intersection 6 software. SIDRA uses a “gap acceptance” model that predicts operations based on theoretical gap characteristics. SIDRA uses a bunched exponential model for

emulating gap acceptance, and also provides delay and LOS results based on HCM 2010 methodology.

Table 2 summarizes the level of service and operational performance for Existing (2015) volumes.

TABLE 2: EXISTING (2015) ROUNDABOUT LOS AND OPERATIONAL PERFORMANCE

	Existing (2015) AM Peak				Existing (2015) PM Peak			
	South	East	North	Intersection	South	East	North	Intersection
Average Delay (sec.)	3.0	2.8	2.7	3.0	2.8	2.7	3.0	2.9
LOS	A	A	A	A	A	A	A	A

Based on the results of this analysis, the proposed roundabout is anticipated to operate at LOS "A" during AM and PM peak hours with Existing (2015) volumes.

The SIDRA output worksheets with Existing (2015) traffic volumes are included in Attachment "B".

Table 3 summarizes the level of service and operational performance for E+P volumes.

TABLE 3: E+P ROUNDABOUT LOS AND OPERATIONAL PERFORMANCE

	E+P AM Peak				E+P PM Peak			
	South	East	North	Intersection	South	East	North	Intersection
Average Delay (sec.)	3.1	2.9	2.7	3.0	2.9	2.9	3.1	3.0
LOS	A	A	A	A	A	A	A	A

Based on the results of this analysis, the proposed roundabout is anticipated to operate at LOS "A" during AM and PM peak hours with E+P volumes.

The SIDRA output worksheets with E+P traffic volumes are included in Attachment "C".

Table 4 summarizes the level of service and operational performance for Opening Year (2021) volumes.

TABLE 4: OPENING YEAR (2021) ROUNDABOUT LOS AND OPERATIONAL PERFORMANCE

	2021 Without Project AM peak				2021 Without Project PM Peak			
	South	East	North	Intersection	South	East	North	Intersection
Average Delay (sec.)	3.1	2.9	2.7	3.0	2.8	2.7	3.1	2.9
LOS	A	A	A	A	A	A	A	A
	2021 With Project AM Peak				2021 With Project PM Peak			
	South	East	North	Intersection	South	East	North	Intersection
Average Delay (sec.)	3.2	3.0	2.7	3.1	2.9	2.9	3.2	3.0
LOS	A	A	A	A	A	A	A	A

Based on the results of this analysis, the proposed roundabout is anticipated to operate at LOS "A" during AM and PM peak hours with Opening Year (2021) Without and With Project volumes.

The SIDRA output worksheets with Opening Year (2021) Without and With traffic volumes are included in Attachment "D".

Table 4 summarizes the level of service and operational performance for Opening Year (2021) volumes.

TABLE 5: OPENING YEAR (2028) ROUNDABOUT LOS AND OPERATIONAL PERFORMANCE

	2028 Without Project AM peak				2028 Without Project PM Peak			
	South	East	North	Intersection	South	East	North	Intersection
Average Delay (sec.)	3.2	2.9	2.7	3.1	2.8	2.7	3.1	3.0
LOS	A	A	A	A	A	A	A	A
	2028 With Project AM Peak				2028 With Project PM Peak			
	South	East	North	Intersection	South	East	North	Intersection
Average Delay (sec.)	3.3	3.0	2.7	3.2	3.0	2.9	3.2	3.1
LOS	A	A	A	A	A	A	A	A

Based on the results of this analysis, the proposed roundabout is anticipated to operate at LOS "A" during AM and PM peak hours with Opening Year (2028) Without and With Project volumes.

The SIDRA output worksheets with Opening Year (2028) Without and With traffic volumes are included in Attachment "E".

SIGHT DISTANCE

Intersection and stopping sight distance have been evaluated for the proposed roundabout based on guidance in Report 672 *Roundabouts: An Informational Guide (Second Edition)* published by the NCHRP and the FHWA and *A Policy on Geometric Design of Highways and Street (AASHTO "Green Book").*

Per AASHTO "Green Book", the limited use area is determined using an assumed height of driver's eye of 3.5 feet and an assumed height of object of 3.5 feet for intersection sight distance and an assumed height of object of 2 feet for stopping sight distance. It shall be used for the purpose of prohibiting or clearing obstructions in order to maintain adequate sight distance at intersections.

The intersection sight distances for eastbound, northbound and westbound approaches are shown on Exhibits 8, 9 and 10, respectively. It is recommended that no more than the minimum required intersection sight distance be provided on each approach. Landscaping can be effective in restricting sight distance to the minimum requirements.

The stopping sight distance at the road leading to existing Taylor House and Highway 39 is shown on Exhibit 11. The stopping sight distance at Old San Gabriel Canyon Road and SR-39 is shown on Exhibit 12.

Adequate visibility for vehicular and pedestrian traffic should be provided at the intersection by limiting sight obstructions within the limited use are. Any landscaping within the limited use area should not exceed 3.5 feet in height for intersection sight distance and 2 feet for stopping sight distance. The limited use area should be kept clear of any landscaping or any other obstructions that may impede the visibility of the driver.

At ABC Road (to the Taylor House), there are major sight line concerns, especially with the proposal for having school buses access this roadway. It appears as though this would be unsafe, and alternate route for the school buses is recommended. The limited use areas for this driveway include the hills where it would be physically challenging to not have obstruction higher than 2 feet to provide adequate line of sight.

If you have any questions, please contact me directly at (949) 660-1994, extension 205.

Respectfully submitted,

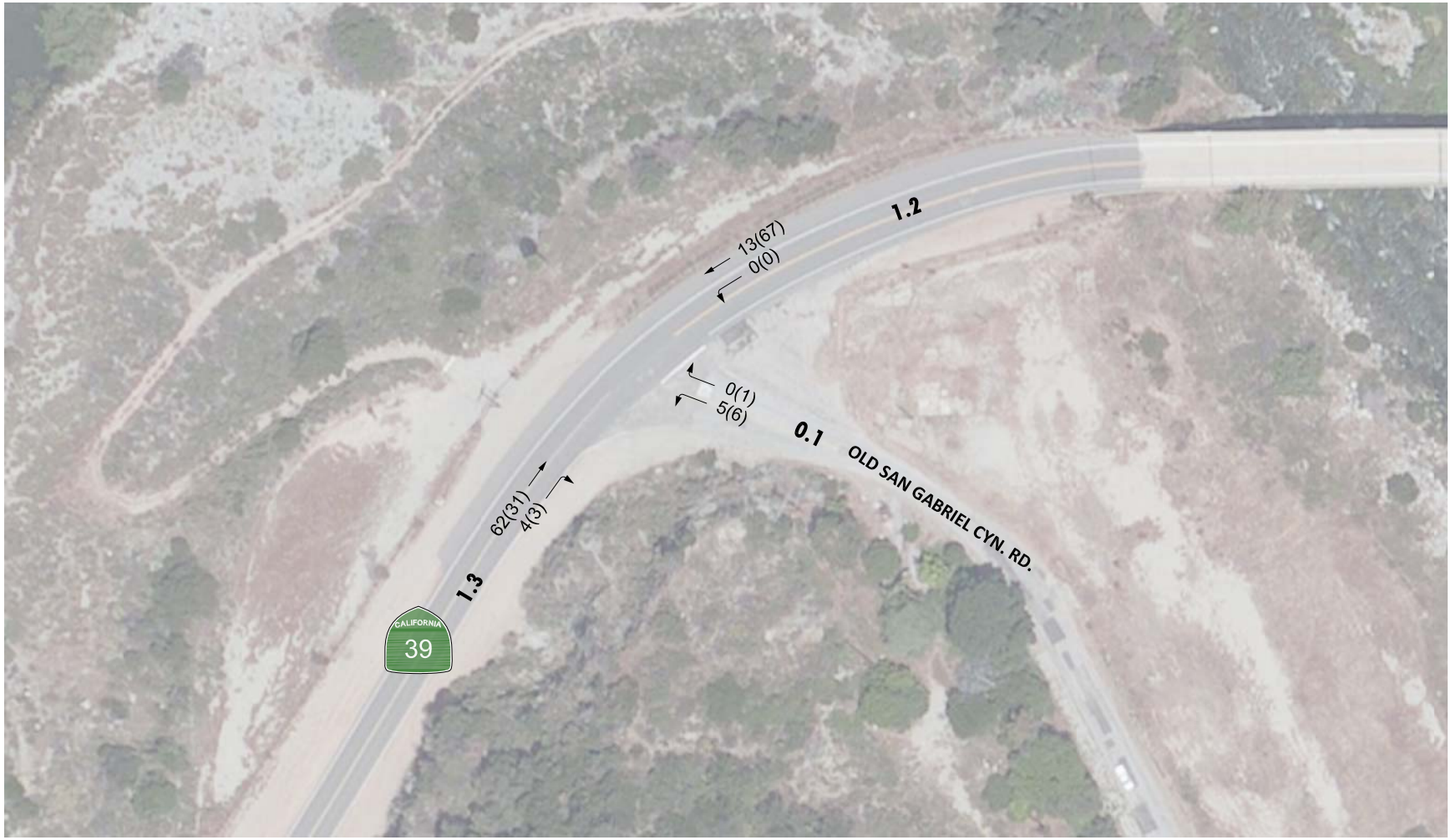
URBAN CROSSROADS, INC.

Pranesh Tarikere, PE
Senior Engineer

Haseeb Qureshi
Senior Associate

Attachments

EXHIBIT 2: EXISTING (2015) TRAFFIC VOLUMES

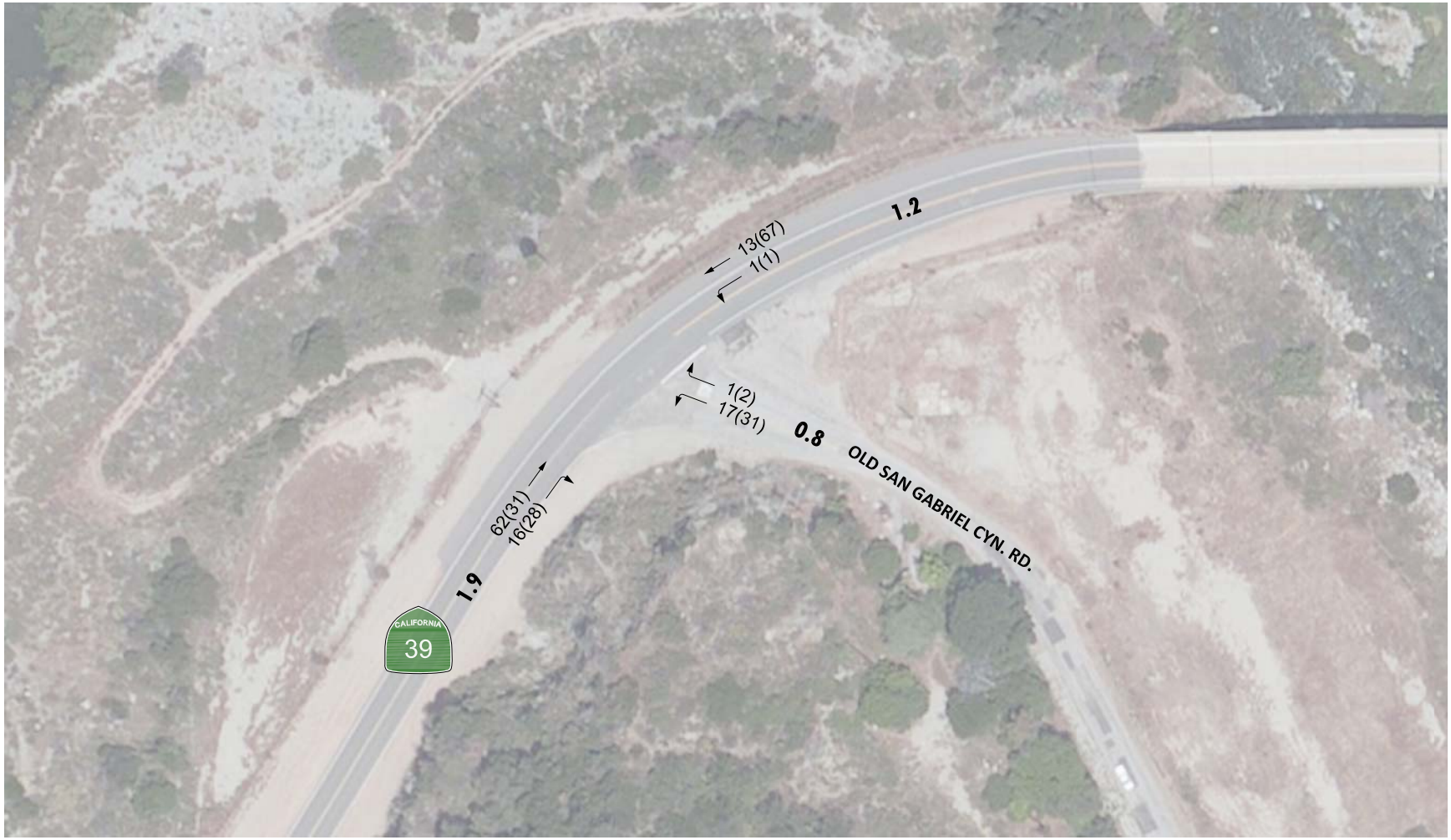


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 3: EXISTING PLUS PROJECT TRAFFIC VOLUMES

