

TRAFFIC IMPACT ANALYSIS

For

The Glen at Scripps Ranch

A Continuing Care Retirement Community

Prepared for

THE CITY OF SAN DIEGO

and

Continuing Life Communities Management, LLC

FINAL: April 12, 2013



© URBAN SYSTEMS ASSOCIATES, INC.
TRAFFIC PLANNING & ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT
4540 Kearny Villa Road, Suite 106
San Diego, CA 92123-1573
(858) 560-4911

**TRANSPORTATION ANALYSIS
TABLE OF CONTENTS**

<u>Section</u>	<u>Page</u>
1.0 EXECUTIVE SUMMARY	1-1
2.0 INTRODUCTION	2-1
3.0 PROPOSED PROJECT	3-1
4.0 METHODOLOGY	4-1
5.0 EXISTING CONDITIONS.....	5-1
6.0 EXISTING + PROJECT.....	6-1
7.0 OTHER PROJECTS	7-1
8.0 NEAR TERM WITHOUT PROJECT	8-1
9.0 NEAR TERM WITH PROJECT	9-1
10.0 YEAR 2030 WITHOUT PROJECT	10-1
11.0 YEAR 2030 WITH PROJECT	11-1
12.0 RAMP METER ANALYSIS & FREEWAY ANALYSIS.....	12-1
13.0 UNIQUE CHARACTERISTICS OF THE PROPOSED PROJECT	13-1
14.0 CONCLUSIONS AND RECOMMENDATIONS	14-1
15.0 REFERENCES	15-1
16.0 URBAN SYSTEMS ASSOCIATES, INC. PREPARERS	16-1

LIST OF FIGURES

<u>Number</u>		<u>Page</u>
1-1	Mitigated Intersection Lane Configurations	1-17
2-1	Vicinity Map	2-2
2-2	Project Location Map.....	2-3
2-3	Project Site Plan	2-4
2-4	Study Area Boundary & Intersection Key	2-5
3-1	Project Only Traffic Distribution.....	3-3
3-2	Project Only Average Daily Traffic.....	3-4
3-3	Project Only AM / PM Peak Hour Traffic.....	3-5
5-1	Existing Average Daily Traffic.....	5-2
5-2	Existing Lane Configurations	5-5
5-3	Existing AM/PM Peak Hour Traffic.....	5-6
6-1	Existing + Project Average Daily Traffic	6-2
6-2	Existing + Project AM/PM Peak Hour Traffic	6-5
7-1	Other Projects Location Map	7-4
7-2	Other Projects Average Daily Traffic Volumes.....	7-5
7-3	Other Projects AM/PM Peak Hour Traffic Volumes	7-6
8-1	Near Term Without Project Average Daily Traffic	8-2
8-2	Near Term Without Project AM/PM Peak Hour Traffic Volumes	8-5
9-1	Near Term With Project Average Daily Traffic Volumes.....	9-2
9-2	Near Term With Project AM/PM Peak Hour Traffic Volumes	9-5
10-1	Year 2030 Without Project Average Daily Traffic Volumes	10-2
10-2	Year 2030 Without Project AM/PM Peak Hour Traffic Volumes	10-5

LIST OF FIGURES (Continued)

<u>Number</u>		<u>Page</u>
11-1	Year 2030 With Project Average Daily Traffic Volumes	11-2
11-2	Year 2030 With Project AM / PM Peak Hour Traffic Volumes.....	11-4
14-1	City CIP Facility Financing Program Project 34-3 Pomerado Road	14-13
14-2	Excerpts From the Scripps Miramar Ranch Community Plan (3 Pages).....	14-14

LIST OF TABLES

<u>Number</u>		<u>Page</u>
1-1	Existing Without & Existing With Project Street Segment Comparison	1-3
1-2	Existing & Existing With Project Intersection Summary	1-4
1-3	Existing With & Without Project Freeway Level of Service Summary	1-5
1-4	Existing Vs. Existing With Project Ramp Meter Analysis	1-6
1-5	Near Term Without & Near Term With Project Street Segment Comparison	1-7
1-6	Near Term With & Near Term Without Project Intersection Comparison.....	1-8
1-7	Near Term With & Without Project Freeway Level of Service Summary	1-9
1-8	Near Term Without Project Vs. Near Term With Project Ramp Meter Analysis	1-10
1-9	Year 2030 & Year 2030 With Project Street Segment Comparison.....	1-12
1-10	Year 2030 & Year 2030 With Project Intersection Summary	1-13
1-11	Year 2030 With & Without Project Freeway Level of Service Summary	1-14
1-12	Year 2030 Without Project Vs. Year 2030 With Project Ramp Meter Analysis.....	1-15
1-13	Mitigated Street Segment Levels of Service.....	1-16
1-14	Mitigated Intersection Levels of Service	1-18
2-1	Study Area Street Segments & Intersections	2-6
3-1	Project Trip Generation.....	3-2
4-1	Levels of Service Criteria for Signalized and Un-signalized Intersections	4-4
4-2	Significance Thresholds.....	4-7
4-3	Roadway Classifications.....	4-8
5-1	Existing Street Segment Levels of Service.....	5-4
5-2	Existing Intersection Levels of Service	5-7
6-1	Existing Plus Project Street Segment Levels of Service.....	6-3

LIST OF TABLES (Continued)

<u>Number</u>		<u>Page</u>
6-2	Existing Plus Project Intersection Levels of Service	6-6
7-1	Other Projects List	7-7
8-1	Near Term Without Project Street Segment Levels of Service	8-3
8-2	Near Term Without Project Intersection Levels of Service.....	8-6
9-1	Near Term With Project Street Segment Levels of Service	9-3
9-2	Near Term With Project Intersection Levels of Service.....	9-6
10-1	Year 2030 Without Project Street Segment Levels of Service	10-3
10-2	Year 2030 Without Project Intersection Levels of Service	10-6
11-1	Year 2030 With Project Street Segment Levels of Service	11-3
11-2	Year 2030 With Project Intersection Levels of Service.....	11-5
12-1	Existing Ramp Meter Analysis	12-2
12-2	Existing Plus Project Ramp Meter Analysis	12-3
12-3	Near Term Without Project Ramp Meter Analysis	12-4
12-4	Near Term With Project Ramp Meter Analysis	12-5
12-5	Year 2030 Without Project Ramp Meter Analysis.....	12-6
12-6	Year 2030 With Project Ramp Meter Analysis.....	12-7
12-7	Existing With & Without Project Ramp Meter Analysis.....	12-8
12-8	Near Term With & Without Project Ramp Meter Analysis.....	12-9
12-9	Year 2030 With & Without Project Ramp Meter Analysis	12-10
12-10	Existing Freeway Segment LOS Summary.....	12-12
12-11	Existing Plus Project Freeway Segment LOS Summary	12-13
12-12	Near Term Without Project Freeway Segment LOS Summary	12-14

LIST OF TABLES (Continued)

<u>Number</u>		<u>Page</u>
12-13	Near Term With Project Freeway Segment LOS Summary	12-15
12-14	Year 2030 Without Project Freeway Segment LOS Summary	12-16
12-15	Year 2030 With Project Freeway Segment LOS Summary	12-17
12-16	Existing With & Without Project Freeway Segment LOS Comparison	12-18
12-17	Near Term With & Without Project Freeway Segment LOS Comparison	12-19
12-18	Year 2030 With & Without Project Freeway Segment LOS Comparison.....	12-20
13-1	Continuing Life Communities Traffic Study Street & Intersection Peaks Summary	13-2
13-2	Staff Arrival / Departure Times	13-3
13-3	Continuing Life Communities Transportation Summary and Comparisons.....	13-5
14-1	Existing With & Without Project Street Segment Significance.....	14-5
14-2	Near Term With & Without Project Street Segment Significance.....	14-6
14-3	Existing With & Without Project Intersection LOS Comparison	14-7
14-4	Near Term With & Without Project Intersection LOS Comparison	14-8
14-5	Year 2030 With & Without Project Street Segment Significance	14-10
14-6	Year 2030 With & Without Project Intersection Summary	14-11

APPENDICES

- A. Series 11 Forecast + Existing Traffic Flows
- B. Existing Traffic Counts
- C. Existing Synchro Worksheets
- D. Existing With Project Synchro Worksheets
- E. Cumulative Projects Information
- F. Near Term Without Project Synchro Worksheets
- G. Near Term With Project Synchro Worksheets
- H. Year 2030 Factoring Worksheets
- I. Year 2030 Without Project Synchro Worksheets
- J. Year 2030 With Project Synchro Worksheets

1.0 EXECUTIVE SUMMARY

This study was commissioned by Continuing Life Communities Management, LLC to determine potential transportation impacts and appropriate mitigation measures for the proposed The Glen at Scripps Ranch (A Continuing Care Retirement Community). The proposed project is located in Scripps Ranch. The proposed development includes 50 personal care units, and 60 convalescent / nursing beds, and 400 independent wing RCFE (Residential Care Facility for the Elderly) units which would generate 1,880 average daily trips (ADT).

In order to determine a scope of work for the Transportation Impact Study, staff of Urban Systems Associates, Inc. (USAI) completed a preliminary analysis and met with City Transportation staff. Based on the meeting, study area intersections and street segments were identified for the analysis and traffic generation and distribution was determined. The preliminary analysis was based on a Series 11 travel forecast and both machine and manual traffic counts of the existing daily and peak hour traffic flow data for the study intersections and street segments.

The traffic generation for The Glen at Scripps Ranch was based on the City of San Diego's May 2003 Trip Generation Manual. The project traffic was then added to Other Project traffic and both Near Term and Year 2030 scenarios, and an impact analysis was completed in which six scenarios were analyzed: Existing, Existing Plus Project, Near Term Without Project, Near Term With Project, Year 2030 Without Project, and Year 2030 With Project. The term Near Term is meant to discuss a condition occurring within the next several years where traffic from other known development projects in the area are added onto existing traffic levels to reflect the project's anticipated opening day, which is expected to be in Year 2016 / 2017. This reflects the best information available for determining what traffic would be in the next

several years. The term Year 2030 is meant to discuss traffic conditions to the year 2030. The analysis year used for modeling purposes is the Year 2030.

Study Results:

Based upon this transportation impact analysis, it was determined that development of the proposed project would have the following impacts:

1.1 DIRECT IMPACTS:

EXISTING + PROJECT

1. **Street Segments** - The proposed project has four (4) significant direct project impacts as shown in **Table 1-1**.
2. **Intersections** - The proposed project has one (1) direct significant project impact as shown on **Table 1-2**.
3. **Freeway Segments** - The project has no significant direct freeway main lane impacts as shown in **Table 1-3**.
4. **Freeway Ramps** – The project has no significant direct ramp meter impacts as shown in **Table 1-4**.

NEAR TERM + PROJECT

5. **Street Segments** - The proposed project has four (4) significant Near Term direct project impacts as shown in **Table 1-5**.
6. **Intersections** - The proposed project has one (1) significant Near Term direct project impact as shown on **Table 1-6**.
7. **Freeway Segments** - The project has no significant Near Term direct freeway main lane impacts as shown in **Table 1-7**.
8. **Freeway Ramps** – The project has no significant Near Term direct ramp meter impacts as shown in **Table 1-8**.

TABLE 1-1
Existing Without & Existing With Project Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project			Δ V/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	PA	C	41,208	0.69	C	42,449	0.71	0.021	<i>NO</i>
Pomerado Road	I-15 NB Ramps to Willow Creek Road	2-Ca	F	27,827	1.86	F	29,181	1.95	0.090	YES
	Willow Creek Road to Scripps Ranch Blvd.	2-Ca	F	22,038	1.47	F	23,410	1.56	0.091	YES
	Scripps Ranch Blvd. to Chabad Center Drwy.	2-Ca	F	22,199	1.48	F	23,703	1.58	0.100	YES
	Chabad Center Drwy to Avenida Magnifica	2-Ca	F	21,847	1.46	F	22,223	1.48	0.025	YES

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

TABLE 1-2
Existing & Existing With Project Intersection Summary

#	Intersection	Existing				Existing + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	25.7	C	13.5	B	26.6	C	0.9	No	13.9	B	0.4	No
2	Miramar Road / I-15 NB Ramps	15.8	B	14.2	B	16.0	B	0.2	No	14.4	B	0.2	No
3	Pomerado Road / Willow Creek Road	82.0	F	58.2	E	93.2	F	11.2	Yes	68.4	E	10.2	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.3	C	50.0	D	10.6	No	29.9	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

TABLE 1-3

Existing With & Without Project Freeway Level of Service Summary

Segment	Dir.	Existing		Existing with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.858	D	0.860	D	0.002	NO
Miramar Way/ Miramar Road	SB	0.780	C	0.782	C	0.002	NO
Miramar Road/ Carroll Canyon Road	NB	0.808	D	0.808	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.735	C	0.735	C	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 1-4

Existing Vs. Existing With Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Existing		Existing With Project		Freeway LOS	∇	S	
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)				
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	0.00	0	0.00	0	C	0.00	NO	
	PM	0.00	0	0.00	0	C	0.00	NO	
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	Ramp Meter is not turned on in this Peak							
	PM	0.00	0	0.00	0	D	0.00	NO	
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	C	0.00	NO	
	PM	13.09	3,538	13.09	3,538	C	0.00	NO	
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	Ramp Meter is not turned on in this Peak							
	PM	23.32	5,162	23.32	5,162	D	0.00	NO	

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes

Observed Meter Delay & Queue

Location		Lanes on Ramps	Observed Delay (Min)	Observed Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	0.58	319
	PM	2 SOV	0.25	203
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak	
	PM	1 SOV	0.00	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	0.25	174
	PM	2 SOV & 1 HOV	0.52	348
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak	
	PM	2 SOV	3.50	1,131

TABLE 1-5

Near Term Without & Near Term With Project Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project			Δ V/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	PA	C	41,723	0.70	C	42,964	0.72	0.021	<i>NO</i>
Pomerado Road	I-15 NB Ramps to Willow Creek Road	2-Ca	F	27,938	1.86	F	29,292	1.95	0.090	YES
	Willow Creek Road to Scripps Ranch Blvd.	2-Ca	F	22,119	1.47	F	23,491	1.57	0.091	YES
	Scripps Ranch Blvd. to Chabad Center Drwy.	2-Ca	F	22,260	1.48	F	23,764	1.58	0.100	YES
	Chabad Center Drwy to Avenida Magnifica	2-Ca	F	21,908	1.46	F	22,284	1.49	0.025	YES

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

TABLE 1-6

Near Term With & Near Term Without Project Intersection Comparison

#	Intersection	Near Term				Near Term + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.1	C	14.3	B	27.4	C	1.3	No	14.7	B	0.4	No
2	Miramar Road / I-15 NB Ramps	16.2	B	14.2	B	16.4	B	0.2	No	14.6	B	0.4	No
3	Pomerado Road / Willow Creek Road	82.6	F	59.1	E	94.0	F	11.4	Yes	70.1	E	11.0	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.4	C	49.8	D	10.4	No	30.0	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service
 Δ = Change
 S = Significant
 D = Delay

TABLE 1-7

Near Term With & Without Project Freeway Level of Service Summary

Segment	Dir.	Near Term		Near Term with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.866	D	0.867	D	0.002	NO
Miramar Way/ Miramar Road	SB	0.788	C	0.789	C	0.002	NO
Miramar Road/ Carroll Canyon Road	NB	0.826	D	0.826	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.751	C	0.751	C	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 1-8

Near Term Without Project Vs. Near Term With Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Near Term Without Project		Near Term With Project		Freeway LOS	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	0.00	0	0.00	0	C	0.00	NO
	PM	0.00	0	0.00	0	C	0.00	NO
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	D	0.00	NO
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	C	0.00	NO
	PM	14.49	3,915	14.49	3,915	C	0.00	NO
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	Ramp Meter is not turned on in this Peak						
	PM	23.32	5,162	23.32	5,162	D	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes

1.2 LONG TERM (YEAR 2030) CUMULATIVE IMPACTS:

1. **Street Segments** - The proposed project has four (4) significant Long Term (Year 2030) cumulative project impacts as shown in **Table 1-9**.
2. **Intersections** - The proposed project has two (2) significant Long Term (Year 2030) cumulative project impacts as shown on **Table 1-10**.
3. **Freeway Segments** - The project has no significant Long Term (Year 2030) cumulative freeway main lane freeway main lane impacts as shown in **Table 1-11**.
4. **Freeway Ramps** – The project has no significant Long Term (2030) cumulative ramp meter impacts as shown in **Table 1-12**.

1.3 MITIGATION:

Mitigation for project direct and cumulative impacts is determined based on the project's identified significant impacts under the City's significance criteria. As noted in this chapter, both direct and cumulative impacts were identified. However, in the Scripps Miramar Ranch planning area, the City and planning groups have previously determined that they do not, without a vote of the citizens that reside in the planning area, want to widen Pomerado Road east of Scripps Ranch Blvd. to four (4) lanes¹. **Table 1-13** shows street segment levels of service on Pomerado Road if it were widened as mitigation for the project's direct and cumulative impacts. **Figure 1-1** shows Year 2030 with Project lane configurations at two intersections that would mitigate the direct and cumulative impacts. **Table 1-14** shows that Pomerado Road at Willow Creek Road and Pomerado Road at Scripps Ranch Blvd. would operate at acceptable levels of service if an additional eastbound and westbound through lane were provided to mitigate the project's direct and cumulative impacts.

¹ Scripps Miramar Ranch Community Plan, pg. 50-51, Oct. 26, 1993, Resolution R-282903.

TABLE 1-9

Year 2030 & Year 2030 With Project Street Segment Comparison

Road	Segment	Class.	Year 2030			Year 2030 + Project			Δ V/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	PA	C	45,000	0.75	C	46,241	0.77	0.021	<i>NO</i>
Pomerado Road	I-15 NB Ramps to Willow Creek Road	2-Ca	F	36,000	2.40	F	37,354	2.49	0.090	YES
	Willow Creek Road to Scripps Ranch Blvd.	2-Ca	F	30,000	2.00	F	31,372	2.09	0.091	YES
	Scripps Ranch Blvd. to Chabad Center Drwy.	2-Ca	F	28,000	1.87	F	29,504	1.97	0.100	YES
	Chabad Center Drwy to Avenida Magnifica	2-Ca	F	28,000	1.87	F	28,376	1.89	0.025	YES

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

TABLE 1-10

Year 2030 & Year 2030 With Project Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.3	C	48.7	D	27.0	C	0.7	No	48.8	D	0.1	No
2	Miramar Road / I-15 NB Ramps	16.6	B	13.9	B	17.2	B	0.6	No	13.9	B	0.0	No
3	Pomerado Road / Willow Creek Road	167.5	F	165.8	F	181.5	F	14.0	Yes	189.9	F	24.1	Yes
4	Pomerado Road / Scripps Ranch Blvd.	136.5	F	82.9	F	160.7	F	24.2	Yes	105.0	F	22.1	Yes
5	Pomerado Road / Chabad Center Drwy.	19.2	B	28.5	C	33.3	C	14.1	No	39.0	D	10.5	No
6	Pomerado Road / Avenida Magnifica	99.5	F	83.6	F	100.3	F	0.8	No	83.9	F	0.3	No

Notes

Δ = Change
 LOS = Level of Service
 S = Significant
 D = Delay

TABLE 1-11

Year 2030 With & Without Project Freeway Level of Service Summary

Segment	Dir.	Year 2030		Year 2030 + Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.921	E	0.922	E	0.001	NO
Miramar Way/ Miramar Road	SB	0.838	D	0.839	D	0.001	NO
Miramar Road/ Carroll Canyon Road	NB	0.985	E	0.985	E	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.805	D	0.805	D	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 1-12

Year 2030 Without Project Vs. Year 2030 With Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Year 2030 Without Project		Year 2030 With Project		Freeway LOS	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	0.00	0	0.00	0	D	0.00	NO
	PM	0.00	0	0.00	0	D	0.00	NO
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	E	0.00	NO
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	D	0.00	NO
	PM	26.89	7,265	26.89	7,265	D	0.00	NO
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	Ramp Meter is not turned on in this Peak						
	PM	23.32	5,162	23.32	5,162	E	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes

TABLE 1-13
Mitigated Street Segment Levels of Service

Existing + Project

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	42,449	0.71	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	6-M	50,000	29,181	0.58	C
	Willow Creek Road to Scripps Ranch Blvd.	SD	4-C	30,000	23,410	0.78	D
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	4-C	30,000	23,703	0.79	D
	Chabad Center Drwy to Avenida Magnifica	SD	4-C	30,000	22,223	0.74	D

Near Term + Project

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	42,964	0.72	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	6-M	50,000	29,292	0.59	C
	Willow Creek Road to Scripps Ranch Blvd.	SD	4-C	30,000	23,491	0.78	D
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	4-C	30,000	23,764	0.79	D
	Chabad Center Drwy to Avenida Magnifica	SD	4-C	30,000	22,284	0.74	D

Year 2030 + Project

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	46,241	0.77	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	6-M	50,000	37,354	0.75	C
	Willow Creek Road to Scripps Ranch Blvd.	SD	4-M	40,000	31,372	0.78	D
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	4-M	40,000	29,504	0.74	C
	Chabad Center Drwy to Avenida Magnifica	SD	4-M	40,000	28,376	0.71	C

Legend:

Class. = Functional Class

Cap. = Capacity

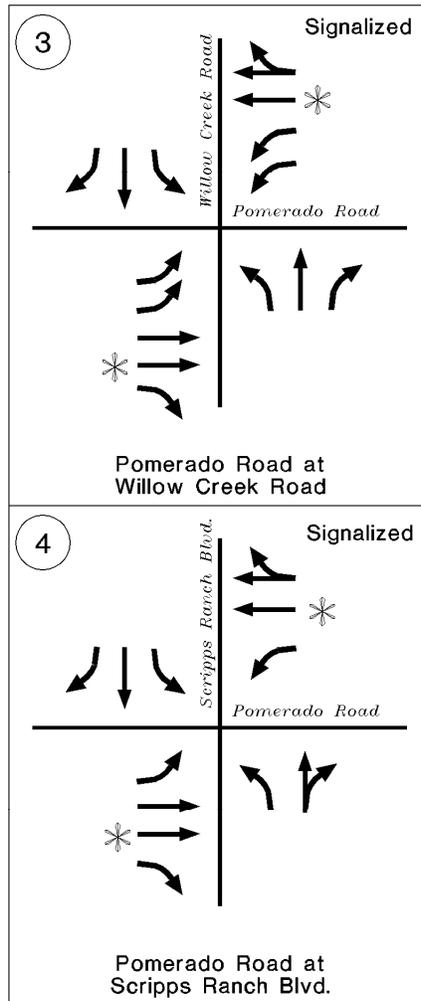
LOS = Level of Service

4-C = 4 lane Collector

4-M = 4 lane Major Arterial

6-M = 6 lane Major Arterial

PA = 6 lane Prime Arterial



* Added Through Lane To Achieve Acceptable LOS



FIGURE 1-1
Mitigated Intersection Lane Configurations

TABLE 1-14
Mitigated Intersection Levels of Service

Existing + Project

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
3	Pomerado Road / Willow Creek Road	Signalized	42.6	D	34.5	C
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	17.8	B	18.1	B

Near Term + Project

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
3	Pomerado Road / Willow Creek Road	Signalized	42.7	D	34.6	C
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	17.8	B	18.1	B

Year 2030 + Project

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
3	Pomerado Road / Willow Creek Road	Signalized	48.2	D	44.6	D
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	25.0	C	24.8	C

Notes:

LOS = Level of Service

2.0 INTRODUCTION

Urban Systems Associates, Inc. (USAI) was retained by Continuing Life Communities Management, LLC to determine the potential transportation impacts and the appropriate mitigation measures for proposed project development of The Glen at Scripps Ranch. **Figure 2-1** illustrates the regional location of the proposed project. The proposed project is located in the Scripps Ranch Community of San Diego (See **Figure 2-2**) The Glen at Scripps Ranch includes a combination of uses which are expected to generate 1,880 average daily trips (ADT).

Figure 2-3 shows The Glen at Scripps Ranch site plan.

In order to determine the impacts of the project, USAI used a SANDAG Series 11 Transportation Model Run, see **Appendix A**. For study area purposes, USAI used City and regional guidelines which require 50 trips in one direction during a peak hour be used as a threshold for study intersections and street segments. Also, based on the City and regional guidelines, USAI used 50 peak hour directional trips as the basis for studying freeway segments and 20 peak hour trips for studying ramp meters. **Figure 2-4** shows the study area boundary and the intersection key selected for the study. USAI then gathered information or oversaw the machine and manual traffic counts of the existing ADT and peak hour traffic flow data for the study intersections and street segments. **Table 2-1** shows the study area street segments and intersections.

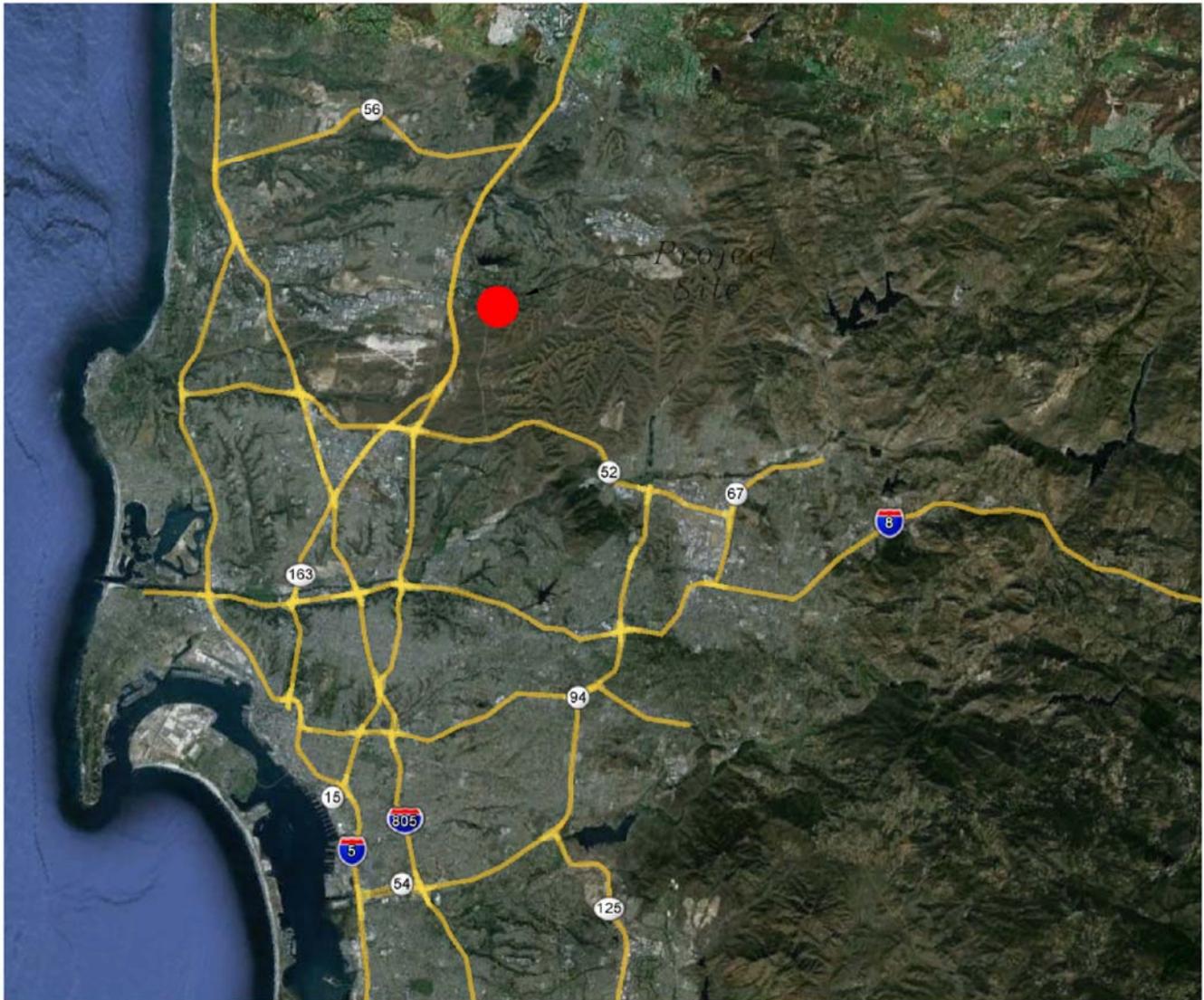


FIGURE 2-1
Vicinity Map



FIGURE 2-2
Project Location Map

THE GLEN AT SCRIPPS RANCH CCRC POMERADO ROAD ACCESS



FIGURE 2-3

Project Site Plan



LEGEND

--- = Study Area Boundary

③ = Intersection Key



FIGURE 2-4

Study Area Boundary and Intersection Key

TABLE 2-1
Study Area Street Segments & Intersections

Street Segments	
Road	Segment
Miramar Road	I-15 SB Ramps to I-15 NB Ramps
Pomerado Road	I-15 NB Ramps to Willow Creek Road
	Willow Creek Road to Scripps Ranch Blvd.
	Scripps Ranch Blvd. to Chabad Center Drwy.
	Chabad Center Drwy. to Avenida Magnifica
Intersections	
Number	Intersection
1	Miramar Road / I-15 SB Ramps
2	Miramar Road / I-15 NB Ramps
3	Pomerado Road / Willow Creek Road
4	Pomerado Road / Scripps Ranch Blvd.
5	Pomerado Road / Chabad Center Drwy.
6	Pomerado Road / Avenida Magnifica

In order to summarize project impacts and required mitigation this report is divided into the following text sections:

- 1.0 Executive Summary
- 2.0 Introduction
- 3.0 Proposed Project
- 4.0 Methodology
- 5.0 Existing Conditions
- 6.0 Existing Plus Project
- 7.0 Other Projects
- 8.0 Near Term Without Project
- 9.0 Near Term With Project
- 10.0 Year 2030 Without Project
- 11.0 Year 2030 With Project
- 12.0 Ramp Meter Analysis and Freeway Analysis
- 13.0 Unique Characteristics of the Proposed Project
- 14.0 Conclusions and Recommendations
- 15.0 Urban Systems Associates, Inc. Preparers

3.0 PROPOSED PROJECT

The project evaluated in this study proposes the development of a continuing care retirement community (CCRC).

3.1 TRIP GENERATION

A trip generation table for the project was developed as shown in **Table 3-1**. As shown, the proposed project would generate **1,880** average daily trips (ADT) with **144 (35 in / 109 out)** trips in the AM peak hour and **181 (121 in / 60 out)** trips in the PM peak hour per the City of San Diego Trip Generation Manual.

3.2 PROJECT ONLY TRAFFIC

Figure 3-1 shows the project only trip distribution percentages are based on existing counts at nearby intersections and engineering judgment during scoping of this traffic study. The expected distribution of project traffic is 20% to the east, 80% to the west from Chabad Center Driveway. The proposed project access Pomerado Road via Chabad Center Driveway. **Figure 3-2** shows the project only average daily traffic volumes which are based on the daily traffic generation from **Table 3-1** and the distribution of project only traffic from **Figure 3-1**.

Figure 3-3 shows the AM/PM peak hour project only traffic.