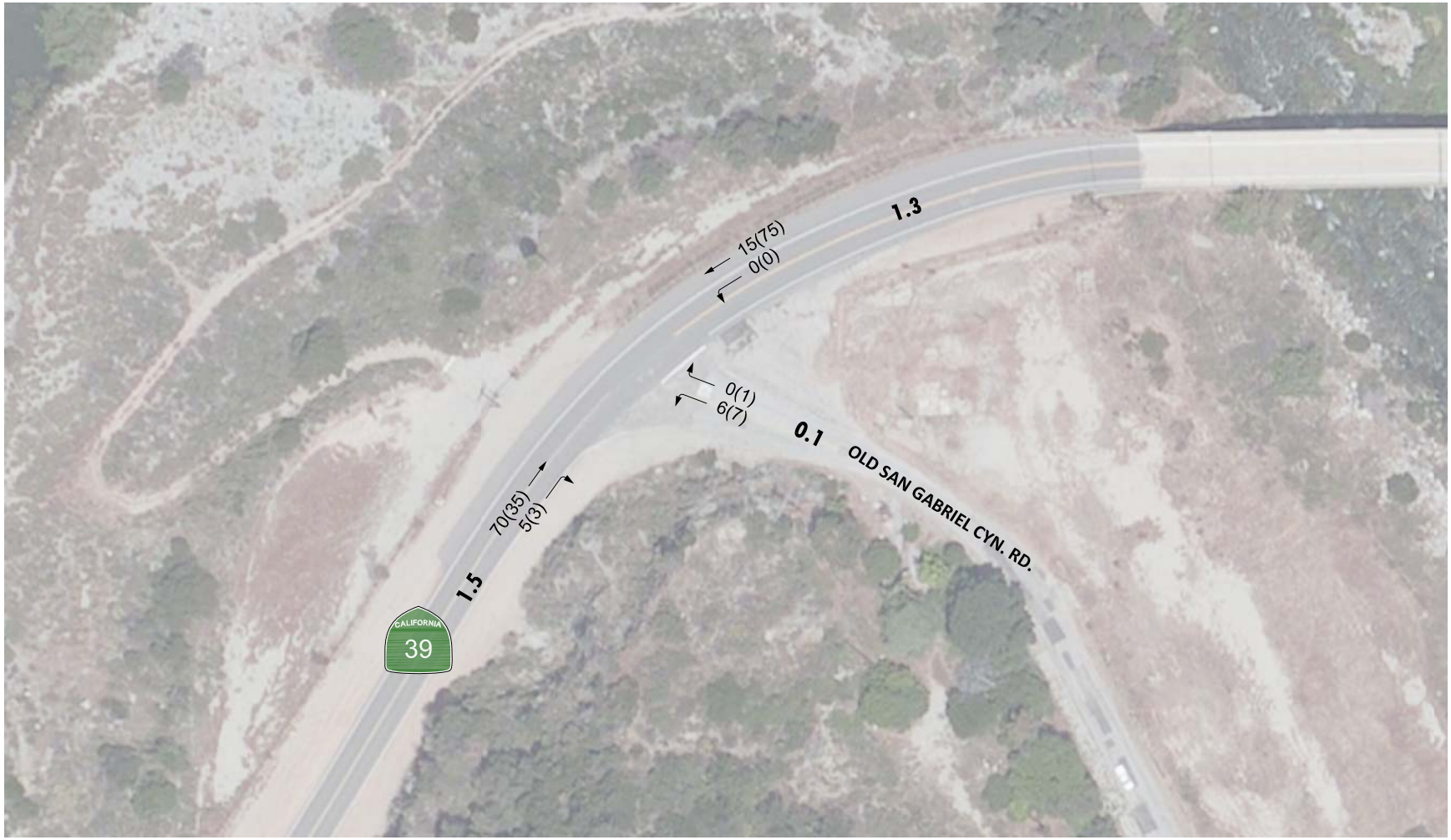


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 4: OPENING YEAR (2021) WITHOUT PROJECT TRAFFIC VOLUMES

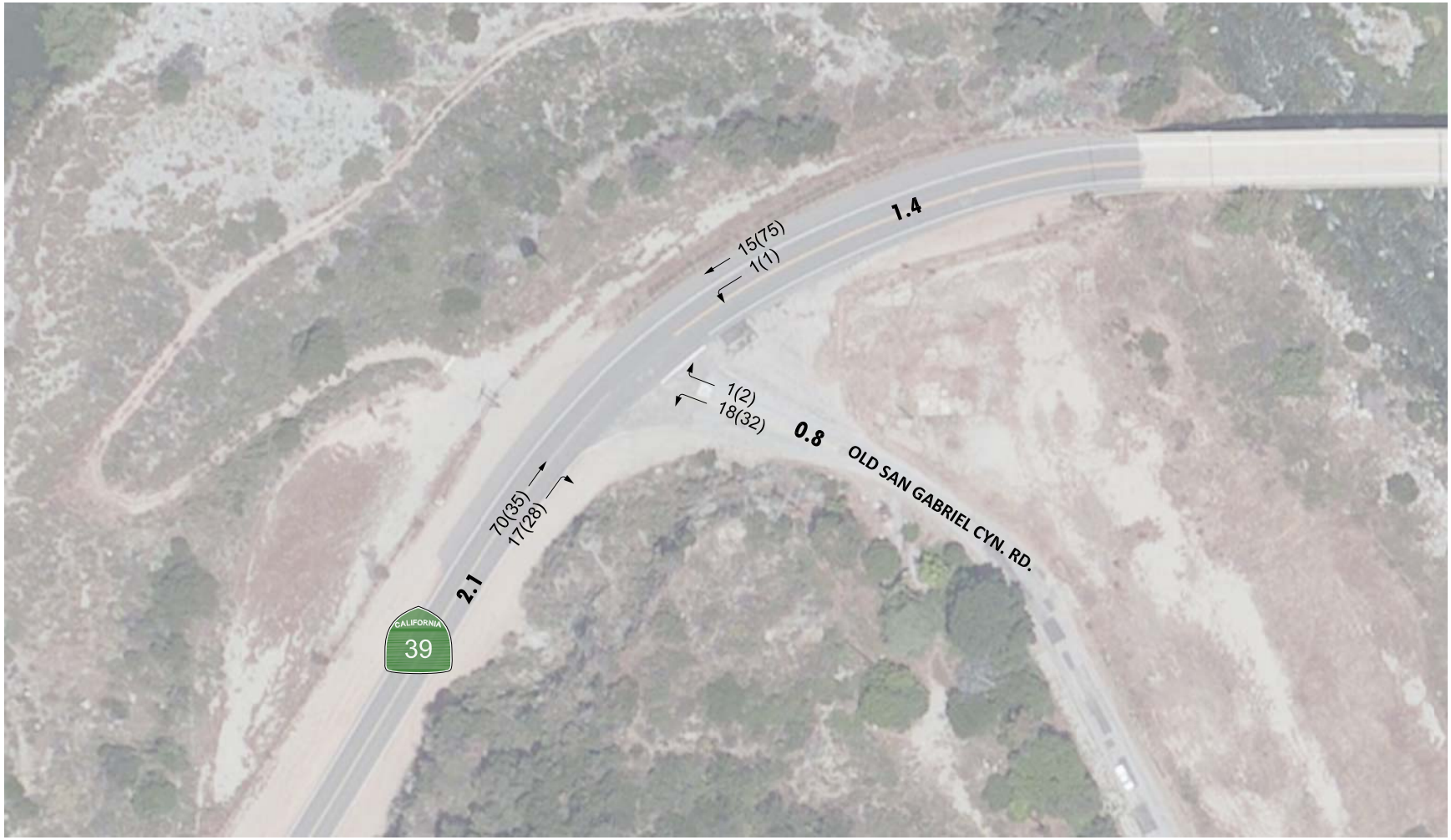


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 5: OPENING YEAR (2021) WITH PROJECT TRAFFIC VOLUMES

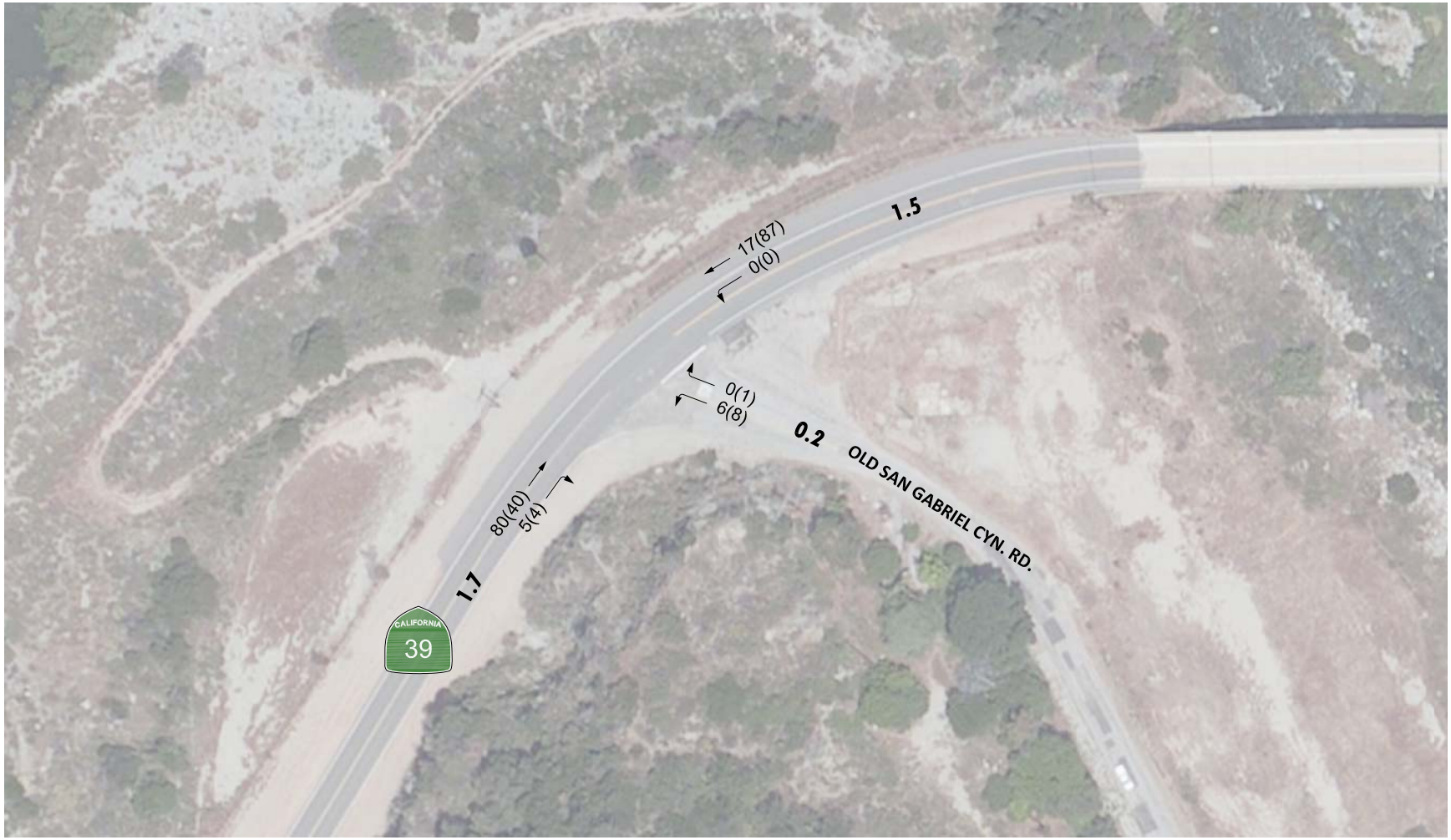


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 6: OPENING YEAR (2028) WITHOUT PROJECT TRAFFIC VOLUMES