TABLE 3-1
Project Trip Generation

Use	Amount		*Trip	ADT	AM Peak Hour					PM Peak Hour								
					% *	#	In	: Out	In	Out	% *	#	In	: Out	In	Out		
Congregate Care	50	DU	2 /DU	100	3%	3	6	:	4	2	1	8%	8	5	:	5	4	4
Convalescent / Nursing	60	beds	3 /bed	180	7%	13	6	:	4	8	5	7%	13	4	:	6	5	8
Retirement / Senior Housing	400	DU	4 /DU	1,600	8%	128	2	:	8	26	102	10%	160	7	:	3	112	48
TOTAL				1,880		144				35	109		181				121	60

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

DU = Dwelling Unit



FIGURE 3-1

Project Only Traffic Distribution



FIGURE 3-2

Project Only Average Daily Traffic

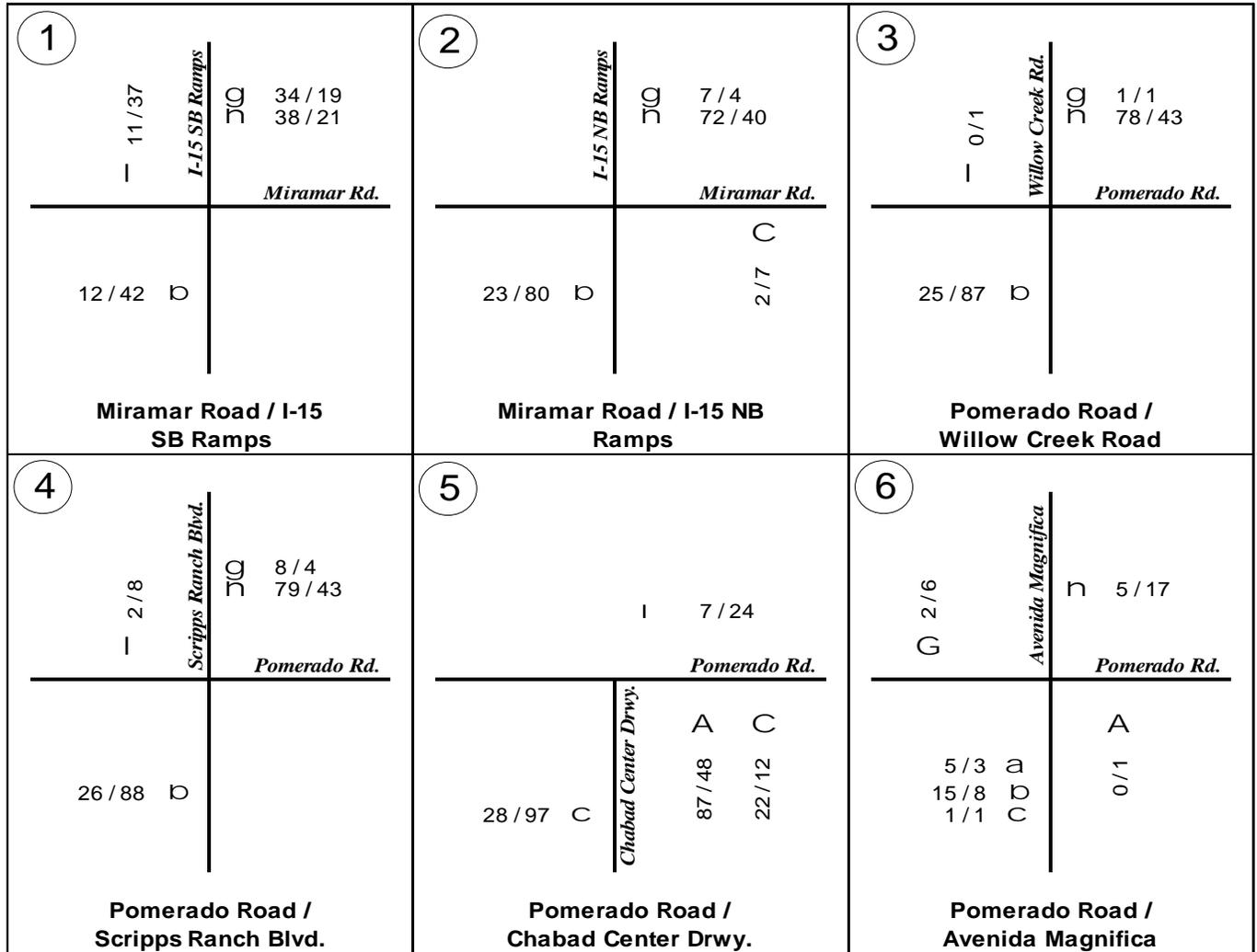


FIGURE 3-3

Project Only AM / PM Peak Hour Traffic

4.0 METHODOLOGY

This section of the report describes various analysis procedures and criteria that are used to determine if the proposed project has a significant impact and if mitigation is required. Mitigation may be either specific improvements by the project or a financial contribution towards an improvement by others. Two criteria must be met before project mitigation is proposed. First, the intersection or street segment must have an unacceptable level of service (LOS), i.e. E or F as discussed below. Second, the amount of project traffic must be significant based on the application of criteria also discussed below. For an intersection, if the change in delay is greater than 2 seconds or 1 second and the level of service is “E” or “F” respectively, then the intersection project impacts would be considered significant. For a street segment, if the change in volume to capacity ratio (V/C ratio) exceeds 0.02 or 0.01, and the level of service is “E” or “F” respectively, then the street segment would be considered significant. If project traffic causes an intersection, roadway segment, or freeway segment to degrade from LOS “D” to LOS “E” or LOS “F” and exceeds the threshold above, project mitigation is required. For freeway segments to be considered significant, the segment would need to operate at unacceptable levels of service and exceed a change in v/c ratio of 0.01 or 0.005 for LOS “E” and “F” respectively. A ramp meter would be significant if the change in delay is greater than 2 minutes or 1 minute for LOS “E” and “F” respectively using the most restrictive meter rate method of analysis.

4.1 CITY OF SAN DIEGO GUIDELINES

The City of San Diego has developed a Traffic Impact Study Manual (7/98). The stated purpose of the Traffic Impact Study Manual is “...to ensure consistency with all applicable City and State regulations.” The Traffic Impact Study Manual provides guidance regarding preparation of traffic impact reports in the

City of San Diego. Since the proposed project is located in City of San Diego, this traffic impact report follows the procedures outlined in their traffic manual. The manual includes guidelines for forecasting, trip generation and assignment, and analysis procedures.

The City's Traffic Impact Study Manual also establishes criteria which identify the allowable change in delay or volume to capacity ratio (V/C) due to project impacts. The manual also establishes criteria for measuring project impacts at intersections. This method establishes an allowable increase in delay at intersections due to the addition of project trips. The City Traffic Impact Study Manual specifies use of the most current Highway Capacity Manual (HCM) operational method for studying intersections. The most current HCM is HCM 2000. For analyzing intersections, a software package called Synchro is used. This software package is a direct and faithful application of the HCM methodology.

4.2 TRIP DISTRIBUTION

The projected trips were distributed based on existing counts at nearby intersections and engineering judgment during scoping of this project. See [Appendix A](#) for existing traffic flow on city streets, and city staff review and refinements received as comments during scoping review.

4.3 STREET LOS THRESHOLD

When analyzing street segments, the level of service (LOS) must be determined. LOS is a measure used to describe the conditions of traffic flow. LOS is expressed using letter designations from "A" to "F". LOS "A" represents the best case, and LOS "F" represents the worst case. Generally LOS "A" through "C" represents free flowing traffic conditions with little or no delay. LOS "D" represents limited

congestion and some delay. However, the duration of periods of delay is acceptable to most people. LOS “E” and “F” represent significant delays on local streets, which are generally unacceptable for urban design purposes. The LOS descriptions are from Chapter 9 of the Highway Capacity Manual (Transportation Research Board, 2000).

The City of San Diego has developed LOS threshold tables based on the different functional street classifications and their ability to carry traffic. For the City of San Diego, LOS “D” is the acceptable LOS standard for roadways and intersections.

4.4 INTERSECTION LOS PROCEDURES

The City and Regional Congestion Management Program (CMP) guidelines, as adopted by SANDAG, determine the procedures to be used for intersection peak hour analysis. To determine an intersection peak hour LOS, the CMP guidelines require use of the most recent procedure from Chapter 9 of the Highway Capacity Manual (Transportation Research Board, 2000). The procedure in Chapter 9 which is used to analyze signalized intersection is the “operational method.” This method determines LOS based on total vehicle delay expressed in seconds. **Table 4-1** shows the LOS based upon the delay. A computer program is used to complete the analysis. As discussed above, the City and CMP guidelines have established LOS “D” or better as the objective for intersections and street segments.

TABLE 4-1

Level of Service Criteria For Signalized Intersections

Level of Service	Control Delay Per Vehicle (sec)
A	#10
B	>10 and #20
C	>20 and #35
D	>35 and #55
E	>55 and #80
F	>80

Source: Table 9-1, Highway Capacity Manual, 2000

Level of Service Criteria For Unsignalized Intersections

Level of Service	Control Delay Per Vehicle (sec)
A	#10
B	>10 and #15
C	>15 and #25
D	>25 and #35
E	>35 and #50
F	>50

Source: Table 10-7, Highway Capacity Manual, 2000

4.5 CMP ENHANCED CEQA REVIEW GUIDELINES

As discussed above, the Congestion Management Program regional guidelines were developed by SANDAG to provide a set of procedures for completing enhanced CEQA review for certain projects. The guidelines, prepared by the San Diego Association of Governments (SANDAG), stipulate that any development project generating 2,400 or more average daily trips, or 200 or more peak hour trips, must be evaluated in accordance with the requirements of the Regional CMP. The CMP analysis must include the traffic level of service (LOS) impacts on affected freeways and Regionally Significant Arterial (RSA) systems, which includes all designated CMP roadways. In order to conform to the region's CMP, local jurisdictions must adopt and implement a land use analysis program to assess impacts of land use decisions on the regional transportation system.

A review of the trip generation from **Table 3-1** compared to the CMP requirements is summarized below:

	The Glen at Scripps Ranch	CMP Requirements
ADT	1,880	> 2,400
Peak Hour	181 (PM)	> 200

As shown, the proposed project is below the threshold for ADT's, and it is also below the threshold for peak hour trips, therefore, a CMP analysis level of analysis is not required.

City of San Diego Guidelines is consistent with the methodologies contained in the Congestion Management Program. Further, City of San Diego significance determination Guidelines are also more

restrictive than those contained in the Congestion Management Program. Therefore, CMP requirements are met by following the City Traffic Impact Study Manual procedures.

4.6 CALTRANS FREEWAY SEGMENT LOS PROCEDURES

To determine the LOS of main lane freeway segments, Caltrans Guide for the Preparation of Traffic Impacts Studies, December 2002, specifies the use of the Highway Capacity Manual operational analysis. This method determines levels of service based on Density of Vehicles expressed in passenger cars per mile per lane. A computer program, HCS +, was used to complete this analysis. This computer program is a direct application of the procedures outlined in the 2000 Highway Capacity Manual.

4.7 SIGNIFICANCE THRESHOLDS

As discussed above, two criteria must be met before project traffic mitigation is required. First, an unacceptable LOS (i.e. E or F) must occur or degrade from D to E, and second, significance thresholds for only project traffic must be exceeded. The City has significance thresholds which are summarized in **Table 4-2**. These thresholds are used in this analysis along with levels of service to determine if project mitigation is required. **Table 4-3** shows the roadway classifications for the City of San Diego.

TABLE 4-2
Significance Thresholds

Level of Service with Project *	Allowable Change Due To Project Impact **					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Note 1: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes.

Note 2: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

* All LOS measurements are based upon Highway Capacity Manual procedures for peak-hour conditions. However, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual. The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped locations). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

** If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above * note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.

KEY: Delay = Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meters
 LOS = Level of Service
 Speed = Speed measured in miles per hour
 V/C = Volume to Capacity ratio

TABLE 4-3
Roadway Classifications

STREET CLASSIFICATION	LANES	LEVEL OF SERVICE				
		A	B	C	D	E
Freeway	8 lanes	60,000	84,000	120,000	140,000	150,000
Freeway	6 lanes	45,000	63,000	90,000	110,000	120,000
Freeway	4 lanes	30,000	42,000	60,000	70,000	80,000
Expressway	6 lanes	30,000	42,000	60,000	70,000	80,000
Primary Arterial	6 lanes	25,000	35,000	50,000	55,000	60,000
Major Arterial	6 lanes	20,000	28,000	40,000	45,000	50,000
Major Arterial	4 lanes	15,000	21,000	30,000	35,000	40,000
Collector	4 lanes	10,000	14,000	20,000	25,000	30,000
Collector (no center lane) continuous left-turn lane)	4 lanes 2 lanes	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2 lanes	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial fronting)	2 lanes	2,500	3,500	5,000	6,500	8,000
Collector (multifamily)	2 lanes	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2 lanes	—	—	2,200	—	—

LEGEND:

XX/XXX= Approximate recommended ADT based on the City of San Diego Street Design Manual.

NOTES:

1. The volumes and the average daily level of service listed above are only intended as a general planning guideline.
2. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

5.0 EXISTING CONDITIONS

The proposed project is located in the Scripps Miramar Ranch North Community area within the City of San Diego.

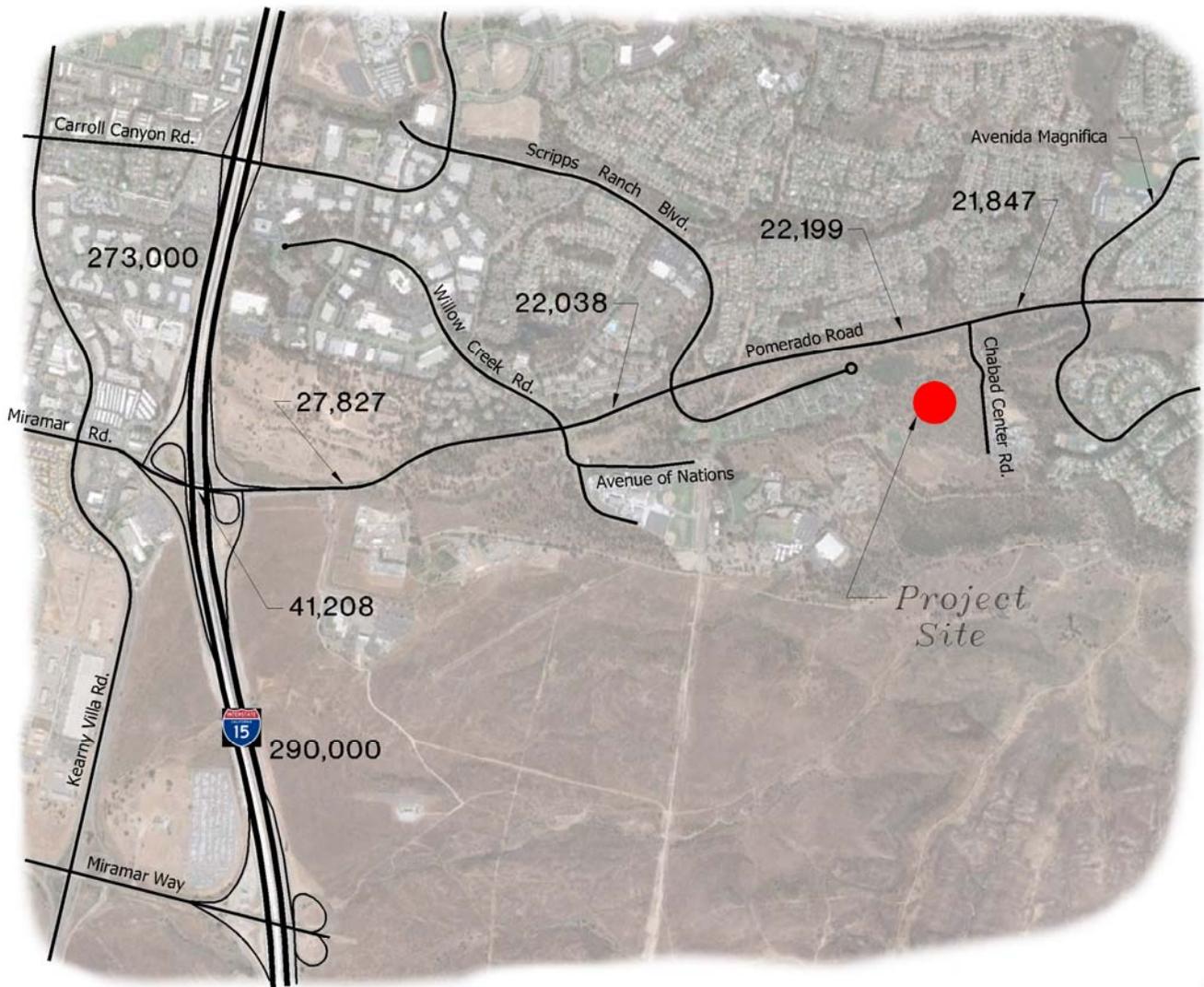
5.1 EXISTING ROADWAY FACILITIES

Miramar Road – Miramar Road is functionally and ultimately classified as a six (6) lane Prime Arterial that is primarily an east-west roadway. On-street parking is not allowed along either side of the roadway within the interchange area evaluated. The roadway width curb to curb is 102 feet and the posted speed limit is 45 mph. Class II bike lanes are included on the bridge.

Pomerado Road – Pomerado Road is functionally classified as a two (2) lane Collector with painted median and is primarily an east-west roadway. The ultimate classification in the Community Plan shows Pomerado Road as a four lane Major roadway. On-street parking is not allowed along either side of the roadway. The roadway width curb to curb is 50 feet and the posted speed limit is 45 mph. Class II bike lanes are included on the roadway.

5.2 EXISTING TRAFFIC VOLUMES

Figure 5-1 shows the existing average weekday 24-hour traffic volumes for street segments in the project study area. Existing street segment functional classifications were used for purposes of this analysis. Traffic counts summarized on this figure were compiled by Transportation Studies, Inc. in March 2012. **Appendix B** includes the existing count data for street segments, intersections, and freeway segments. Freeway volumes were provided via Caltrans website and counted in Year 2011.