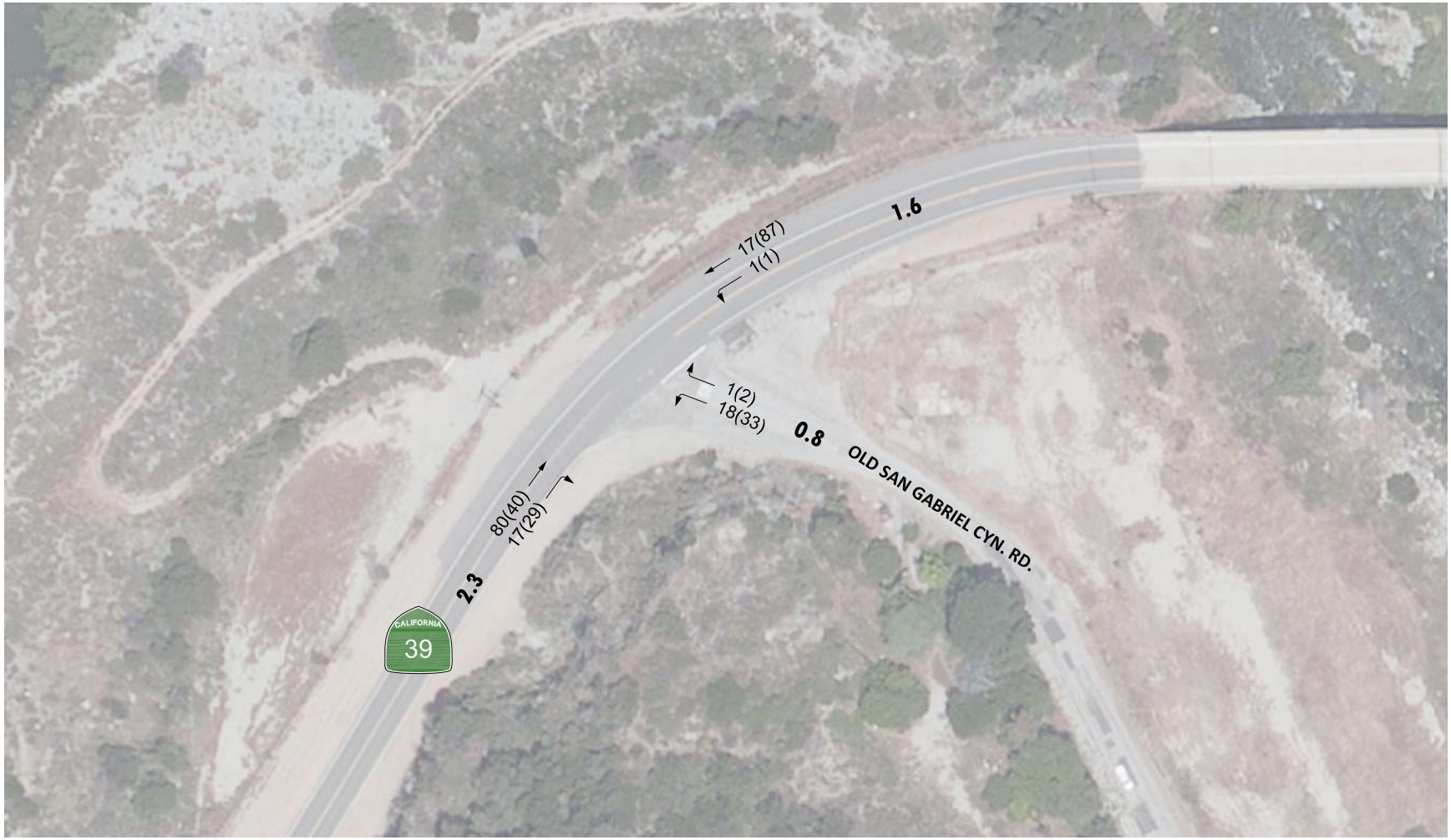


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 7: OPENING YEAR (2028) WITH PROJECT TRAFFIC VOLUMES

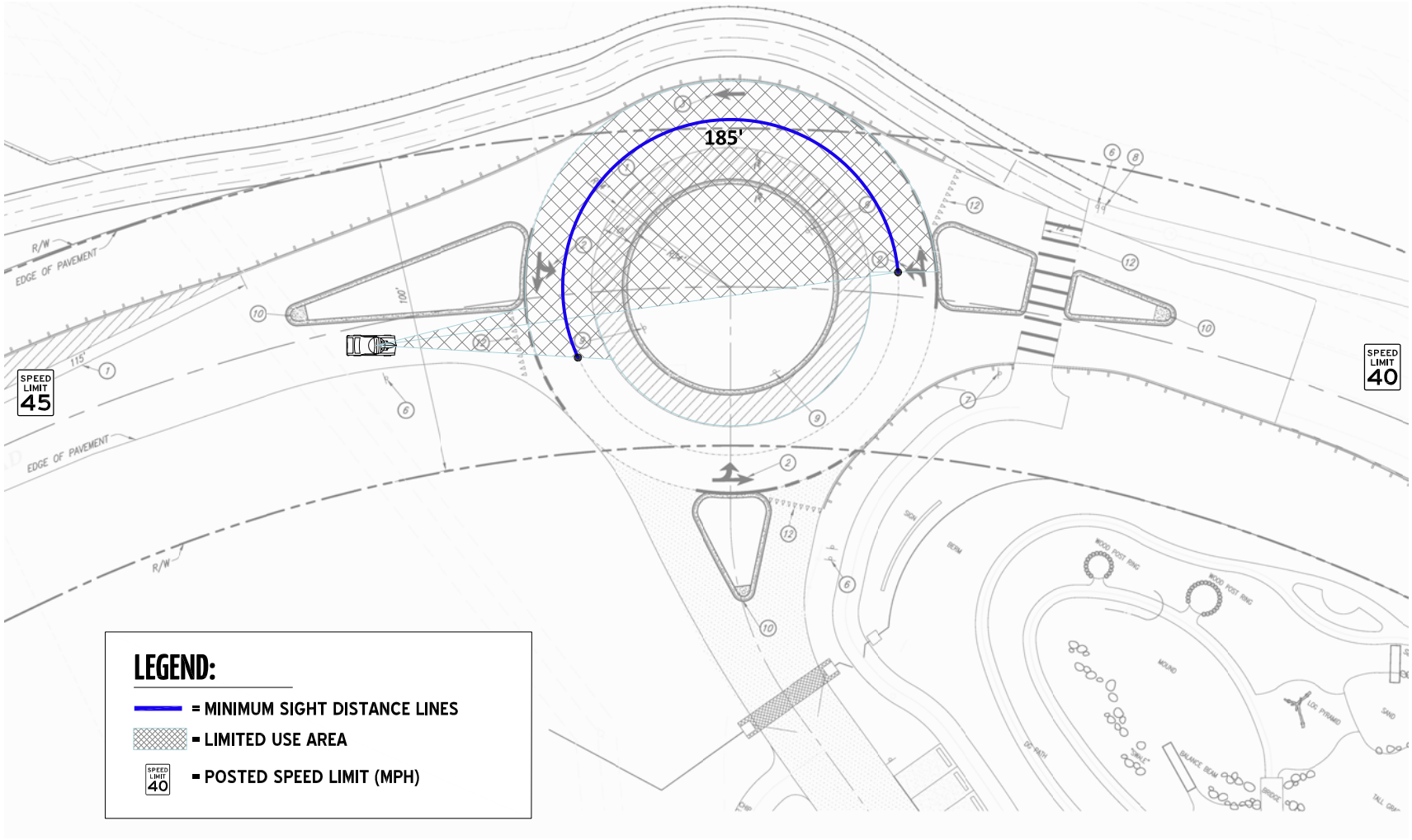


LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

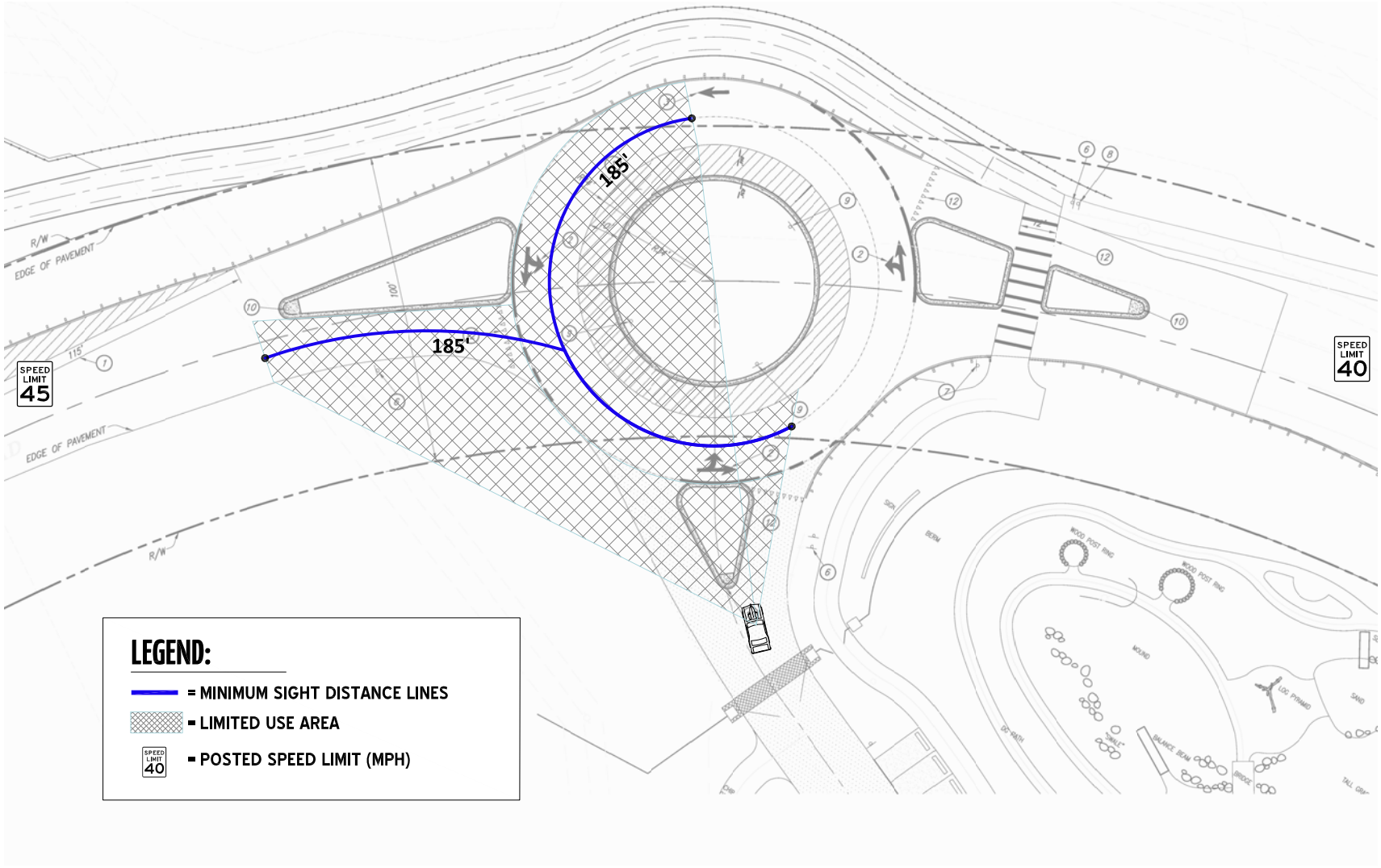
EXHIBIT 8: ROUNDABOUT EASTBOUND SIGHT DISTANCE



GRAPHIC SCALE
0 25 50
1"=50'