SOURCE

Transportation Studies, March 2012

Freeway Volumes: Caltrans, 2011



FIGURE 5-1
Existing Average Daily Traffic

5.3 STREET SEGMENT ANALYSIS

As shown on **Table 5-1**, all street segments are projected to operate at unacceptable levels of service with the exception of the following street segments:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	C

5.4 EXISTING INTERSECTIONS

Figure 5-2 shows the existing lane configurations in the study area.

5.5 EXISTING INTERSECTION PEAK HOUR VOLUMES AND LOS

Figure 5-3 shows the existing AM and PM peak hour intersection traffic data which was collected at the intersections. As required by the City of San Diego, the analysis of peak hour intersection performance was based on the 2000 Highway Capacity Manual (HCM) using operational analysis procedures. A computer program called Synchro was used to complete the analysis. Manual counts were conducted in March of 2012.

As shown on **Table 5-2**, all intersections currently operate at a level of service “D” or better during the AM and PM peak hour periods except for one. The intersection of Pomerado Road and Willow Creek Road presently operates at a level of service E during the PM peak and F during the AM peak. Synchro worksheets for existing conditions may be found in **Appendix C**.

TABLE 5-1
Existing Street Segment Levels of Service

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	41,208	0.69	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	2-Ca	15,000	27,827	1.86	F
	Willow Creek Road to Scripps Ranch Blvd.	SD	2-Ca	15,000	22,038	1.47	F
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	2-Ca	15,000	22,199	1.48	F
	Chabad Center Drwy to Avenida Magnifica	SD	2-Ca	15,000	21,847	1.46	F

Legend:

Class. = Functional Class

Cap. = Capacity

LOS = Level of Service

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

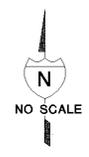
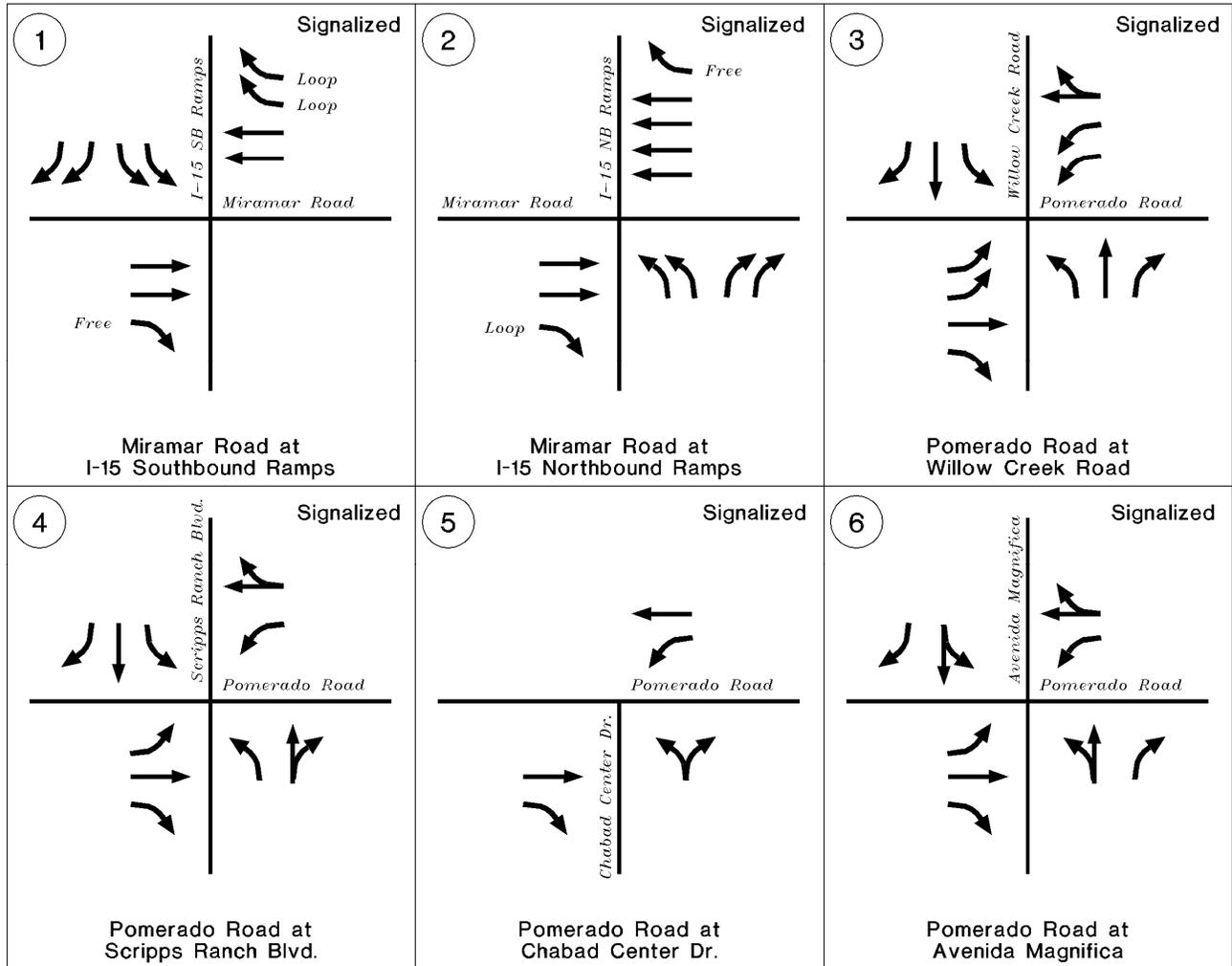


FIGURE 5-2
Existing Lane Configurations

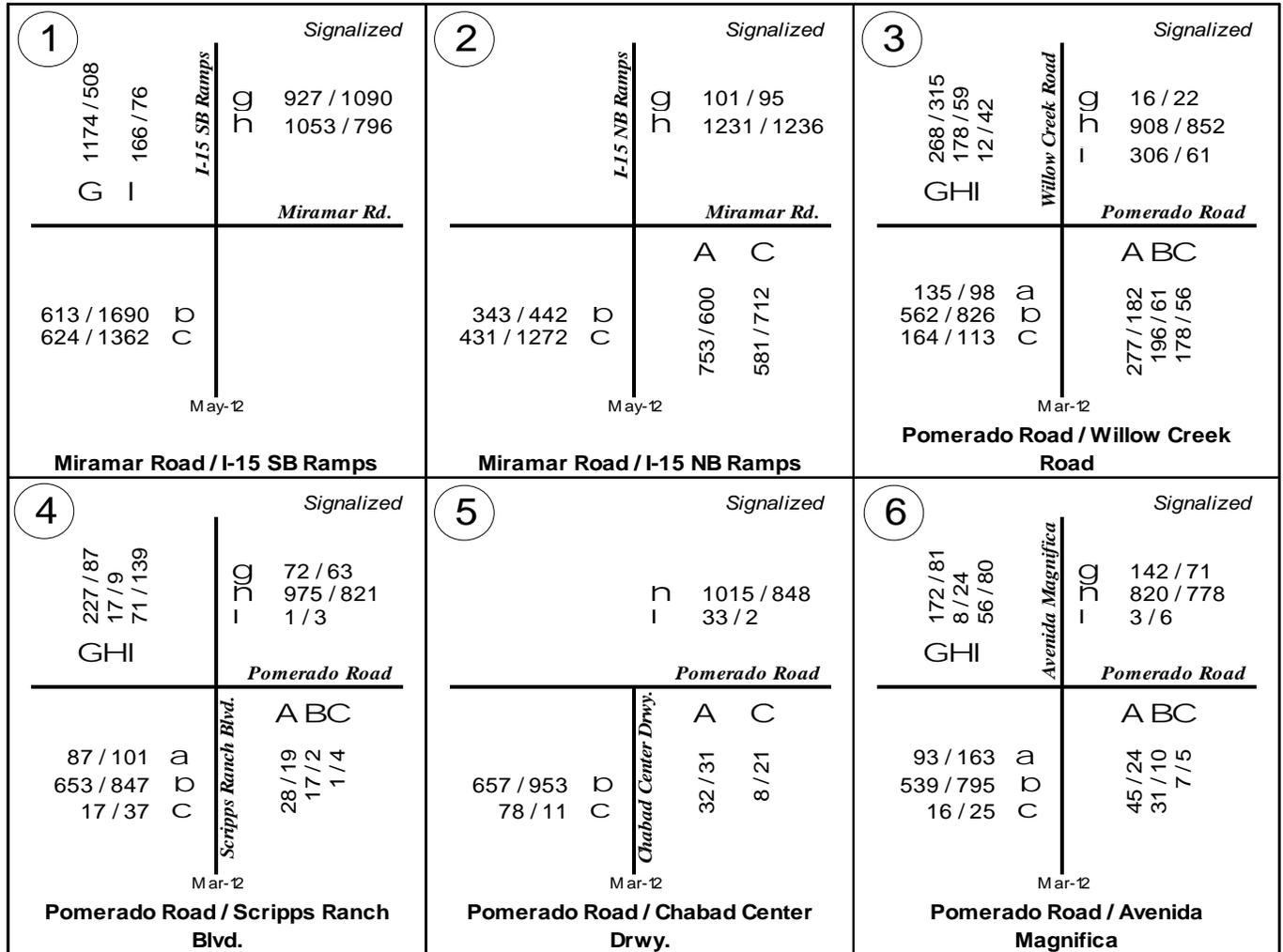


FIGURE 5-3

Existing AM / PM Peak Hour Traffic

TABLE 5-2

Existing Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	25.7	C	13.5	B
2	Miramar Road / I-15 NB Ramps	Signalized	15.8	B	14.2	B
3	Pomerado Road / Willow Creek Road	Signalized	82.0	F	58.2	E
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	39.4	D	26.3	C
5	Pomerado Road / Chabad Center Drwy.	Signalized	11.0	B	10.1	B
6	Pomerado Road / Avenida Magnifica	Signalized	39.4	D	36.4	D

Notes:

LOS = Level of Service

6.0 EXISTING PLUS PROJECT

This section of the report evaluates the existing with project traffic conditions by adding project only traffic to existing volumes and evaluating the project's direct traffic impacts.

6.1 STREET SEGMENTS

Figure 6-1 shows existing average daily traffic volumes with project only traffic added.

Table 6-1 shows street segment levels of service with The Glen at Scripps Ranch project traffic. The following street segments are projected to operate at an unacceptable level of service:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Pomerado Road	I-15 NB Ramps to Willow Creek Rd.	F
Pomerado Road	Willow Creek Rd. to Scripps Ranch Blvd.	F
Pomerado Road	Scripps Ranch Blvd. to Chabad Center Drwy.	F
Pomerado Road	Chabad Center Drwy. To Avenida Magnifica	F

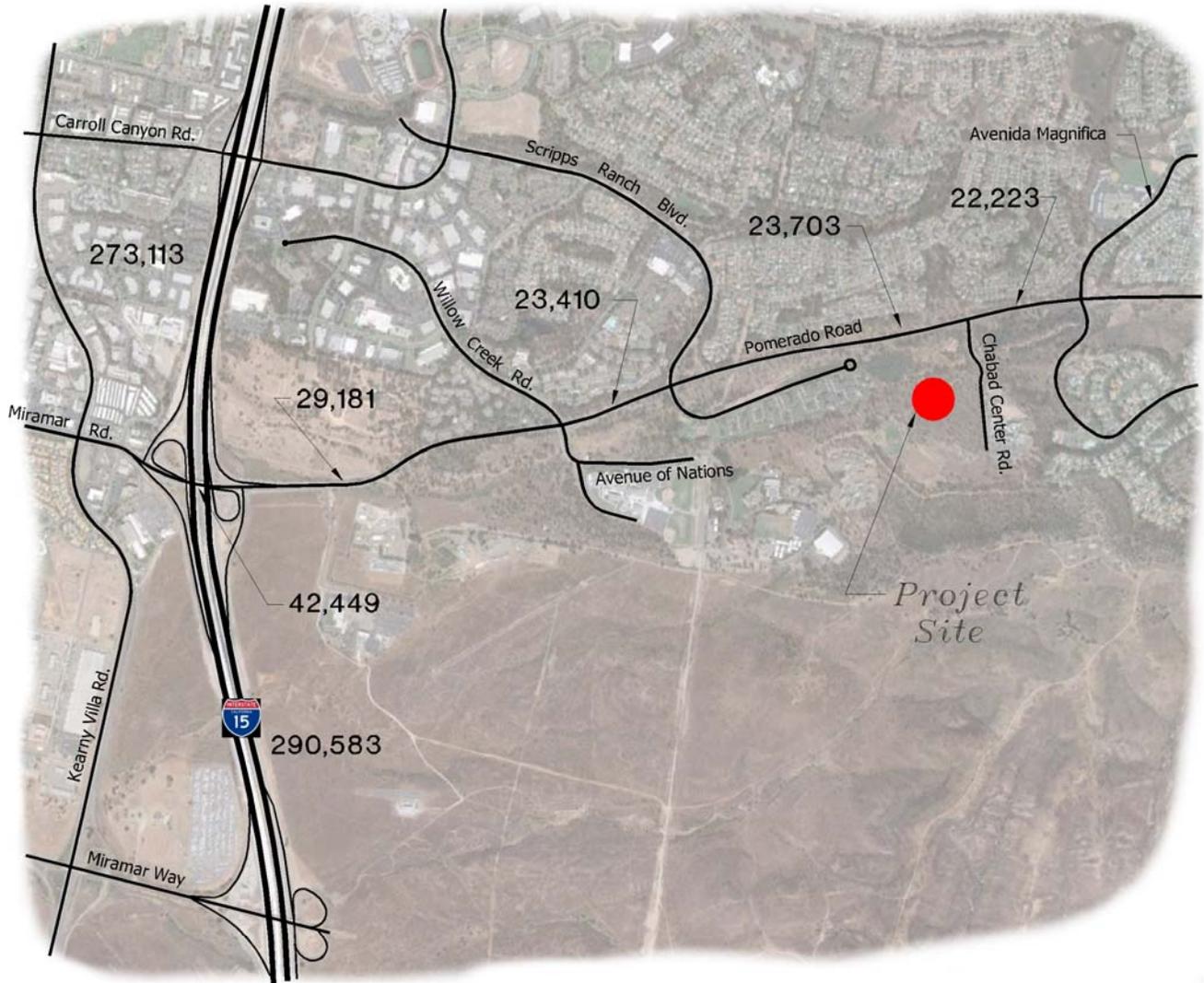


FIGURE 6-1
Existing + Project Average Daily Traffic

TABLE 6-1

Existing + Project Street Segment Levels of Service

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	42,449	0.71	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	2-Ca	15,000	29,181	1.95	F
	Willow Creek Road to Scripps Ranch Blvd.	SD	2-Ca	15,000	23,410	1.56	F
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	2-Ca	15,000	23,703	1.58	F
	Chabad Center Drwy to Avenida Magnifica	SD	2-Ca	15,000	22,223	1.48	F

Legend:

Class. = Functional Class

Cap. = Capacity

LOS = Level of Service

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

6.2 INTERSECTION ANALYSIS

Figure 6-2 shows existing plus The Glen at Scripps Ranch project combined traffic volumes during AM/PM peak hour at study area intersections.

Table 6-2 includes study area intersection levels of service with The Glen at Scripps Ranch project traffic added. As shown in the table, only the intersection of Pomerado Road and Willow Creek Road operates at an unacceptable level of service.

Appendix D includes the existing plus project Synchro worksheets.