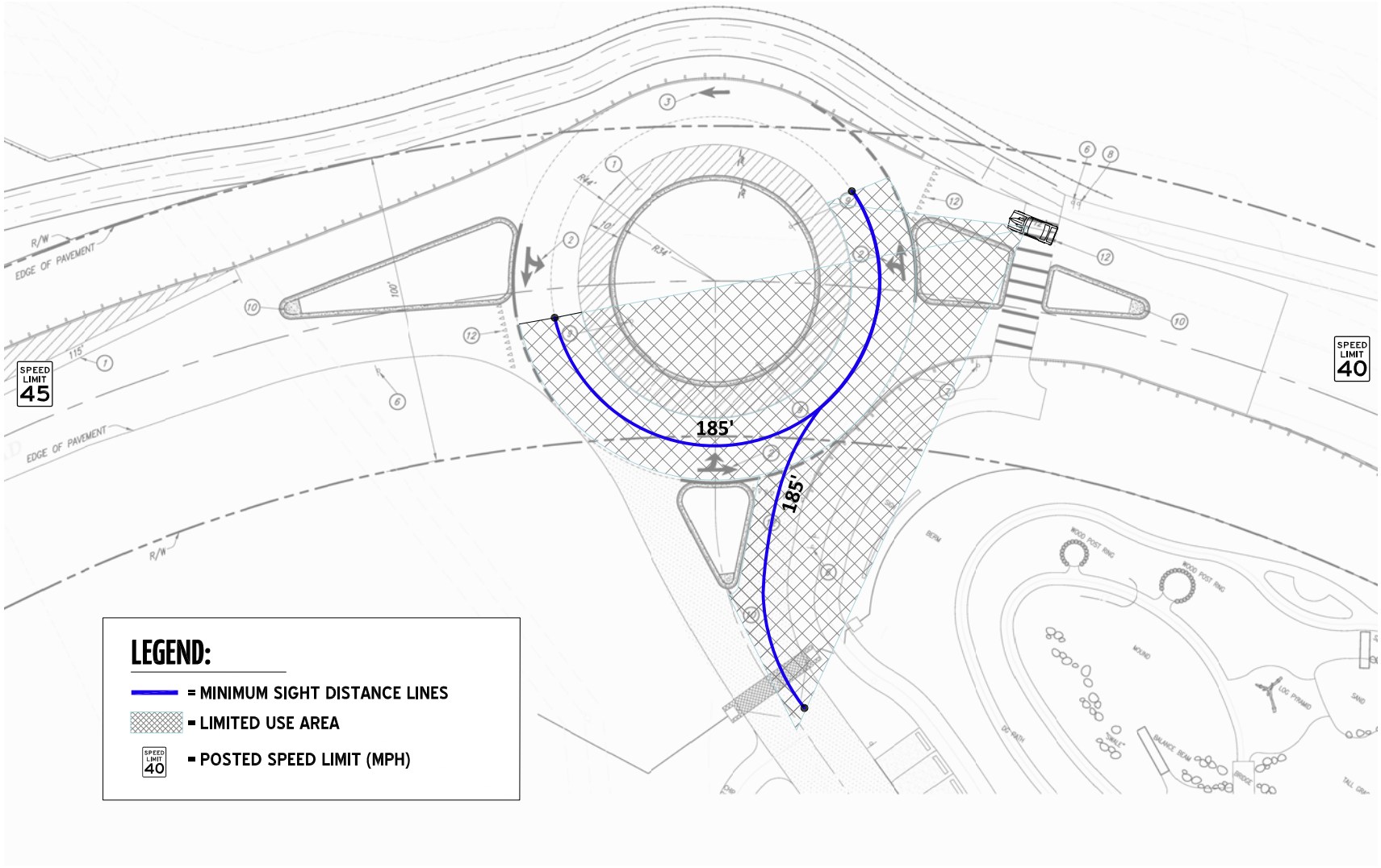
NOTE: ASSUMES A 25 MPH APPROACH/CIRCULATING SPEED

EXHIBIT 9: ROUNDABOUT NORTHBOUND SIGHT DISTANCE



NOTE: ASSUMES A 25 MPH APPROACH/CIRCULATING SPEED

EXHIBIT 10: ROUNDABOUT WESTBOUND SIGHT DISTANCE



NOTE: ASSUMES A 25 MPH APPROACH/CIRCULATING SPEED

EXHIBIT 11: HORIZONTAL SIGHT DISTANCE AT ABC ROAD (TO TAYLOR HOUSE) AND HIGHWAY 39

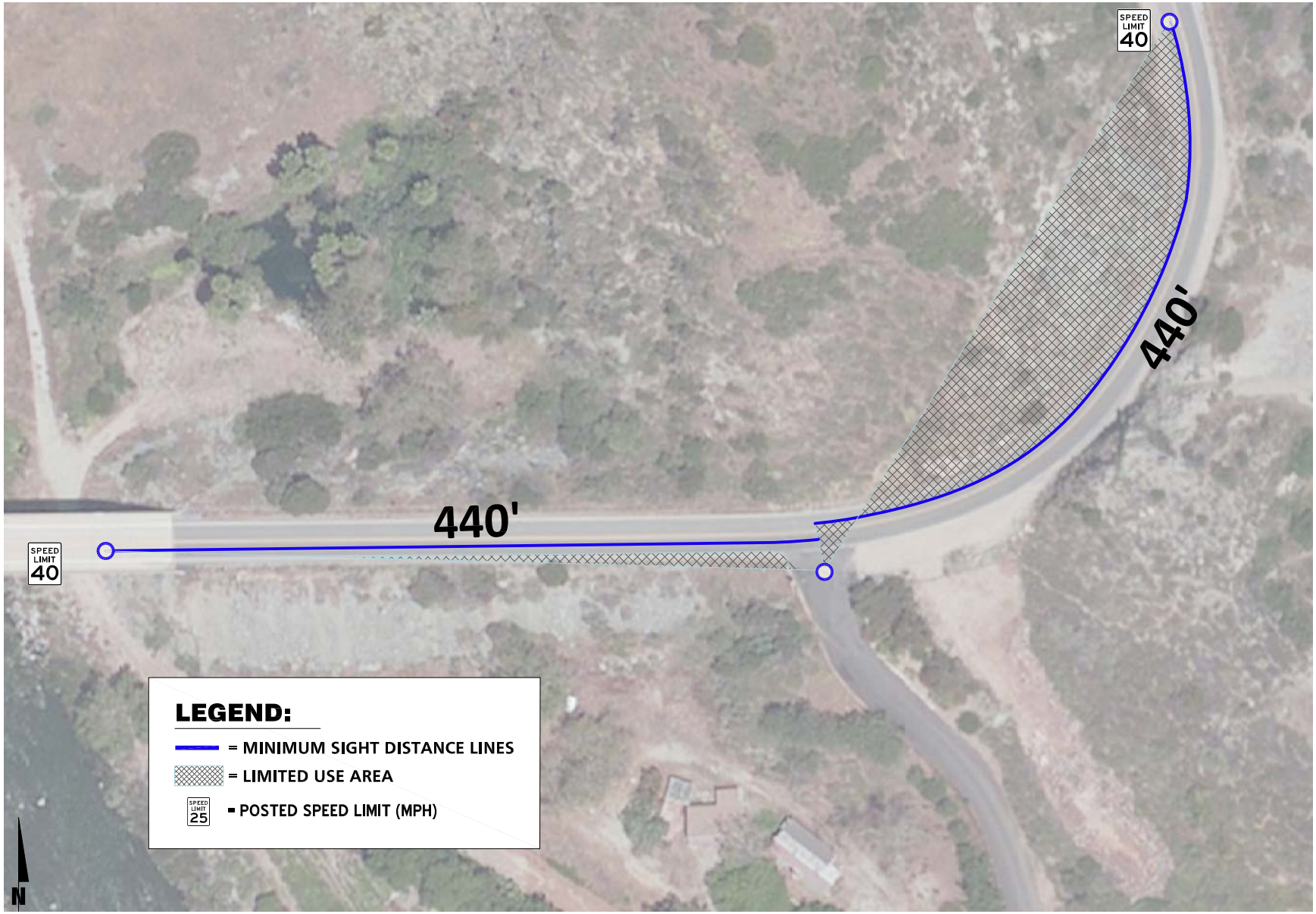
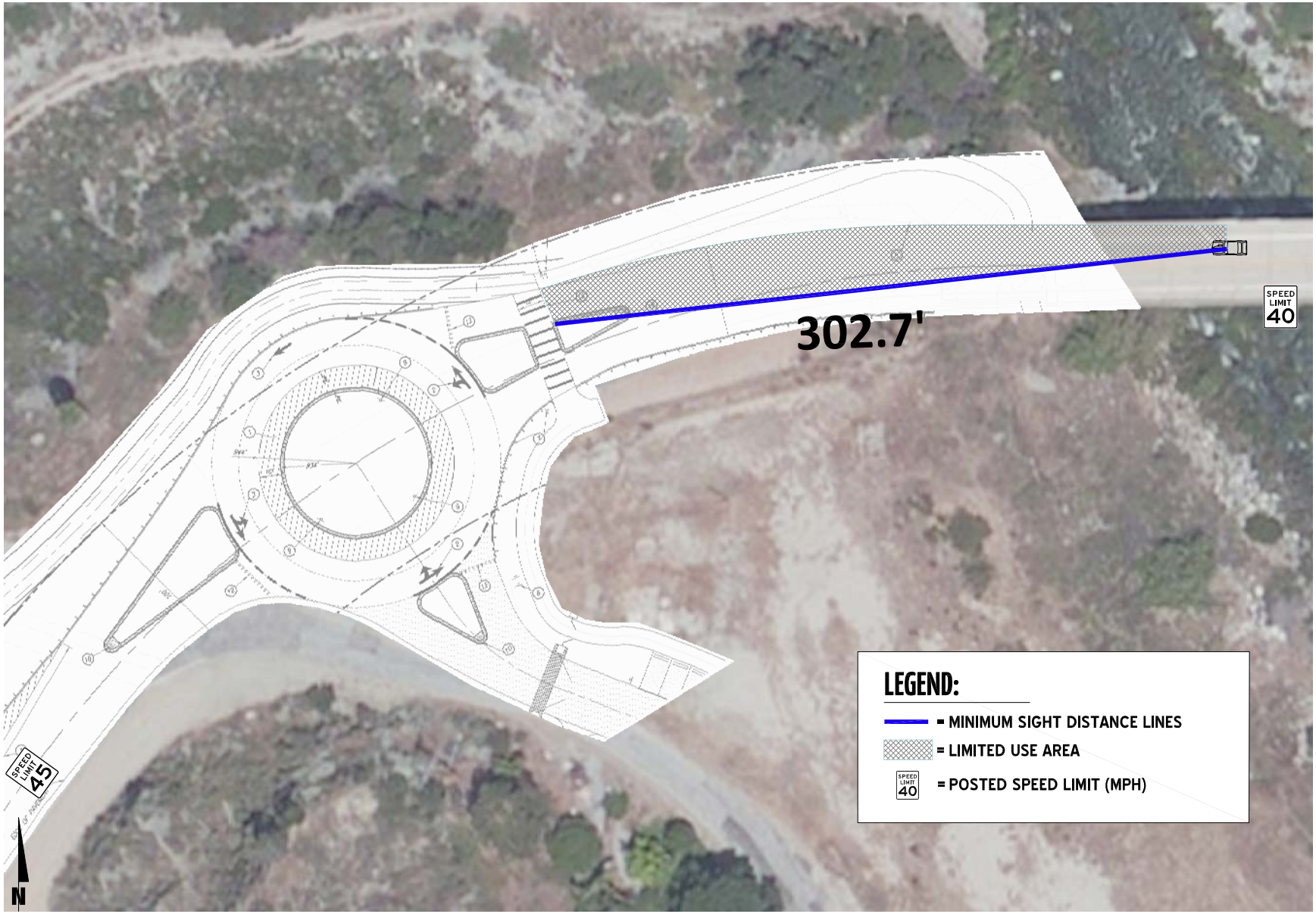


EXHIBIT 12: STOPPING SIGHT DISTANCE AT OLD SAN GABRIEL CANYON ROAD AND HIGHWAY 39



ATTACHMENT A

TRAFFIC COUNTS

Counts Unlimited Inc
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Azusa
N/S: SR-39
E/W: Old San Gabriel Canyon Road
Weather: Sunny

File Name : AZU39SGAM
Site Code : 00000001
Start Date : 5/21/2015
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

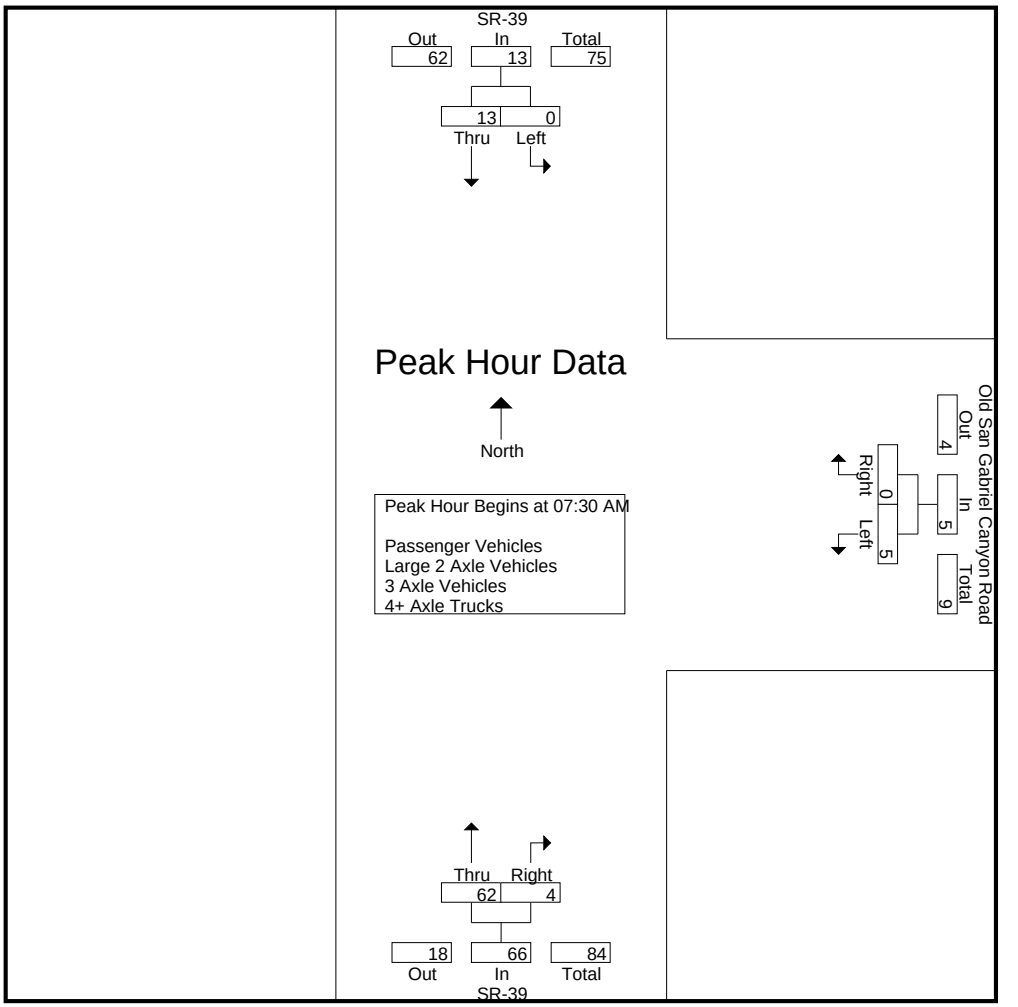
	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	6	1	0	1	8	4	12	19
07:15 AM	0	5	5	0	0	0	7	0	7	12
07:30 AM	0	5	5	2	0	2	13	0	13	20
07:45 AM	0	1	1	2	0	2	20	0	20	23
Total	0	17	17	5	0	5	48	4	52	74
08:00 AM	0	2	2	1	0	1	8	2	10	13
08:15 AM	0	5	5	0	0	0	21	2	23	28
08:30 AM	0	0	0	0	0	0	6	1	7	7
08:45 AM	0	4	4	0	1	1	4	2	6	11
Total	0	11	11	1	1	2	39	7	46	59
Grand Total	0	28	28	6	1	7	87	11	98	133
Apprch %	0	100		85.7	14.3		88.8	11.2		
Total %	0	21.1	21.1	4.5	0.8	5.3	65.4	8.3	73.7	
Passenger Vehicles	0	27	27	5	1	6	87	10	97	130
% Passenger Vehicles	0	96.4	96.4	83.3	100	85.7	100	90.9	99	97.7
Large 2 Axle Vehicles	0	1	1	1	0	1	0	1	1	3
% Large 2 Axle Vehicles	0	3.6	3.6	16.7	0	14.3	0	9.1	1	2.3
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	5	5	2	0	2	13	0	13	20
07:45 AM	0	1	1	2	0	2	20	0	20	23
08:00 AM	0	2	2	1	0	1	8	2	10	13
08:15 AM	0	5	5	0	0	0	21	2	23	28
Total Volume	0	13	13	5	0	5	62	4	66	84
% App. Total	0	100		100	0		93.9	6.1		
PHF	.000	.650	.650	.625	.000	.625	.738	.500	.717	.750

Counts Unlimited Inc
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Azusa
N/S: SR-39
E/W: Old San Gabriel Canyon Road
Weather: Sunny

File Name : AZU39SGAM
Site Code : 00000001
Start Date : 5/21/2015
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:30 AM		
+0 mins.	0	6	6	1	0	1	13	0	13
+15 mins.	0	5	5	0	0	0	20	0	20
+30 mins.	0	5	5	2	0	2	8	2	10
+45 mins.	0	1	1	2	0	2	21	2	23
Total Volume	0	17	17	5	0	5	62	4	66
% App. Total	0	100		100	0		93.9	6.1	
PHF	.000	.708	.708	.625	.000	.625	.738	.500	.717

Counts Unlimited Inc
PO Box 1178
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(951) 268-6268

City of Azusa
N/S: SR-39
E/W: Old San Gabriel Canyon Road
Weather: Sunny

File Name : AZU39SGAM
Site Code : 00000001
Start Date : 5/21/2015
Page No : 1

Groups Printed- Passenger Vehicles

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	6	0	0	0	8	3	11	17
07:15 AM	0	4	4	0	0	0	7	0	7	11
07:30 AM	0	5	5	2	0	2	13	0	13	20
07:45 AM	0	1	1	2	0	2	20	0	20	23
Total	0	16	16	4	0	4	48	3	51	71
08:00 AM	0	2	2	1	0	1	8	2	10	13
08:15 AM	0	5	5	0	0	0	21	2	23	28
08:30 AM	0	0	0	0	0	0	6	1	7	7
08:45 AM	0	4	4	0	1	1	4	2	6	11
Total	0	11	11	1	1	2	39	7	46	59
Grand Total	0	27	27	5	1	6	87	10	97	130
Apprch %	0	100		83.3	16.7		89.7	10.3		
Total %	0	20.8	20.8	3.8	0.8	4.6	66.9	7.7	74.6	

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	5	5	2	0	2	13	0	13	20
07:45 AM	0	1	1	2	0	2	20	0	20	23
08:00 AM	0	2	2	1	0	1	8	2	10	13
08:15 AM	0	5	5	0	0	0	21	2	23	28
Total Volume	0	13	13	5	0	5	62	4	66	84
% App. Total	0	100		100	0		93.9	6.1		
PHF	.000	.650	.650	.625	.000	.625	.738	.500	.717	.750

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Site Code : 00000001
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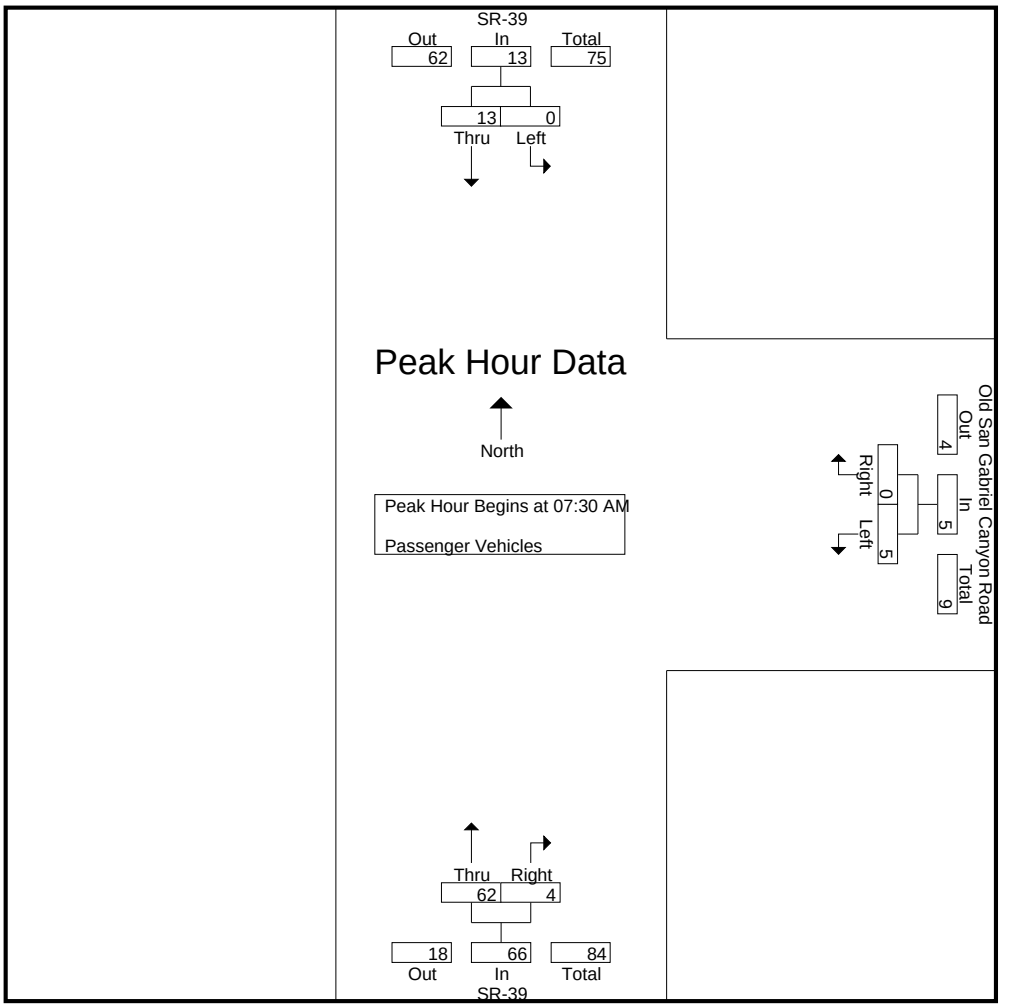

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	5	5	2	0	2	13	0	13
+15 mins.	0	1	1	2	0	2	20	0	20
+30 mins.	0	2	2	1	0	1	8	2	10
+45 mins.	0	5	5	0	0	0	21	2	23
Total Volume	0	13	13	5	0	5	62	4	66
% App. Total	0	100		100	0		93.9	6.1	
PHF	.000	.650	.650	.625	.000	.625	.738	.500	.717

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Groups Printed- Large 2 Axle Vehicles

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	1	0	1	0	1	1	2
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	1	0	1	0	1	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	1	1	0	1	0	1	1	3
Apprch %	0	100		100	0		0	100		
Total %	0	33.3	33.3	33.3	0	33.3	0	33.3	33.3	

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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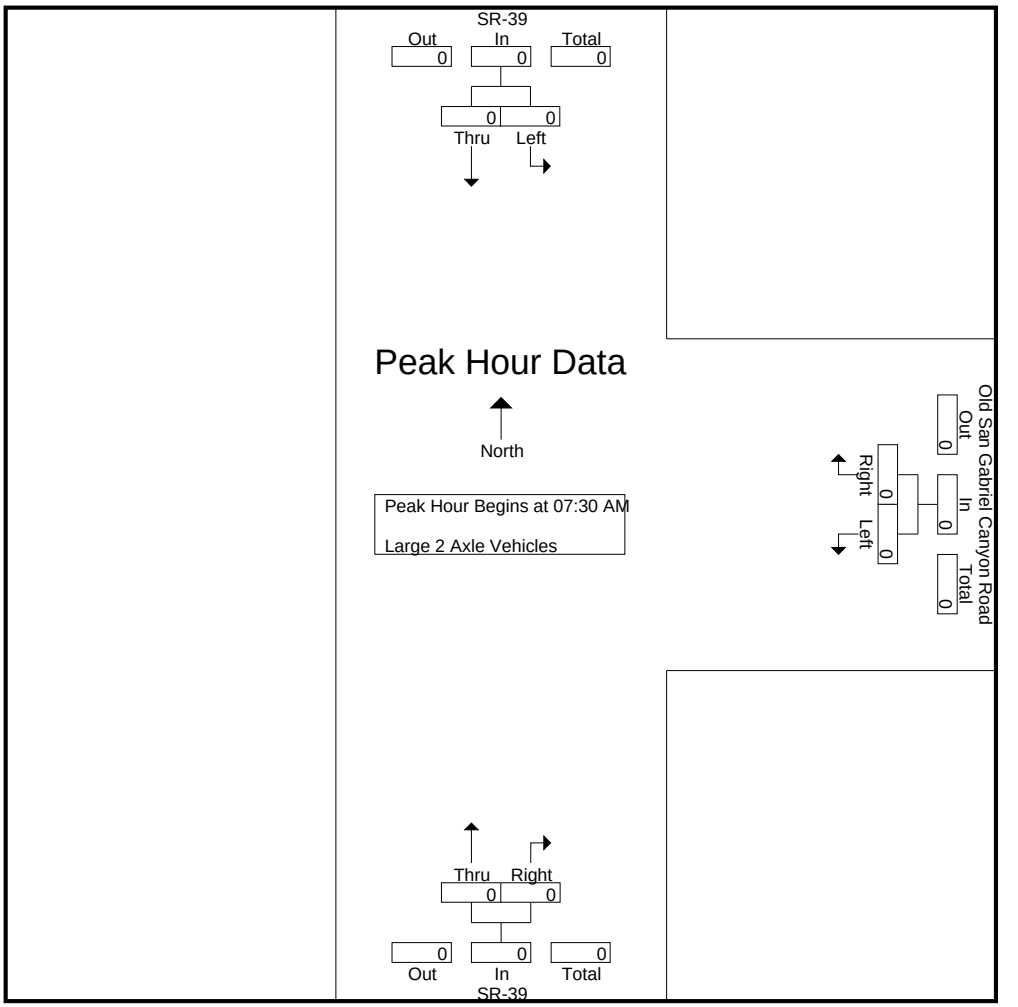

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- 3 Axle Vehicles

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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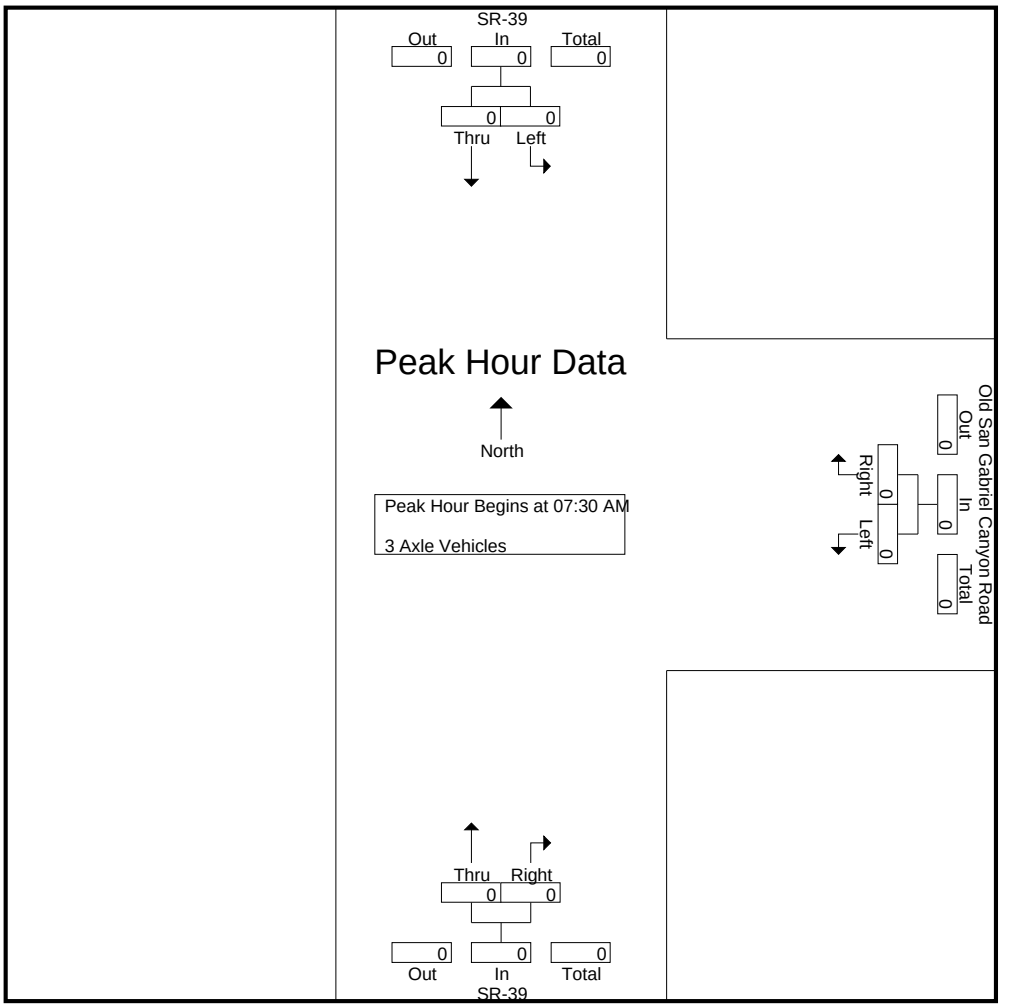