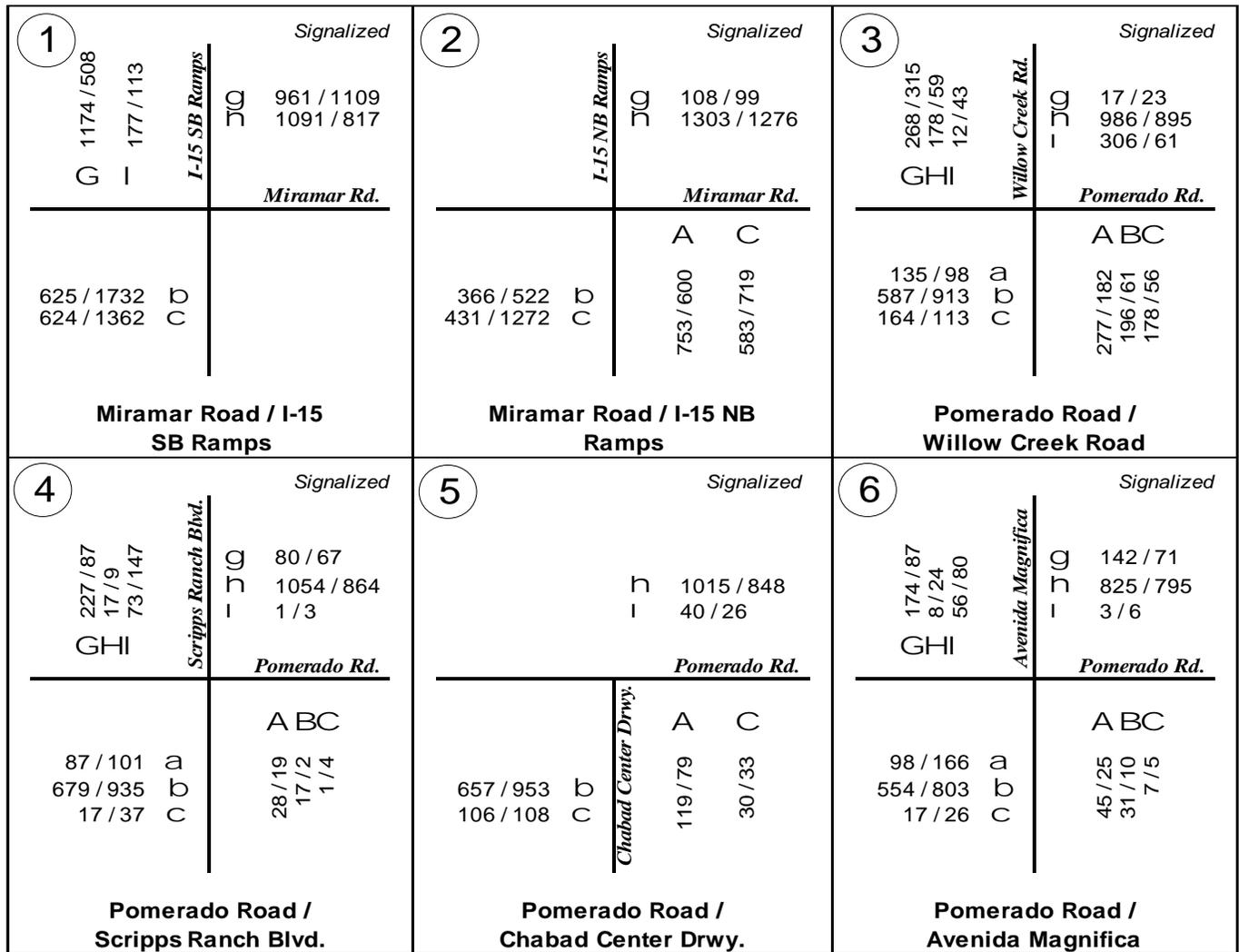


FIGURE 6-2

Existing + Project AM / PM Peak Hour Traffic

TABLE 6-2

Existing + Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	26.6	C	13.9	B
2	Miramar Road / I-15 NB Ramps	Signalized	16.0	B	14.4	B
3	Pomerado Road / Willow Creek Road	Signalized	93.2	F	68.4	E
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	50	D	29.9	C
5	Pomerado Road / Chabad Center Drwy.	Signalized	15.5	B	13.6	B
6	Pomerado Road / Avenida Magnifica	Signalized	40.4	D	38	D

Notes:

Delay = sec./veh.

LOS = Level of Service

7.0 OTHER PROJECTS

To find the Near Term (Existing + Other Projects) traffic volumes, USAI met with City staff to identify 9 other proposed or approved but not yet constructed projects that may have impacts within the project study area. After researching, only five (5) other projects were found to contribute traffic within the project study area between the time of existing counts and the project's expected opening day in Year 2016-17. Trip distribution, trip generation, and project only data for the cumulative projects may be found in Appendix E. **Figure 7-1** shows the location of the Other Projects.

Project only volumes from the five (5) cumulative projects were extracted from other traffic studies, and added to existing traffic volumes to get Near Term "other project" volumes. **Figure 7-2** shows the Other Projects average daily traffic volumes. **Figure 7-3** shows the Other Projects AM/PM peak hour traffic volumes. The five (5) other projects included in this analysis are listed below:

Stone Creek – A mixed-use project consisting of 4,445 residential units, 174,000 square feet of retail uses, 200,000 square feet of office space, 850,000 square feet of industrial/business park use, 175 room hotel, and 26.2 acres of neighborhood park space. This project is located west of I-15 between Camino Ruiz and Black Mountain Road on both the north and south sides of Carroll Canyon Road. The total project will generate about 35,000 average daily trips. This cumulative project is planned to be partially constructed generating approximately 12,500 ADT by the time The Glen at Scripps Ranch is planned to be opened in 2016-17.

Miramar College – A master plan for the existing Miramar Community College located on a site west of I-15, east of Black Mountain Road, south of Hillery Drive and north of Gold Coast Drive. This proposed

project will generate 7,792 average daily trips by expanding enrollment to a maximum of 25,000 students. A recent report (San Diego Miramar College Educational Master Plan (2011-2014) predicts the college will surpass 10,000 full-time enrolled students by the year 2017-18. This represents approximately 40% or 3,117 ADT (7,792 ADT x 40%) generated by the time The Glen at Scripps Ranch is planned to be opened in Year 2016-17.

Casa Mira View I – A residential project of 1,848 multi-family dwelling units located on the west side of I-15 just north of Mira Mesa Blvd. This cumulative project will generate 11,082 average daily trips. This project is planned to build approximately 900 units or generate 5,400 ADT by the time The Glen at Scripps Ranch is projected to be opened in Year 2016-17.

Carroll Canyon Commercial Center – A redevelopment project with 144,800 square feet of commercial space located at the northwest corner of the I-15 freeway at Carroll Canyon Road. This cumulative project will generate 7,095 average daily trips. This project is planned to be built prior to The Glen at Scripps Ranch.

U. S. Army – An expansion of the existing military reserve base off Pomerado Road, east of I-15. This cumulative project will generate 242 average week-day daily trips. This project is planned to be built prior to The Glen at Scripps Ranch.

The following cumulative projects are anticipated to be built after the completion of the proposed project, have either been constructed, or are located far enough away to add only a negligible amount of cumulative project traffic to the study area roadways and/or intersections:

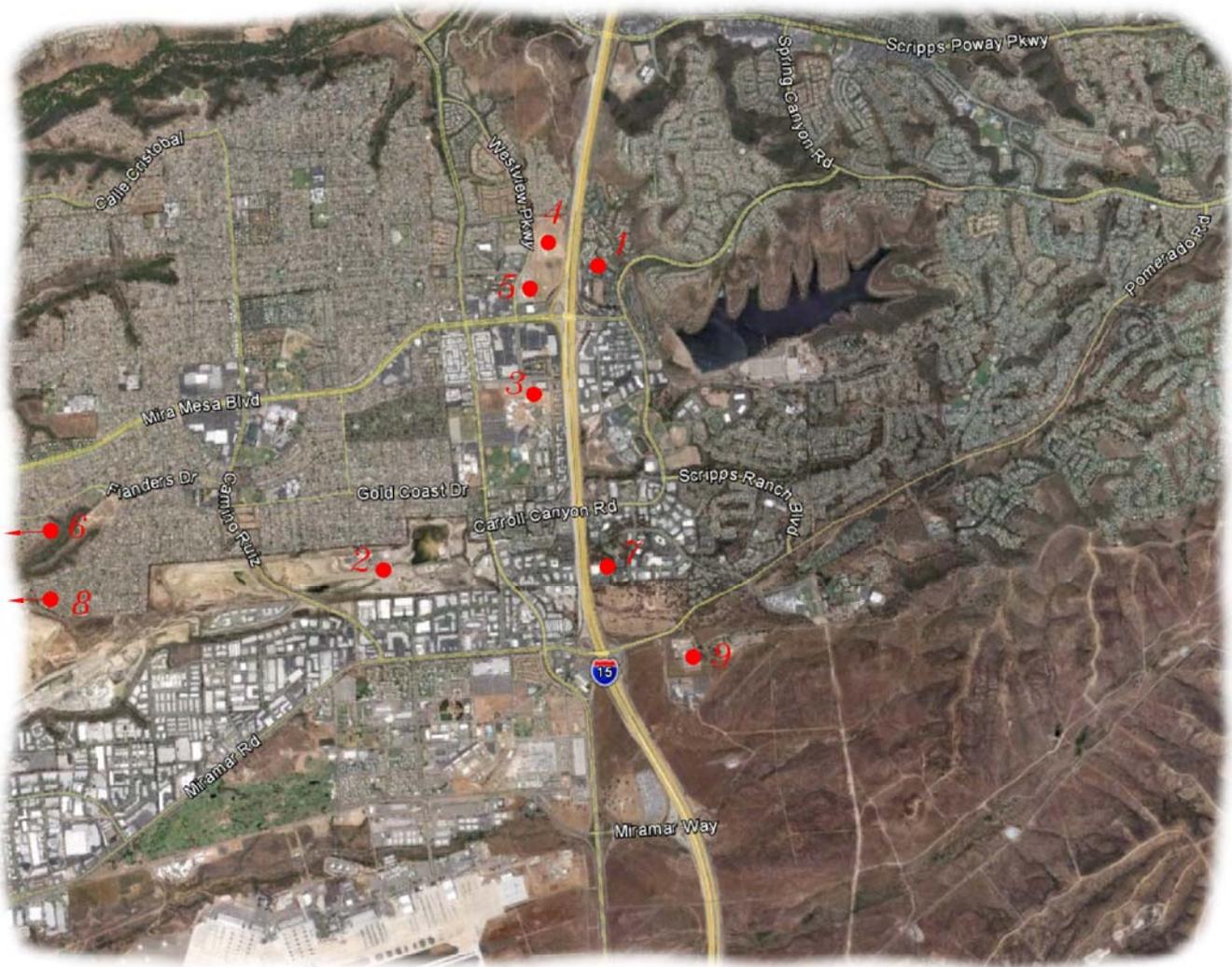
Erma Road Apartments – This residential project of approximately 114 apartment units is located on the south side of Erma Road just east of I-15. This cumulative project did not add any significant project traffic to the study area, so therefore, project traffic was not included in this analysis.

Casa Mira View II – A residential project of 319 multi-family units located on the west side of I-15 just north of Mira Mesa Blvd. The traffic generated by this cumulative project is 1,914 ADT. This cumulative project is not planned to be built before The Glen at Scripps Ranch.

Carroll Canyon Business Park (Aspen Creek) – An Industrial/Business Park with Office project generally located west of Camino Ruiz and south of Carroll Canyon Road. This cumulative project is built and occupied. In addition, this project did not add any significant project traffic to the study area, so therefore, project traffic was not included in this analysis.

Fenton Carroll Canyon Tech Center – An 896,000 SF Industrial Park generally located on the west side of Camino Santa Fe north of Carroll Canyon Road. Some of this cumulative project is constructed. Due to the location of this project, this cumulative project did not add any significant project traffic to the study area, so therefore, project traffic was not included in this analysis.

Please refer to **Table 7-1** for a list of all cumulative projects considered for this analysis.



- 1 = Erma Road Apartments
- 2 = Stone Creek
- 3 = Miramar College
- 4 = Casa Mira View I
- 5 = Casa Mira View II
- 6 = Carroll Canyon Business Park
- 7 = Carroll Canyon Commercial Center
- 8 = Fenton-Carroll Canyon Tech Center
- 9 = U. S. Army



FIGURE 7-1

Other Projects Location Map

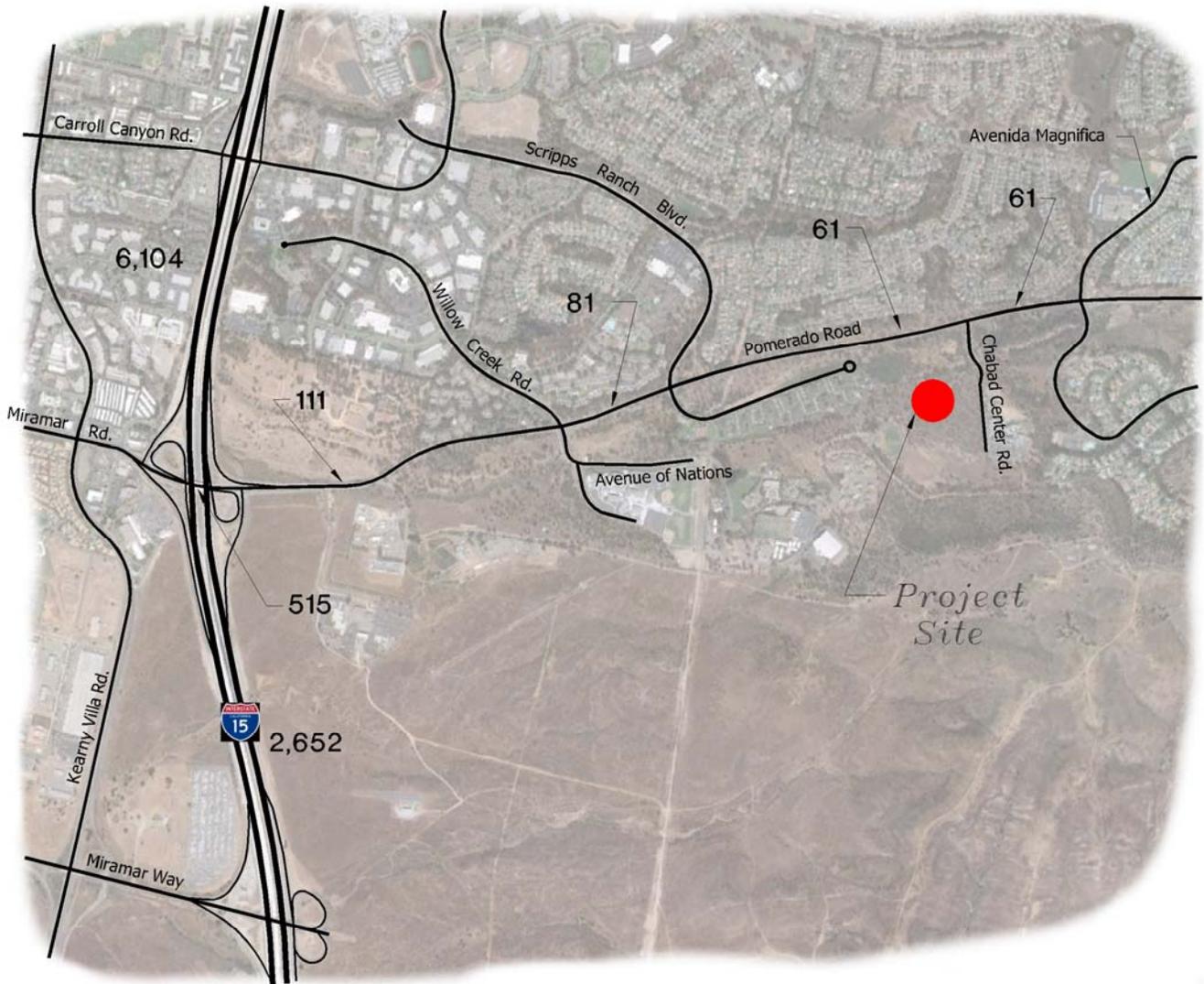


FIGURE 7-2
Other Projects Average Daily Traffic Volumes

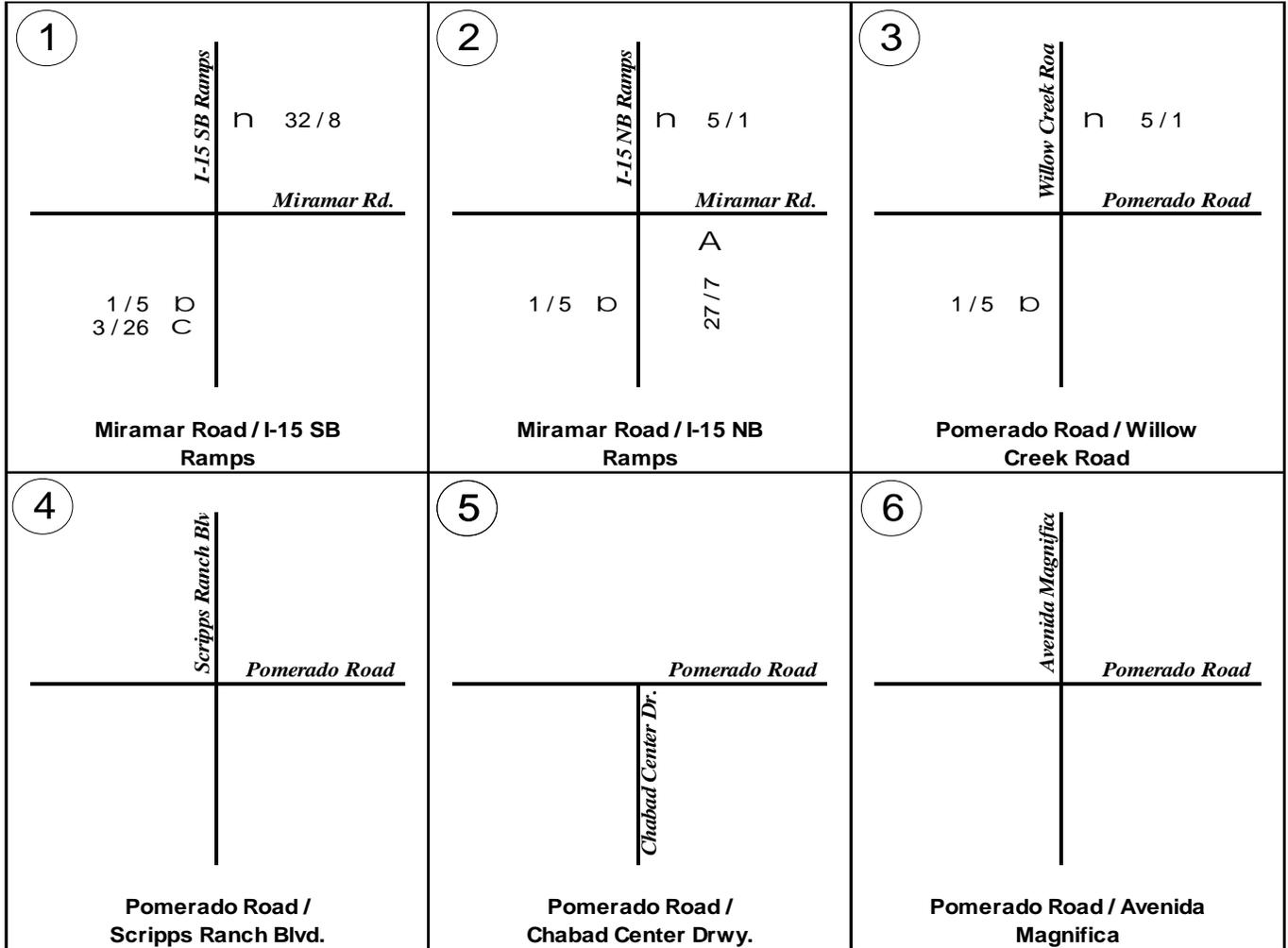


FIGURE 7-3

Other Projects AM/PM Peak Hour Traffic Volumes

TABLE 7-1
Other Projects List

	Project	Location	Size	Status	Study
1	Erma Road Apartments	South side of Erma Rd., just east of I-15	1,452 ADT	Approved	Rejected
2	Stone Creek	On Carroll Canyon Rd. west of I-15	>35,000 ADT	Approved	Included
3	Miramar College	South of Mira Mesa Blvd., west of I-15	7,792 ADT	Partially Built	Included
4	Casa Mira View I	North of Mira Mesa Blvd., just west of I-15 (1,848 DU)	11,082 ADT	Under Construction	Included
5	Casa Mira View II	North of Mira Mesa Blvd., just west of I-15 (319 DU)	1,914 ADT	Approved	Rejected
6	Carroll Canyon Business Park	Southwest corner of Pacific Heights Blvd./Pacific Center Blvd.	5,800 ADT	Built	Rejected
7	Carroll Canyon Commercial Center	Northeast corner of I-15 and Carroll Canyon Road	7,095 ADT	Pending	Included
8	Fenton-Carroll Canyon Tech Center	West side of Camino Santa Fe north of Carroll Canyon Road	13,440 ADT	Partially Built	Rejected
9	U.S. Army	South of Pomerado Road just east of I-15	242 ADT	Considered	Included

8.0 NEAR TERM WITHOUT PROJECT

In order to determine Near Term traffic, USAI followed the methodology outlined in the City of San Diego Traffic Impact Study Manual. An examination of the immediate area surrounding The Glen at Scripps Ranch to include projects that were approved but not yet constructed or pending approval in the area, were evaluated as shown in the previous section of this report. The project only traffic of these projects was added to the existing traffic to reflect an “existing plus other project” or Near Term scenario at the project’s expected opening day of Year 2016-17.

8.1.1 STREET SEGMENTS

Figure 8-1 shows average daily traffic volumes from the “other projects” added to existing average daily traffic volumes.

Table 8-1 shows street segment levels of service without project traffic. The following street segments are projected to operate at an unacceptable level of service in the Near Term condition without the project:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Pomerado Road	I-15 NB Ramps to Willow Creek Rd.	F
Pomerado Road	Willow Creek Rd. to Scripps Ranch Blvd.	F
Pomerado Road	Scripps Ranch Blvd. to Chabad Center Drwy.	F
Pomerado Road	Chabad Center Drwy. to Avenida Magnifica	F

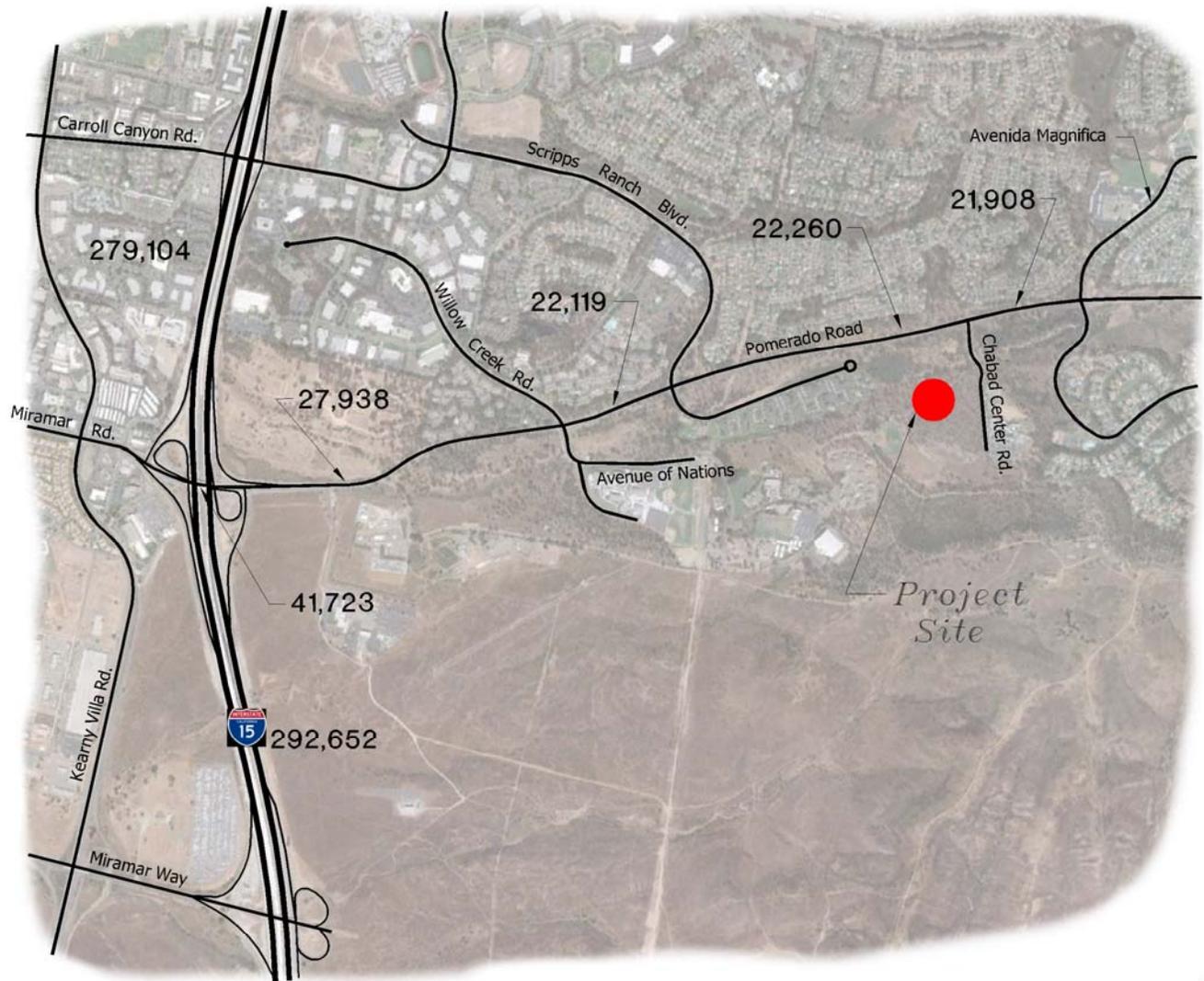


FIGURE 8-1
Near Term Without Project Average Daily Traffic

TABLE 8-1

Near Term Without Project Street Segment Levels of Service

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	41,723	0.70	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	2-Ca	15,000	27,938	1.86	F
	Willow Creek Road to Scripps Ranch Blvd.	SD	2-Ca	15,000	22,119	1.47	F
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	2-Ca	15,000	22,260	1.48	F
	Chabad Center Drwy to Avenida Magnifica	SD	2-Ca	15,000	21,908	1.46	F

Legend:

Class. = Functional Class

Cap. = Capacity

LOS = Level of Service

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

8.2 INTERSECTIONS

Figure 8-2 shows the peak hour traffic volumes from the “other projects” when added to existing peak hour volumes at the study area intersections. **Table 8-2** shows the resulting AM and PM peak hour levels of service. As shown in **Table 8-2**, there is only one (1) intersection that is projected to operate at level of service F/E in the AM and PM peak hours, respectively. The intersection is located at Pomerado Road at Willow Creek Road.

Appendix F includes the Near Term without Project Synchro worksheets.

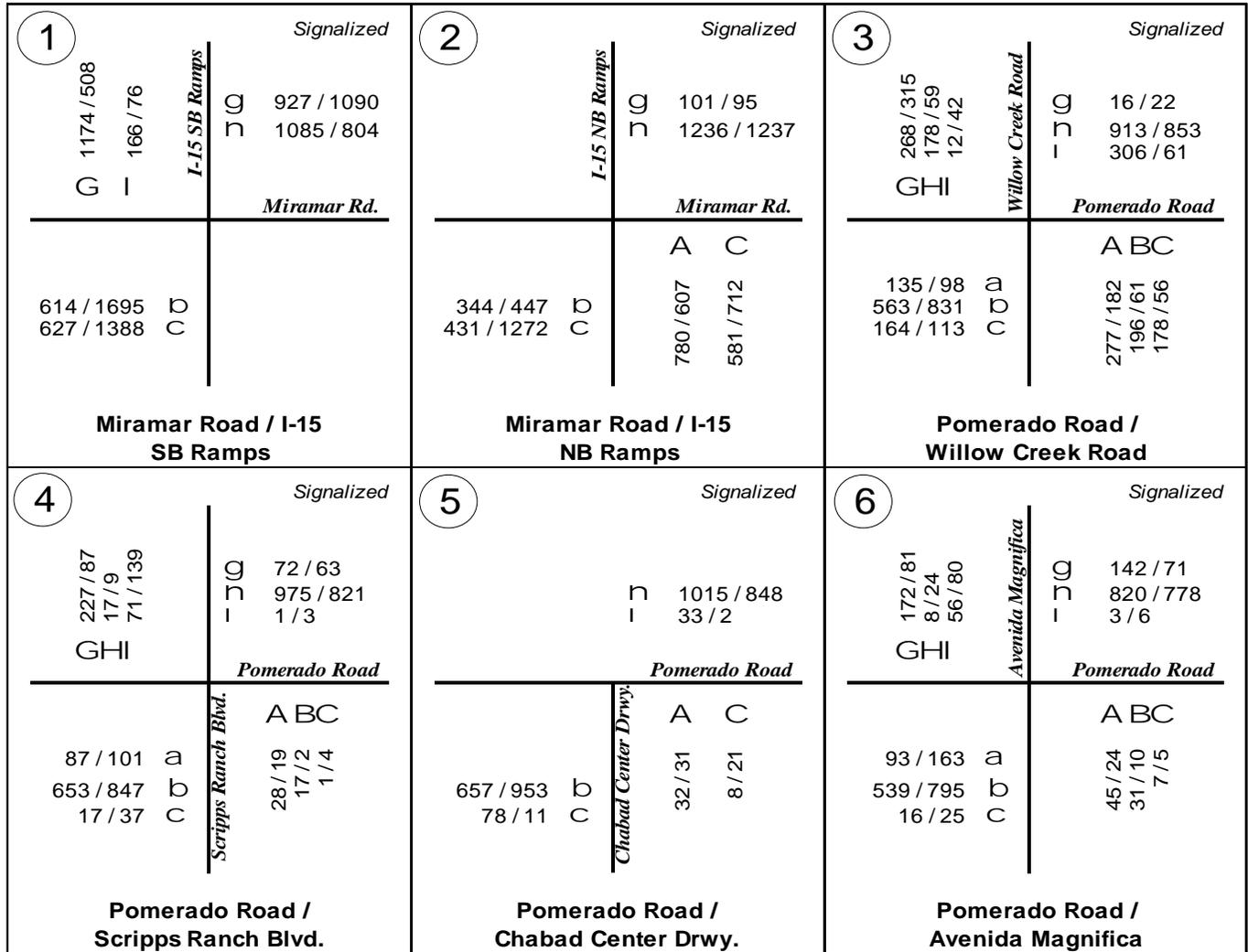


FIGURE 8-2

Near Term Without Project AM/PM Peak Hour Traffic

TABLE 8-2

Near Term Without Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	26.1	C	14.3	B
2	Miramar Road / I-15 NB Ramps	Signalized	16.2	B	14.2	B
3	Pomerado Road / Willow Creek Road	Signalized	82.6	F	59.1	E
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	39.4	D	26.4	C
5	Pomerado Road / Chabad Center Drwy.	Signalized	11.0	B	10.1	B
6	Pomerado Road / Avenida Magnifica	Signalized	39.4	D	36.4	D

Notes:

LOS = Level of Service

9.0 NEAR TERM WITH PROJECT

This section of the report evaluates the Near Term with Project traffic conditions by adding The Glen at Scripps Ranch project traffic to Near Term volumes and evaluating project traffic impacts.

9.1.1 STREET SEGMENTS

Figure 9-1 shows average daily traffic volumes with project traffic added to existing plus “other project’s” traffic volumes.