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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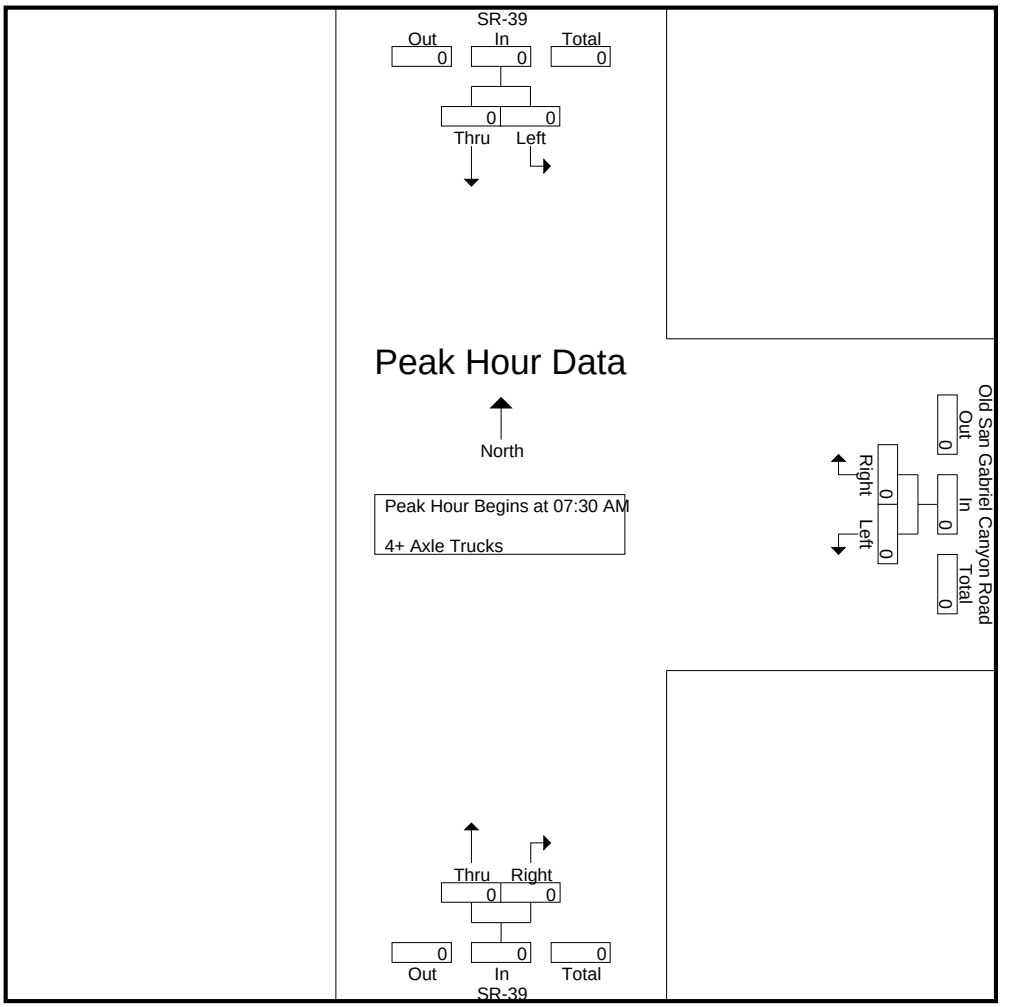

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	19	19	1	0	1	4	1	5	25
04:15 PM	0	20	20	1	0	1	8	0	8	29
04:30 PM	0	8	8	2	0	2	7	2	9	19
04:45 PM	0	17	17	2	1	3	9	0	9	29
Total	0	64	64	6	1	7	28	3	31	102
05:00 PM	0	22	22	1	0	1	7	1	8	31
05:15 PM	0	14	14	4	0	4	7	1	8	26
05:30 PM	0	2	2	0	0	0	5	0	5	7
05:45 PM	1	4	5	1	0	1	13	1	14	20
Total	1	42	43	6	0	6	32	3	35	84
Grand Total	1	106	107	12	1	13	60	6	66	186
Apprch %	0.9	99.1		92.3	7.7		90.9	9.1		
Total %	0.5	57	57.5	6.5	0.5	7	32.3	3.2	35.5	
Passenger Vehicles	1	103	104	12	1	13	60	6	66	183
% Passenger Vehicles	100	97.2	97.2	100	100	100	100	100	100	98.4
Large 2 Axle Vehicles	0	3	3	0	0	0	0	0	0	3
% Large 2 Axle Vehicles	0	2.8	2.8	0	0	0	0	0	0	1.6
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	20	20	1	0	1	8	0	8	29
04:30 PM	0	8	8	2	0	2	7	2	9	19
04:45 PM	0	17	17	2	1	3	9	0	9	29
05:00 PM	0	22	22	1	0	1	7	1	8	31
Total Volume	0	67	67	6	1	7	31	3	34	108
% App. Total	0	100		85.7	14.3		91.2	8.8		
PHF	.000	.761	.761	.750	.250	.583	.861	.375	.944	.871

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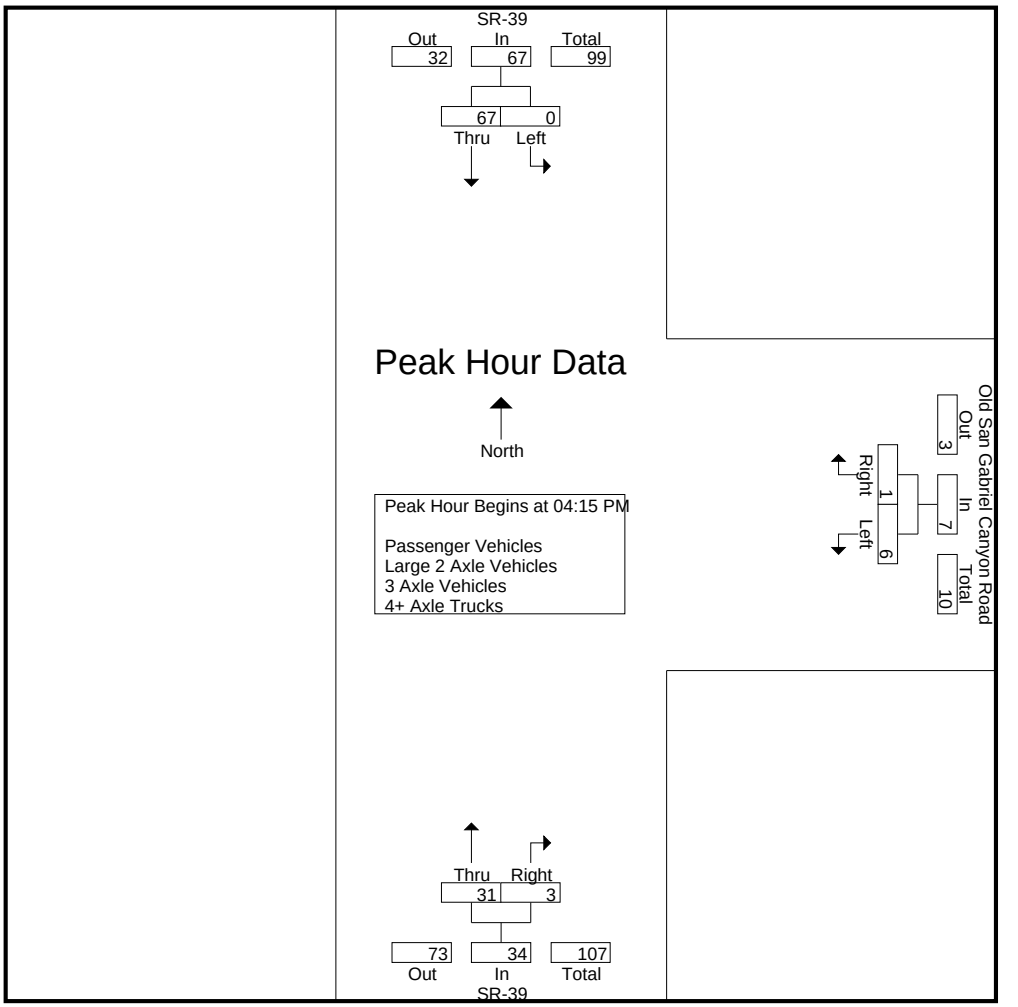

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:30 PM			05:00 PM		
+0 mins.	0	20	20	2	0	2	7	1	8
+15 mins.	0	8	8	2	1	3	7	1	8
+30 mins.	0	17	17	1	0	1	5	0	5
+45 mins.	0	22	22	4	0	4	13	1	14
Total Volume	0	67	67	9	1	10	32	3	35
% App. Total	0	100		90	10		91.4	8.6	
PHF	.000	.761	.761	.563	.250	.625	.615	.750	.625

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Groups Printed- Passenger Vehicles

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	18	18	1	0	1	4	1	5	24
04:15 PM	0	19	19	1	0	1	8	0	8	28
04:30 PM	0	7	7	2	0	2	7	2	9	18
04:45 PM	0	17	17	2	1	3	9	0	9	29
Total	0	61	61	6	1	7	28	3	31	99
05:00 PM	0	22	22	1	0	1	7	1	8	31
05:15 PM	0	14	14	4	0	4	7	1	8	26
05:30 PM	0	2	2	0	0	0	5	0	5	7
05:45 PM	1	4	5	1	0	1	13	1	14	20
Total	1	42	43	6	0	6	32	3	35	84
Grand Total	1	103	104	12	1	13	60	6	66	183
Apprch %	1	99		92.3	7.7		90.9	9.1		
Total %	0.5	56.3	56.8	6.6	0.5	7.1	32.8	3.3	36.1	

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	19	19	1	0	1	8	0	8	28
04:30 PM	0	7	7	2	0	2	7	2	9	18
04:45 PM	0	17	17	2	1	3	9	0	9	29
05:00 PM	0	22	22	1	0	1	7	1	8	31
Total Volume	0	65	65	6	1	7	31	3	34	106
% App. Total	0	100		85.7	14.3		91.2	8.8		
PHF	.000	.739	.739	.750	.250	.583	.861	.375	.944	.855

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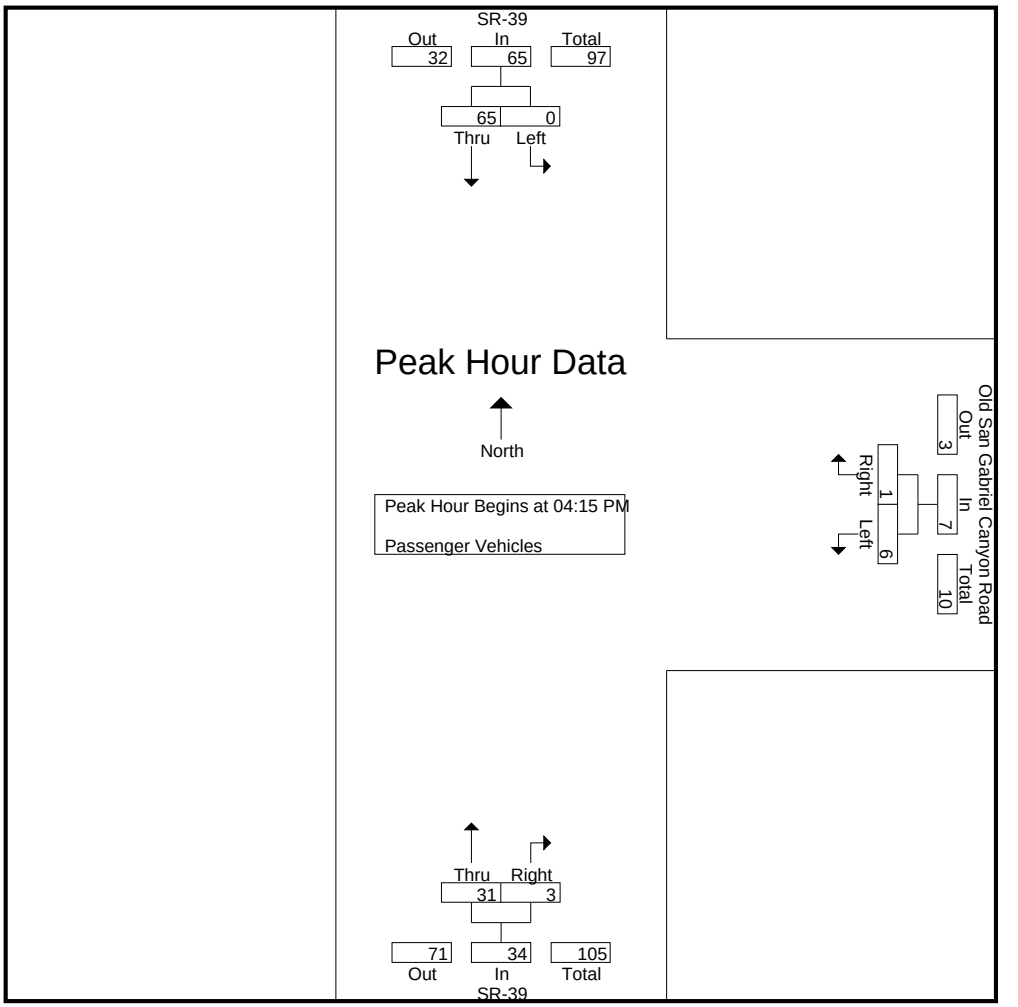