Table 9-1 shows street segment levels of service with The Glen at Scripps Ranch project traffic. The following street segments are projected to operate at unacceptable levels of service:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Pomerado Road	I-15 NB Ramps to Willow Creek Rd.	F
Pomerado Road	Willow Creek Rd. to Scripps Ranch Blvd.	F
Pomerado Road	Scripps Ranch Blvd. to Chabad Center Drwy.	F
Pomerado Road	Chabad Center Drwy. to Avenida Magnifica	F

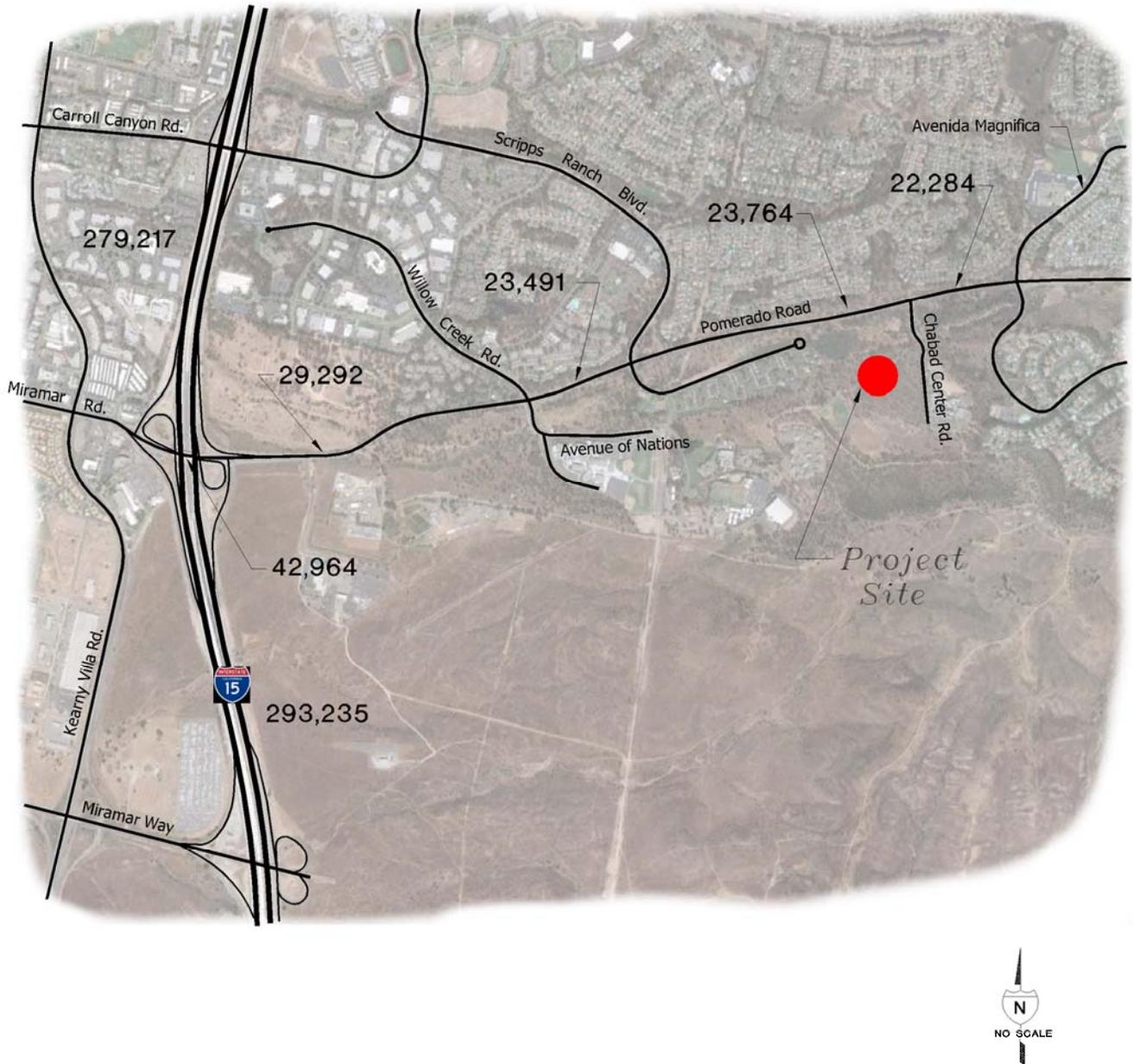


FIGURE 9-1

Near Term With Project Average Daily Traffic

TABLE 9-1

Near Term With Project Street Segment Levels of Service

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	42,964	0.72	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	2-Ca	15,000	29,292	1.95	F
	Willow Creek Road to Scripps Ranch Blvd.	SD	2-Ca	15,000	23,491	1.57	F
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	2-Ca	15,000	23,764	1.58	F
	Chabad Center Drwy to Avenida Magnifica	SD	2-Ca	15,000	22,284	1.49	F

Legend:

Class. = Functional Class

Cap. = Capacity

LOS = Level of Service

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

9.1.2 INTERSECTIONS

Figure 9-2 shows Near Term plus The Glen at Scripps Ranch project combined traffic volumes during AM/PM peak hours at study area intersections.

Table 9-2 includes study area intersection levels of service with The Glen at Scripps Ranch project traffic added. As shown in the table, the intersection of Pomerado Road and Willow Creek Road is projected to operate at level of service F during the AM peak and level of service E during the PM peak.

Appendix G includes the Near Term with Project Synchro worksheets.

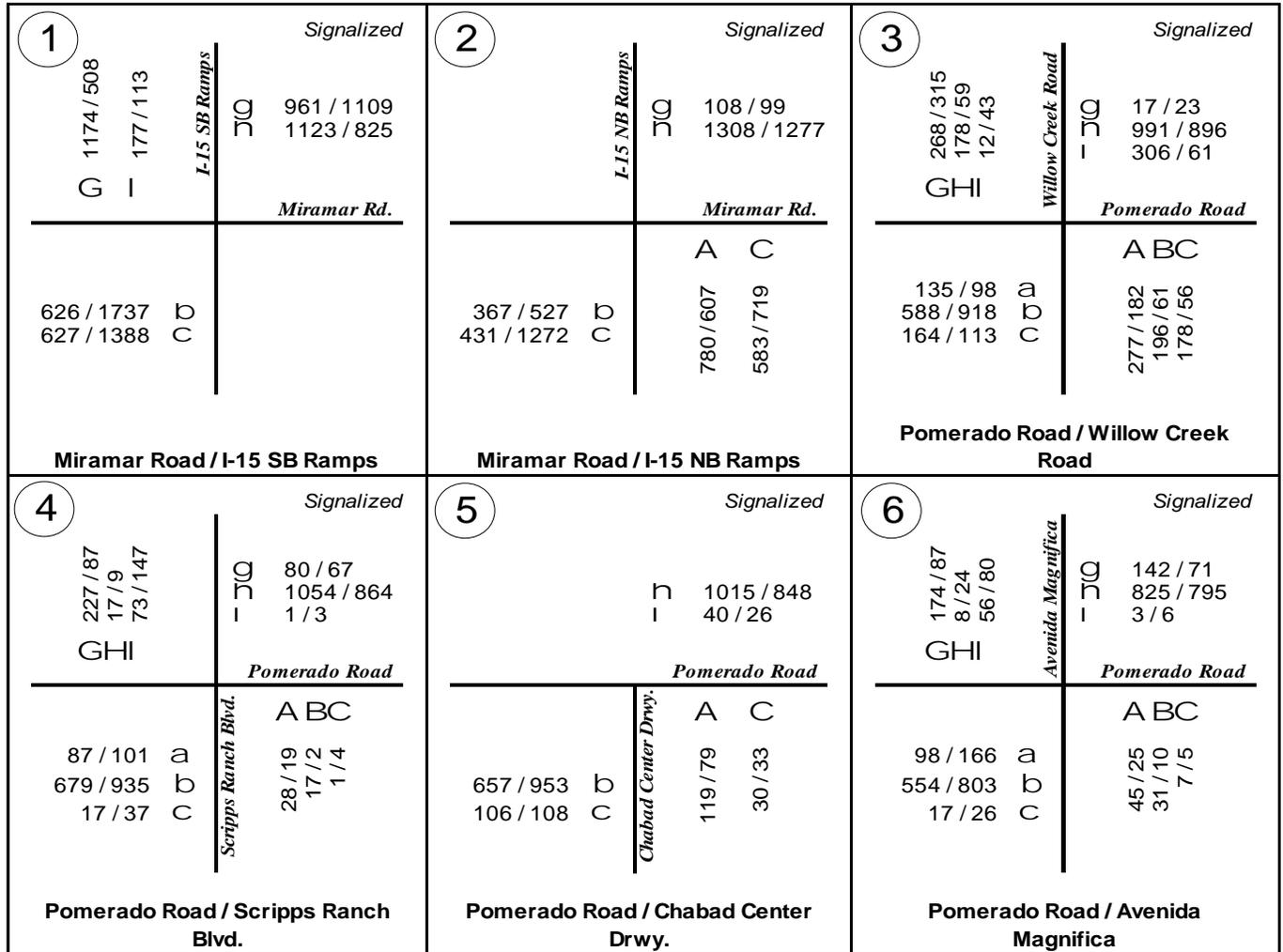


FIGURE 9-2

Near Term With Project AM/PM Peak Hour Traffic

TABLE 9-2

Near Term With Project Intersection Levels Of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	27.4	C	14.7	B
2	Miramar Road / I-15 NB Ramps	Signalized	16.4	B	14.6	B
3	Pomerado Road / Willow Creek Road	Signalized	94.0	F	70.1	E
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	49.8	D	30.0	C
5	Pomerado Road / Chabad Center Drwy.	Signalized	15.5	B	13.6	B
6	Pomerado Road / Avenida Magnifica	Signalized	40.4	D	38.0	D

Notes:

LOS = Level of Service

10.0 YEAR 2030 WITHOUT PROJECT

This section of the report evaluates the Year 2030 without project condition. The SANDAG Series 11 regional traffic forecast model is based on planning efforts involving all jurisdictions within the County of San Diego. SANDAG, as the regional planning agency collects data from these plans and collates this data within a traffic model. SANDAG also prepared the regional transportation plan (RTP) utilized by the traffic model as a basis for estimating future traffic. Street segment future (Year 2030) traffic volumes were taken from SANDAG’s Series 11 Regional Travel Forecast Model. The proposed project is within traffic analysis zone (TAZ) #1937 which includes the previously planned university which would generate 15,594 ADT. The Glen at Scripps Ranch would generate 1,880 ADT. So the Year 2030 without project segment volumes used in this analysis are conservatively high.

10.1.1 STREET SEGMENTS

Street segment volumes for Year 2030 conditions without the project are shown in **Figure 10-1**. The street segment levels of service for Year 2030 conditions without the project are shown in **Table 10-1**. As shown in **Table 10-1**, four (4) street segments evaluated are projected to operate at unacceptable levels of service LOS “F”.

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Pomerado Road	I-15 NB Ramps to Willow Creek Rd.	F
Pomerado Road	Willow Creek Rd. to Scripps Ranch Blvd.	F
Pomerado Road	Scripps Ranch Blvd. to Chabad Center Drwy.	F
Pomerado Road	Chabad Center Drwy. to Avenida Magnifica	F

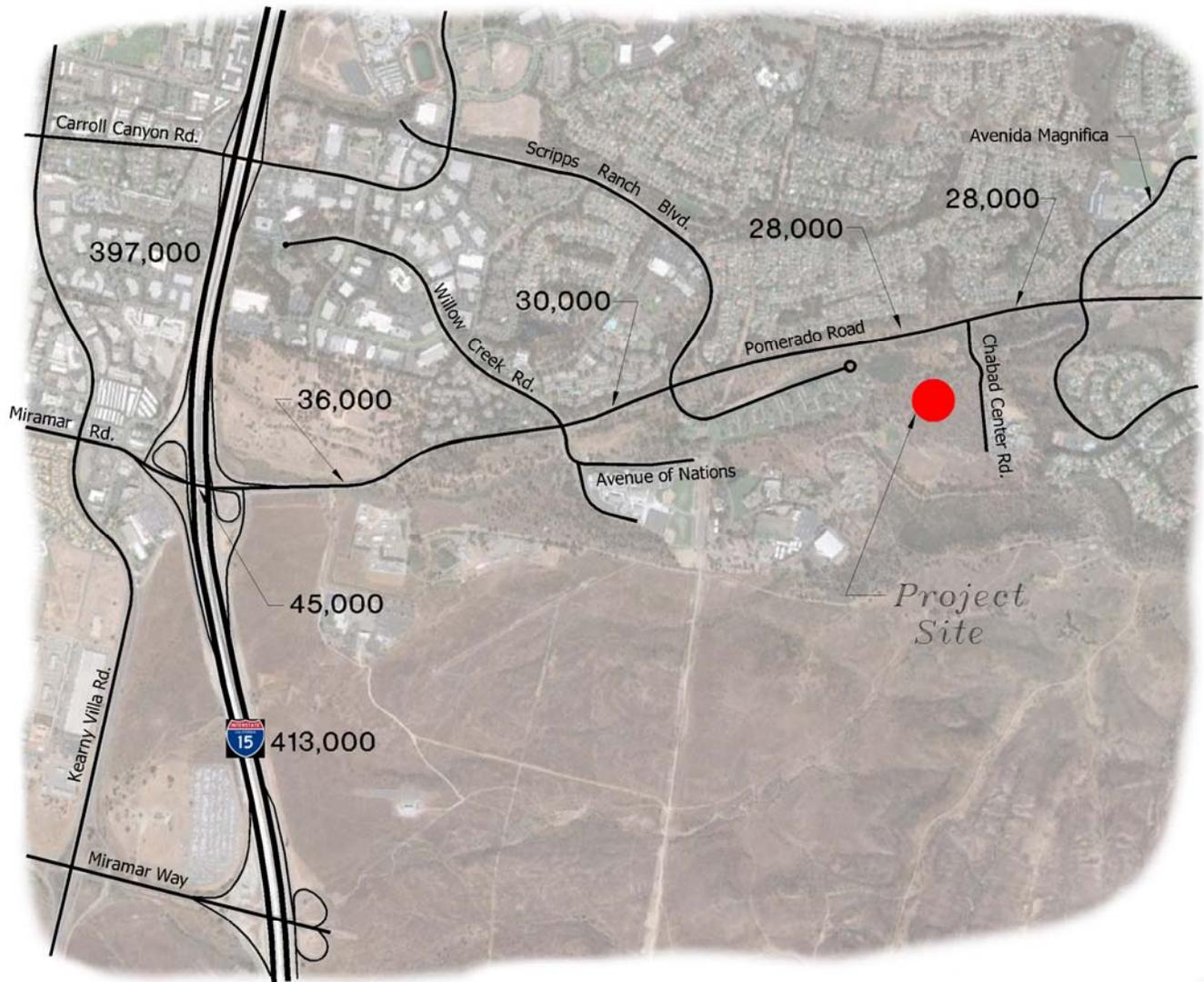


FIGURE 10-1

Year 2030 Without Project Average Daily Traffic Volumes

TABLE 10-1

Year 2030 Without Project Street Segment Levels of Service

Road	Segment	Standard	Class.	Cap.	Volume*	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	45,000	0.75	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	2-Ca	15,000	36,000	2.40	F
	Willow Creek Road to Scripps Ranch Blvd.	SD	2-Ca	15,000	30,000	2.00	F
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	2-Ca	15,000	28,000	1.87	F
	Chabad Center Drwy to Avenida Magnifica	SD	2-Ca	15,000	28,000	1.87	F

Legend:

Class. = Functional Class

Cap. = Capacity

LOS = Level of Service

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

* = Volumes based on SANDAG's Regional Series 11 Year 2030 Traffic Model

10.1.2 INTERSECTIONS

AM/PM peak hour turn volumes were established by using a factoring method based on Near Term without Project volumes and Year 2030 without Project volumes. All study intersections AM/PM peak hour turn volumes used the factoring method to develop Year 2030 without project volumes. Project only peak hour volumes were added to Year 2030 without project volumes to reflect Year 2030 with project peak hour volumes. The factoring worksheets for all study intersections can be found in **Appendix H**.

Existing lane configurations, as shown in **Figure 5-2**, were used in both long term cumulative scenarios. **Figure 10-2** shows the expected Year 2030 Without Project peak hour volumes at the intersections analyzed.

Table 10-2 shows the peak hour intersection levels of service. The following three intersections are projected to operate at unacceptable levels of service.

#3	Pomerado Road at Willow Creek Road	LOS AM (F)	LOS PM (F)
#4	Pomerado Road at Scripps Ranch Blvd.	LOS AM (F)	LOS PM (F)
#6	Pomerado Road at Avenida Magnifica	LOS AM (F)	LOS PM (F)

The Synchro worksheets for the Year 2030 without Project condition may be found in **Appendix I**.