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	19	19	1	0	1	8	0	8
+15 mins.	0	7	7	2	0	2	7	2	9
+30 mins.	0	17	17	2	1	3	9	0	9
+45 mins.	0	22	22	1	0	1	7	1	8
Total Volume	0	65	65	6	1	7	31	3	34
% App. Total	0	100		85.7	14.3		91.2	8.8	
PHF	.000	.739	.739	.750	.250	.583	.861	.375	.944

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Groups Printed- Large 2 Axle Vehicles

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	1
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	3	3	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	3	3	0	0	0	0	0	0	3
Apprch %	0	100		0	0		0	0		
Total %	0	100	100	0	0	0	0	0	0	

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	0	0	0	2
% App. Total	0	100		0	0		0	0		
PHF	.000	.500	.500	.000	.000	.000	.000	.000	.000	.500

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Start Date : 5/21/2015
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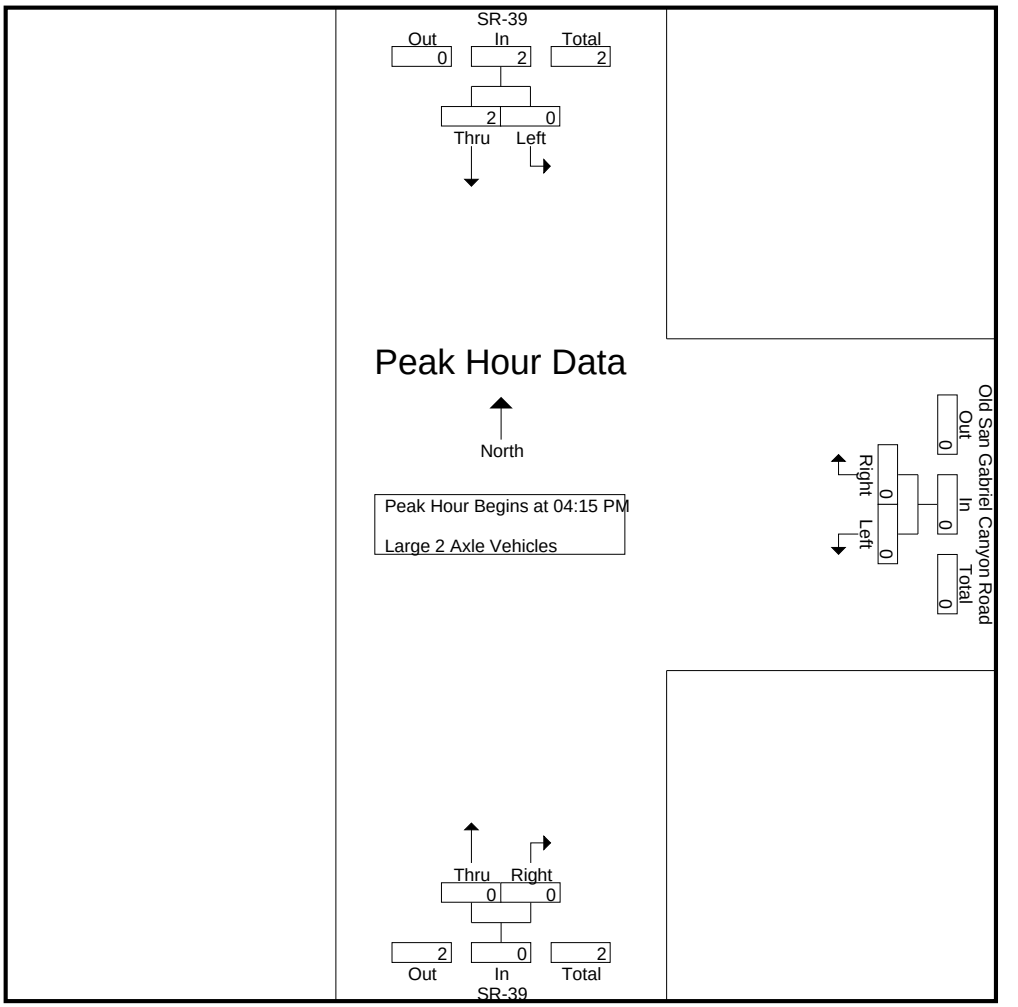

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	1	1	0	0	0	0	0	0
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.500	.500	.000	.000	.000	.000	.000	.000

Counts Unlimited Inc
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Azusa
N/S: SR-39
E/W: Old San Gabriel Canyon Road
Weather: Sunny

File Name : AZU39SGPM
Site Code : 00000001
Start Date : 5/21/2015

Groups Printed- 3 Axle Vehicles

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Azusa
N/S: SR-39
E/W: Old San Gabriel Canyon Road
Weather: Sunny

File Name : AZU39SGPM
Site Code : 00000001
Start Date : 5/21/2015

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Azusa
N/S: SR-39
E/W: Old San Gabriel Canyon Road
Weather: Sunny

File Name : AZU39SGPM
Site Code : 00000001
Start Date : 5/21/2015
Page No : 1

Groups Printed- 4+ Axle Trucks

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

	SR-39 Southbound			Old San Gabriel Canyon Road Westbound			SR-39 Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Counts Unlimited Inc
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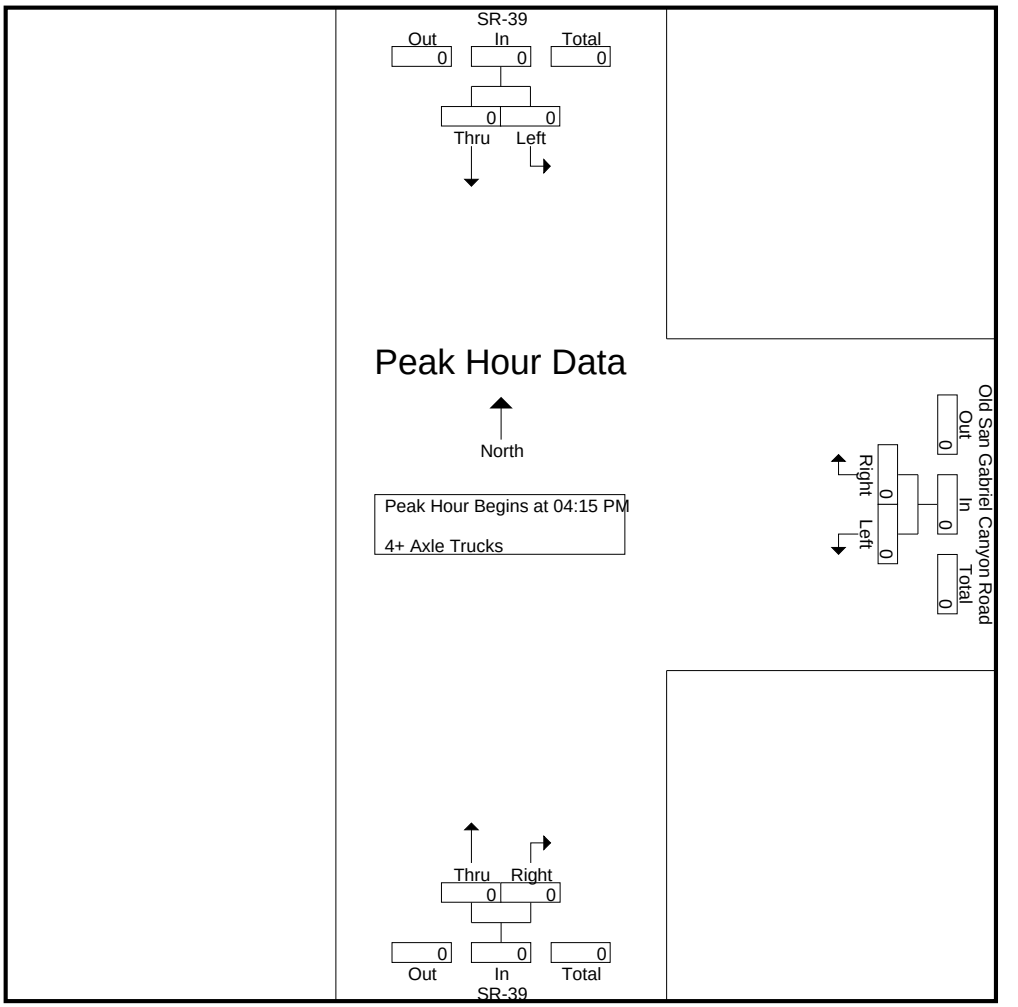
City of Azusa
N/S: SR-39
E/W: Old San Gabriel Canyon Road
Weather: Sunny

File Name : AZU39SGPM
Site Code : 00000001
Start Date : 5/21/2015
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Azusa

Pedestrian Count

SR-39/Old San Gabriel Canyon Road

Thursday, May 21, 2015

	North Leg SR-39	East Leg Old San Gabriel Canyon Road	South Leg SR-39
7:00	0	0	0
7:15	1	0	0
7:30	0	0	0
7:45	0	0	0
8:00	0	0	0
8:15	0	0	1
8:30	2	1	0
8:45	2	0	0
Total	5	1	1

16:00	0	0	0
16:15	0	0	1
16:30	0	0	0
16:45	1	1	0
17:00	0	1	0
17:15	0	0	1
17:30	1	0	0
17:45	0	0	0
Total	2	2	2

City of Azusa

Bicycle Count

SR-39/Old San Gabriel Canyon Road

Thursday, May 21, 2015

	North Leg SR-39	East Leg Old San Gabriel Canyon Road	South Leg SR-39
7:00	0	0	0
7:15	0	1	0
7:30	0	1	0
7:45	1	0	0
8:00	0	0	0
8:15	0	2	0
8:30	1	0	0
8:45	0	0	0
Total	2	4	0

16:00	0	1	0
16:15	0	1	0
16:30	0	0	0
16:45	0	2	0
17:00	0	3	0
17:15	0	0	0
17:30	2	1	0
17:45	0	1	0
Total	2	9	0

ATTACHMENT B

SIDRA OUTPUTS –WITH EXISTING (2015) TRAFFIC VOLUMES

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - Ex AM

River Wilderness Park TIA (JN: 09321)
Existing (2015) - AM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	83	2.0	0.062	3.0	LOS A	0.3	7.1	0.02	0.00	36.1
18	R2	5	2.0	0.062	3.0	LOS A	0.3	7.1	0.02	0.00	35.0
Approach		88	2.0	0.062	3.0	LOS A	0.3	7.1	0.02	0.00	36.0
East: Old San Gabriel Canyon Road											
1	L2	7	2.0	0.006	2.8	LOS A	0.0	0.7	0.20	0.07	33.8
16	R2	1	2.0	0.006	2.8	LOS A	0.0	0.7	0.20	0.07	32.9
Approach		8	2.0	0.006	2.8	LOS A	0.0	0.7	0.20	0.07	33.6
North: SR-39											
7	L2	1	2.0	0.013	2.7	LOS A	0.1	1.4	0.05	0.01	36.1
4	T1	17	2.0	0.013	2.7	LOS A	0.1	1.4	0.05	0.01	36.1
Approach		19	2.0	0.013	2.7	LOS A	0.1	1.4	0.05	0.01	36.1
All Vehicles		115	2.0	0.062	3.0	LOS A	0.3	7.1	0.04	0.01	35.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - Ex PM

River Wilderness Park TIA (JN: 09321)
Existing (2015) - PM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	36	2.0	0.028	2.8	LOS A	0.1	3.0	0.02	0.00	36.2
18	R2	3	2.0	0.028	2.8	LOS A	0.1	3.0	0.02	0.00	35.2
Approach		39	2.0	0.028	2.8	LOS A	0.1	3.0	0.02	0.00	36.1
East: Old San Gabriel Canyon Road											
1	L2	7	2.0	0.006	2.7	LOS A	0.0	0.6	0.12	0.03	33.8
16	R2	1	2.0	0.006	2.7	LOS A	0.0	0.6	0.12	0.03	32.9
Approach		8	2.0	0.006	2.7	LOS A	0.0	0.6	0.12	0.03	33.7
North: SR-39											
7	L2	1	2.0	0.056	3.0	LOS A	0.2	6.3	0.05	0.01	36.1
4	T1	77	2.0	0.056	3.0	LOS A	0.2	6.3	0.05	0.01	36.0
Approach		78	2.0	0.056	3.0	LOS A	0.2	6.3	0.05	0.01	36.0
All Vehicles		125	2.0	0.056	2.9	LOS A	0.2	6.3	0.04	0.01	35.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

ATTACHMENT C

SIDRA OUTPUTS –WITH EXISTING PLUS PROJECT TRAFFIC VOLUMES

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - E+P AM

River Wilderness Park TIA (JN: 09321)
Existing plus Project - AM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	83	2.0	0.074	3.1	LOS A	0.3	8.5	0.02	0.00	36.0
18	R2	21	2.0	0.074	3.1	LOS A	0.3	8.5	0.02	0.00	35.0
Approach		104	2.0	0.074	3.1	LOS A	0.3	8.5	0.02	0.00	35.8
East: Old San Gabriel Canyon Road											
1	L2	23	2.0	0.018	2.9	LOS A	0.1	2.0	0.20	0.07	33.5
16	R2	1	2.0	0.018	2.9	LOS A	0.1	2.0	0.20	0.07	32.6
Approach		24	2.0	0.018	2.9	LOS A	0.1	2.0	0.20	0.07	33.4
North: SR-39											
7	L2	1	2.0	0.014	2.7	LOS A	0.1	1.5	0.09	0.02	36.1
4	T1	17	2.0	0.014	2.7	LOS A	0.1	1.5	0.09	0.02	36.0
Approach		19	2.0	0.014	2.7	LOS A	0.1	1.5	0.09	0.02	36.0
All Vehicles		147	2.0	0.074	3.0	LOS A	0.3	8.5	0.06	0.02	35.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - E+P PM

River Wilderness Park TIA (JN: 09321)
Existing plus Project - PM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	36	2.0	0.048	2.9	LOS A	0.2	5.4	0.02	0.00	36.1
18	R2	32	2.0	0.048	2.9	LOS A	0.2	5.4	0.02	0.00	35.1
Approach		68	2.0	0.048	2.9	LOS A	0.2	5.4	0.02	0.00	35.6
East: Old San Gabriel Canyon Road											
1	L2	36	2.0	0.028	2.9	LOS A	0.1	3.0	0.13	0.03	33.5
16	R2	2	2.0	0.028	2.9	LOS A	0.1	3.0	0.13	0.03	32.6
Approach		38	2.0	0.028	2.9	LOS A	0.1	3.0	0.13	0.03	33.5
North: SR-39											
7	L2	1	2.0	0.057	3.1	LOS A	0.3	6.4	0.13	0.04	36.0
4	T1	77	2.0	0.057	3.1	LOS A	0.3	6.4	0.13	0.04	36.0
Approach		78	2.0	0.057	3.1	LOS A	0.3	6.4	0.13	0.04	36.0
All Vehicles		184	2.0	0.057	3.0	LOS A	0.3	6.4	0.09	0.02	35.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

ATTACHMENT D

SIDRA OUTPUTS –WITH OPENING YEAR (2021) TRAFFIC VOLUMES

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2021 NP AM

River Wilderness Park TIA (JN: 09321)
OPening Year (2021) Without Project - AM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	93	2.0	0.071	3.1	LOS A	0.3	8.2	0.02	0.00	36.0
18	R2	7	2.0	0.071	3.1	LOS A	0.3	8.2	0.02	0.00	35.0
Approach		100	2.0	0.071	3.1	LOS A	0.3	8.2	0.02	0.00	36.0
East: Old San Gabriel Canyon Road											
1	L2	8	2.0	0.007	2.9	LOS A	0.0	0.8	0.21	0.07	33.7
16	R2	1	2.0	0.007	2.9	LOS A	0.0	0.8	0.21	0.07	32.8
Approach		9	2.0	0.007	2.9	LOS A	0.0	0.8	0.21	0.07	33.6
North: SR-39											
7	L2	1	2.0	0.015	2.7	LOS A	0.1	1.7	0.05	0.01	36.1
4	T1	20	2.0	0.015	2.7	LOS A	0.1	1.7	0.05	0.01	36.1
Approach		21	2.0	0.015	2.7	LOS A	0.1	1.7	0.05	0.01	36.1
All Vehicles		131	2.0	0.071	3.0	LOS A	0.3	8.2	0.04	0.01	35.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2021 NP PM

River Wilderness Park TIA (JN: 09321)
Opening Year (2021) Without Project - PM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	40	2.0	0.031	2.8	LOS A	0.1	3.4	0.02	0.00	36.2
18	R2	3	2.0	0.031	2.8	LOS A	0.1	3.4	0.02	0.00	35.2
Approach		44	2.0	0.031	2.8	LOS A	0.1	3.4	0.02	0.00	36.1
East: Old San Gabriel Canyon Road											
1	L2	8	2.0	0.007	2.7	LOS A	0.0	0.7	0.13	0.03	33.7
16	R2	1	2.0	0.007	2.7	LOS A	0.0	0.7	0.13	0.03	32.9
Approach		9	2.0	0.007	2.7	LOS A	0.0	0.7	0.13	0.03	33.6
North: SR-39											
7	L2	1	2.0	0.062	3.1	LOS A	0.3	7.1	0.05	0.01	36.0
4	T1	86	2.0	0.062	3.1	LOS A	0.3	7.1	0.05	0.01	36.0
Approach		87	2.0	0.062	3.1	LOS A	0.3	7.1	0.05	0.01	36.0
All Vehicles		140	2.0	0.062	2.9	LOS A	0.3	7.1	0.05	0.01	35.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2021 WP AM

River Wilderness Park TIA (JN: 09321)
Opening Year (2021) With Project - AM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	93	2.0	0.082	3.2	LOS A	0.4	9.6	0.02	0.00	36.0
18	R2	23	2.0	0.082	3.2	LOS A	0.4	9.6	0.02	0.00	35.0
Approach		116	2.0	0.082	3.2	LOS A	0.4	9.6	0.02	0.00	35.8
East: Old San Gabriel Canyon Road											
1	L2	24	2.0	0.020	3.0	LOS A	0.1	2.1	0.22	0.08	33.4
16	R2	1	2.0	0.020	3.0	LOS A	0.1	2.1	0.22	0.08	32.6
Approach		25	2.0	0.020	3.0	LOS A	0.1	2.1	0.22	0.08	33.4
North: SR-39											
7	L2	1	2.0	0.015	2.7	LOS A	0.1	1.7	0.10	0.02	36.1
4	T1	20	2.0	0.015	2.7	LOS A	0.1	1.7	0.10	0.02	36.1
Approach		21	2.0	0.015	2.7	LOS A	0.1	1.7	0.10	0.02	36.1
All Vehicles		163	2.0	0.082	3.1	LOS A	0.4	9.6	0.06	0.02	35.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2021 WP PM

River Wilderness Park TIA (JN: 09321)
Opening Year (2021) With Project - PM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	40	2.0	0.051	2.9	LOS A	0.2	5.8	0.02	0.00	36.1
18	R2	32	2.0	0.051	2.9	LOS A	0.2	5.8	0.02	0.00	35.1
Approach		72	2.0	0.051	2.9	LOS A	0.2	5.8	0.02	0.00	35.6
East: Old San Gabriel Canyon Road											
1	L2	37	2.0	0.029	2.9	LOS A	0.1	3.1	0.13	0.04	33.5
16	R2	2	2.0	0.029	2.9	LOS A	0.1	3.1	0.13	0.04	32.6
Approach		39	2.0	0.029	2.9	LOS A	0.1	3.1	0.13	0.04	33.4
North: SR-39											
7	L2	1	2.0	0.064	3.2	LOS A	0.3	7.3	0.13	0.04	36.0
4	T1	86	2.0	0.064	3.2	LOS A	0.3	7.3	0.13	0.04	36.0
Approach		87	2.0	0.064	3.2	LOS A	0.3	7.3	0.13	0.04	36.0
All Vehicles		199	2.0	0.064	3.0	LOS A	0.3	7.3	0.09	0.03	35.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

ATTACHMENT E

SIDRA OUTPUTS –WITH OPENING YEAR (2028) TRAFFIC VOLUMES

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2028 NP AM

River Wilderness Park TIA (JN: 09321)
Opening Year (2028) Without Project - AM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	107	2.0	0.080	3.2	LOS A	0.4	9.3	0.02	0.00	36.0
18	R2	7	2.0	0.080	3.2	LOS A	0.4	9.3	0.02	0.00	35.0
Approach		113	2.0	0.080	3.2	LOS A	0.4	9.3	0.02	0.00	35.9
East: Old San Gabriel Canyon Road											
1	L2	8	2.0	0.007	2.9	LOS A	0.0	0.8	0.23	0.09	33.7
16	R2	1	2.0	0.007	2.9	LOS A	0.0	0.8	0.23	0.09	32.8
Approach		9	2.0	0.007	2.9	LOS A	0.0	0.8	0.23	0.09	33.6
North: SR-39											
7	L2	1	2.0	0.017	2.7	LOS A	0.1	1.9	0.05	0.01	36.1
4	T1	23	2.0	0.017	2.7	LOS A	0.1	1.9	0.05	0.01	36.1
Approach		24	2.0	0.017	2.7	LOS A	0.1	1.9	0.05	0.01	36.1
All Vehicles		147	2.0	0.080	3.1	LOS A	0.4	9.3	0.04	0.01	35.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2028 NP PM

River Wilderness Park TIA (JN: 09321)
Opening Year (2028) Without Project - PM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	46	2.0	0.036	2.8	LOS A	0.2	4.0	0.02	0.00	36.2
18	R2	5	2.0	0.036	2.8	LOS A	0.2	4.0	0.02	0.00	35.2
Approach		51	2.0	0.036	2.8	LOS A	0.2	4.0	0.02	0.00	36.1
East: Old San Gabriel Canyon Road											
1	L2	9	2.0	0.008	2.7	LOS A	0.0	0.8	0.14	0.04	33.7
16	R2	1	2.0	0.008	2.7	LOS A	0.0	0.8	0.14	0.04	32.8
Approach		10	2.0	0.008	2.7	LOS A	0.0	0.8	0.14	0.04	33.6
North: SR-39											
7	L2	1	2.0	0.072	3.1	LOS A	0.3	8.3	0.06	0.01	36.0
4	T1	100	2.0	0.072	3.1	LOS A	0.3	8.3	0.06	0.01	36.0
Approach		101	2.0	0.072	3.1	LOS A	0.3	8.3	0.06	0.01	36.0
All Vehicles		162	2.0	0.072	3.0	LOS A	0.3	8.3	0.05	0.01	35.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2028 WP AM

River Wilderness Park TIA (JN: 09321)
Opening Year (2028) With Project - AM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	107	2.0	0.092	3.3	LOS A	0.4	10.8	0.02	0.00	35.9
18	R2	23	2.0	0.092	3.3	LOS A	0.4	10.8	0.02	0.00	34.9
Approach		129	2.0	0.092	3.3	LOS A	0.4	10.8	0.02	0.00	35.7
East: Old San Gabriel Canyon Road											
1	L2	24	2.0	0.020	3.0	LOS A	0.1	2.1	0.23	0.10	33.4
16	R2	1	2.0	0.020	3.0	LOS A	0.1	2.1	0.23	0.10	32.6
Approach		25	2.0	0.020	3.0	LOS A	0.1	2.1	0.23	0.10	33.4
North: SR-39											
7	L2	1	2.0	0.017	2.7	LOS A	0.1	1.9	0.10	0.02	36.1
4	T1	23	2.0	0.017	2.7	LOS A	0.1	1.9	0.10	0.02	36.1
Approach		24	2.0	0.017	2.7	LOS A	0.1	1.9	0.10	0.02	36.1
All Vehicles		179	2.0	0.092	3.2	LOS A	0.4	10.8	0.06	0.02	35.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: SR-39 / Old San Gabriel Cyn Rd - 2028 WP PM

River Wilderness Park TIA (JN: 09321)
Opening Year (2028) With Project - PM Peak Hour

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: SR-39											
8	T1	46	2.0	0.056	3.0	LOS A	0.3	6.4	0.02	0.00	36.1
18	R2	33	2.0	0.056	3.0	LOS A	0.3	6.4	0.02	0.00	35.0
Approach		79	2.0	0.056	3.0	LOS A	0.3	6.4	0.02	0.00	35.6
East: Old San Gabriel Canyon Road											
1	L2	38	2.0	0.030	2.9	LOS A	0.1	3.3	0.15	0.04	33.5
16	R2	2	2.0	0.030	2.9	LOS A	0.1	3.3	0.15	0.04	32.6
Approach		40	2.0	0.030	2.9	LOS A	0.1	3.3	0.15	0.04	33.4
North: SR-39											
7	L2	1	2.0	0.074	3.2	LOS A	0.3	8.5	0.14	0.04	35.9
4	T1	100	2.0	0.074	3.2	LOS A	0.3	8.5	0.14	0.04	35.9
Approach		101	2.0	0.074	3.2	LOS A	0.3	8.5	0.14	0.04	35.9
All Vehicles		220	2.0	0.074	3.1	LOS A	0.3	8.5	0.09	0.03	35.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.