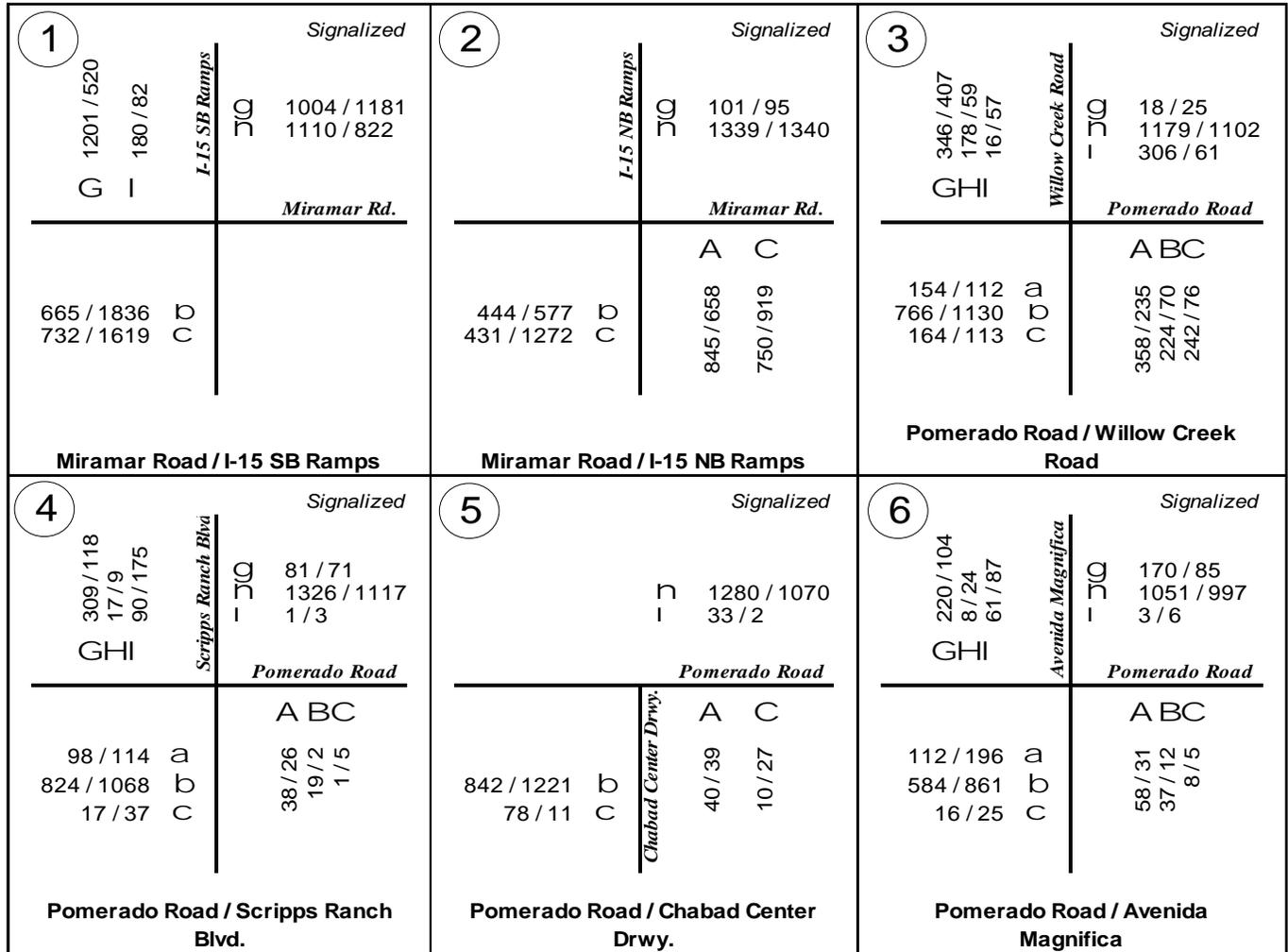


FIGURE 10-2

Year 2030 Without Project AM / PM Peak Hour Traffic Volumes

TABLE 10-2

Year 2030 Without Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	26.3	C	48.7	D
2	Miramar Road / I-15 NB Ramps	Signalized	16.6	B	13.9	B
3	Pomerado Road / Willow Creek Road	Signalized	167.5	F	165.8	F
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	136.5	F	82.9	F
5	Pomerado Road / Chabad Center Drwy.	Signalized	19.2	B	28.5	C
6	Pomerado Road / Avenida Magnifica	Signalized	99.5	F	83.6	F

Notes:

LOS = Level of Service

11.0 YEAR 2030 WITH PROJECT

As previously discussed, Year 2030 without project volumes were taken from the Series 11 Regional Travel Forecast prepared by the City and SANDAG. The Glen at Scripps Ranch project traffic was then added to the Year 2030 without project traffic volumes to get Year 2030 with project traffic.

11.1.1 STREET SEGMENTS

Figure 11-1 shows the Year 2030 With Project street segment traffic volumes.

An analysis was completed for street segments in the Year 2030 With Project condition. As shown on **Table 11-1**, four segments examined are projected to continue to operate at an unacceptable level of service “F”.

11.1.2 YEAR 2030 WITH PROJECT INTERSECTIONS

Figure 11-2 shows the expected peak hour volumes at Year 2030 With Project for the intersections analyzed. **Table 11-2** shows the AM and PM peak hour levels of service for the Year 2030 with Project condition. The following intersections are projected to operate at unacceptable levels of service:

#3	Pomerado Road at Willow Creek Road	LOS AM (F)	LOS PM (F)
#4	Pomerado Road at Scripps Ranch Blvd.	LOS AM (F)	LOS PM (F)
#6	Pomerado Road at Avenida Magnifica	LOS AM (F)	LOS PM (F)

Appendix J includes Synchro worksheets for Year 2030 with Project condition.

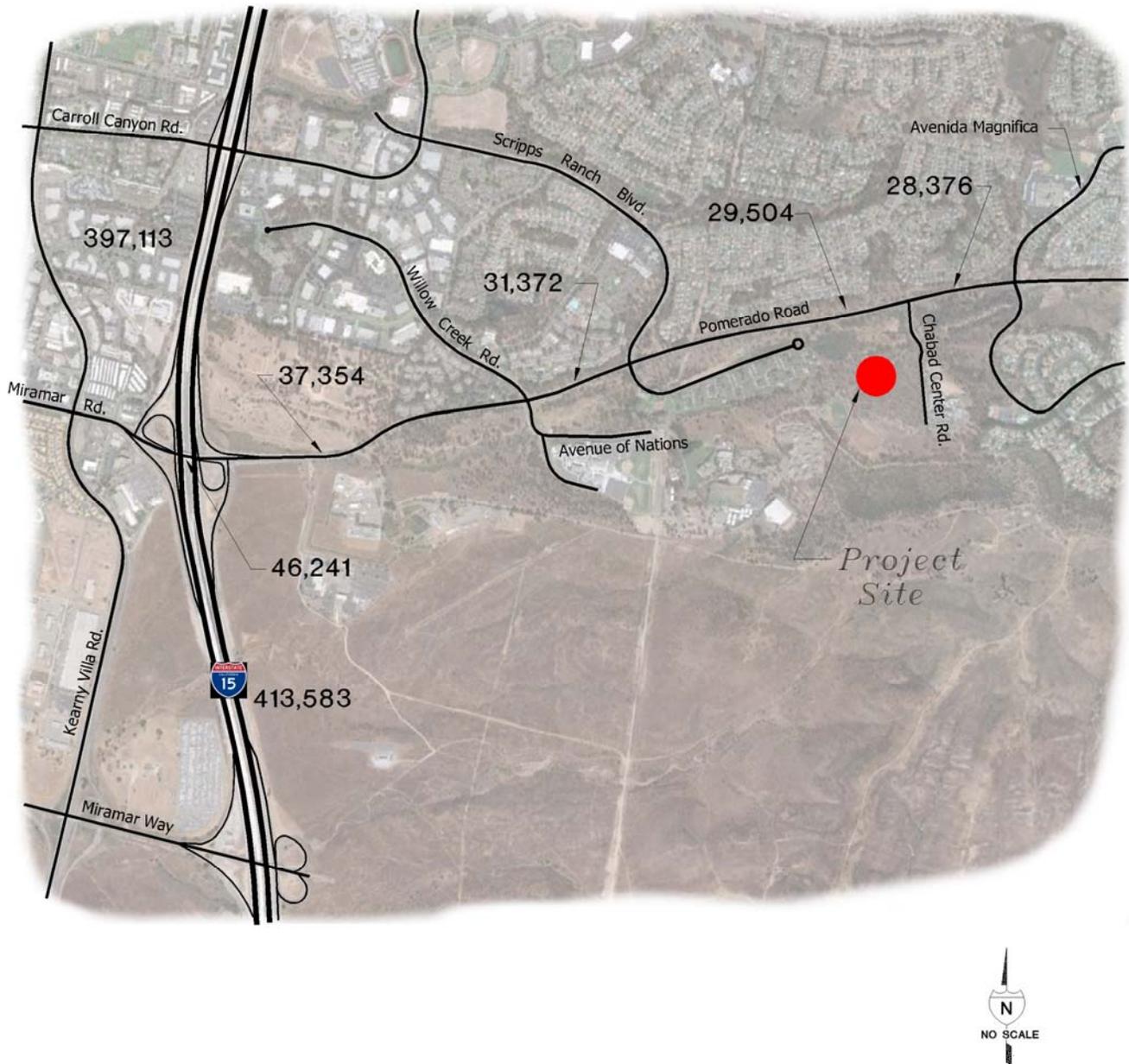


FIGURE 11-1

Year 2030 With Project Average Daily Traffic Volumes

TABLE 11-1

Year 2030 With Project Street Segment Levels of Service

Road	Segment	Standard	Class.	Cap.	Volume	V/C	LOS
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	SD	PA	60,000	46,241	0.77	C
Pomerado Road	I-15 NB Ramps to Willow Creek Road	SD	2-Ca	15,000	37,354	2.49	F
	Willow Creek Road to Scripps Ranch Blvd.	SD	2-Ca	15,000	31,372	2.09	F
	Scripps Ranch Blvd. to Chabad Center Drwy.	SD	2-Ca	15,000	29,504	1.97	F
	Chabad Center Drwy to Avenida Magnifica	SD	2-Ca	15,000	28,376	1.89	F

Legend:

Class. = Functional Class

Cap. = Capacity

LOS = Level of Service

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

<p>1</p> <p>Signalized</p> <table border="1"> <tr> <td>191 / 119 G</td> <td>520 / 1,201 I</td> <td>I-15 SB Ramps</td> <td>JIG 1,038 / 1,200 1,148 / 843</td> </tr> <tr> <td colspan="3">Miramar Rd.</td> <td></td> </tr> <tr> <td>677 / 1,878 732 / 1,619</td> <td>b C</td> <td></td> <td></td> </tr> </table> <p>Miramar Road / I-15 SB Ramps</p>	191 / 119 G	520 / 1,201 I	I-15 SB Ramps	JIG 1,038 / 1,200 1,148 / 843	Miramar Rd.				677 / 1,878 732 / 1,619	b C			<p>2</p> <p>Signalized</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td>JIG 108 / 99 1,411 / 1,380</td> </tr> <tr> <td colspan="3">Miramar Rd.</td> <td></td> </tr> <tr> <td>467 / 657 431 / 1,272</td> <td>b C</td> <td>I-15 NB Ramps</td> <td>A C 658 / 926 845 / 752</td> </tr> </table> <p>Miramar Road / I-15 NB Ramps</p>				JIG 108 / 99 1,411 / 1,380	Miramar Rd.				467 / 657 431 / 1,272	b C	I-15 NB Ramps	A C 658 / 926 845 / 752	<p>3</p> <p>Signalized</p> <table border="1"> <tr> <td>16 / 58 178 / 59 346 / 407 G H I</td> <td></td> <td>Willow Creek Rd.</td> <td>JIG 19 / 26 1,257 / 1,145 306 / 61</td> </tr> <tr> <td colspan="3">Pomerado Rd.</td> <td></td> </tr> <tr> <td>154 / 112 164 / 113</td> <td>a b C</td> <td></td> <td>A B C 235 / 70 / 76 358 / 224 / 242</td> </tr> </table> <p>Pomerado Road / Willow Creek Road</p>	16 / 58 178 / 59 346 / 407 G H I		Willow Creek Rd.	JIG 19 / 26 1,257 / 1,145 306 / 61	Pomerado Rd.				154 / 112 164 / 113	a b C		A B C 235 / 70 / 76 358 / 224 / 242
191 / 119 G	520 / 1,201 I	I-15 SB Ramps	JIG 1,038 / 1,200 1,148 / 843																																			
Miramar Rd.																																						
677 / 1,878 732 / 1,619	b C																																					
			JIG 108 / 99 1,411 / 1,380																																			
Miramar Rd.																																						
467 / 657 431 / 1,272	b C	I-15 NB Ramps	A C 658 / 926 845 / 752																																			
16 / 58 178 / 59 346 / 407 G H I		Willow Creek Rd.	JIG 19 / 26 1,257 / 1,145 306 / 61																																			
Pomerado Rd.																																						
154 / 112 164 / 113	a b C		A B C 235 / 70 / 76 358 / 224 / 242																																			
<p>4</p> <p>Signalized</p> <table border="1"> <tr> <td>183 / 9 / 118 92 / 17 / 309 G H I</td> <td></td> <td></td> <td>JIG 89 / 75 1,405 / 1,160 1 / 3</td> </tr> <tr> <td colspan="3">Pomerado Rd.</td> <td></td> </tr> <tr> <td>98 / 114 850 / 1,156 17 / 37</td> <td>a b C</td> <td>Scripps Ranch Blvd.</td> <td>A B C 26 / 2 / 5 38 / 19 / 1</td> </tr> </table> <p>Pomerado Road / Scripps Ranch Blvd.</p>	183 / 9 / 118 92 / 17 / 309 G H I			JIG 89 / 75 1,405 / 1,160 1 / 3	Pomerado Rd.				98 / 114 850 / 1,156 17 / 37	a b C	Scripps Ranch Blvd.	A B C 26 / 2 / 5 38 / 19 / 1	<p>5</p> <p>Signalized</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td>JIG 1,280 / 1,070 40 / 26</td> </tr> <tr> <td colspan="3">Pomerado Rd.</td> <td></td> </tr> <tr> <td>842 / 1,221 106 / 108</td> <td>b C</td> <td>Chabad Center Drwy.</td> <td>A C 87 / 39 127 / 32</td> </tr> </table> <p>Pomerado Road / Chabad Center Drwy.</p>				JIG 1,280 / 1,070 40 / 26	Pomerado Rd.				842 / 1,221 106 / 108	b C	Chabad Center Drwy.	A C 87 / 39 127 / 32	<p>6</p> <p>Signalized</p> <table border="1"> <tr> <td>87 / 24 / 110 61 / 8 / 222 G H I</td> <td></td> <td></td> <td>JIG 170 / 85 1,056 / 1,014 3 / 6</td> </tr> <tr> <td colspan="3">Pomerado Rd.</td> <td></td> </tr> <tr> <td>117 / 199 599 / 869 17 / 26</td> <td>a b C</td> <td>Avenida Magnifica</td> <td>A B C 32 / 12 / 5 58 / 37 / 8</td> </tr> </table> <p>Pomerado Road / Avenida Magnifica</p>	87 / 24 / 110 61 / 8 / 222 G H I			JIG 170 / 85 1,056 / 1,014 3 / 6	Pomerado Rd.				117 / 199 599 / 869 17 / 26	a b C	Avenida Magnifica	A B C 32 / 12 / 5 58 / 37 / 8
183 / 9 / 118 92 / 17 / 309 G H I			JIG 89 / 75 1,405 / 1,160 1 / 3																																			
Pomerado Rd.																																						
98 / 114 850 / 1,156 17 / 37	a b C	Scripps Ranch Blvd.	A B C 26 / 2 / 5 38 / 19 / 1																																			
			JIG 1,280 / 1,070 40 / 26																																			
Pomerado Rd.																																						
842 / 1,221 106 / 108	b C	Chabad Center Drwy.	A C 87 / 39 127 / 32																																			
87 / 24 / 110 61 / 8 / 222 G H I			JIG 170 / 85 1,056 / 1,014 3 / 6																																			
Pomerado Rd.																																						
117 / 199 599 / 869 17 / 26	a b C	Avenida Magnifica	A B C 32 / 12 / 5 58 / 37 / 8																																			

FIGURE 11-2

Year 2030 With Project AM / PM Peak Hour Traffic Volumes

TABLE 11-2

Year 2030 With Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	27.0	C	48.8	D
2	Miramar Road / I-15 NB Ramps	Signalized	17.2	B	13.9	B
3	Pomerado Road / Willow Creek Road	Signalized	181.5	F	189.9	F
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	160.7	F	105.0	F
5	Pomerado Road / Chabad Center Drwy.	Signalized	33.3	C	39.0	D
6	Pomerado Road / Avenida Magnifica	Signalized	100.3	F	83.9	F

Notes:

LOS = Level of Service

12.0 RAMP METER ANALYSIS & FREEWAY ANALYSIS

Ramp meters have been evaluated at Miramar Road and the Interstate 15 ramps. The Existing, Existing With Project, Near Term, Near Term With Project, Year 2030, and Year 2030 With Project scenarios have been analyzed and are shown on **Tables 12-1** to **Tables 12-6**. In each condition, the meter rate is based on the most restrictive meter rate provided by Caltrans. Also included in **Table 12-1** is the maximum observed meter delays and queues at the freeway ramp meters. As shown in the table, some of the ramp meters are reporting zero (0) delay and zero (0) queue based on the Most Restrictive Meter Rate calculations. This is because the demand is lower than the most restrictive meter rate which equals no excess demand. Therefore, no delay or queue is calculated. However, in the field, we observed delays and queues based on the meter rates observed on October 24, 2012 and April 9, 2013. Since meter rates fluctuate based on freeway main-lane flow rates, the observed meter delays and queues will change constantly. The maximum observed meter delay and queue shown in **Table 12-1** are delays and queues experienced in the field mid-week. See **Appendix B** for the observed ramp meter information.

Table 12-7 summarizes the Existing and Existing with Project ramp meter analysis results. As shown, there are no direct project related impacts shown.

Table 12-8 shows the Near Term with and without project comparison. A significant impact occurs at the ramp if the change in delay between the two conditions is greater than 2 minutes. As shown in the table, there are no direct Near Term project related impacts.

Table 12-9 shows the Year 2030 with and without project comparison. Again, there are no cumulative project impacts.

TABLE 12-1
Existing Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Lanes on Ramps	Demand (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	464	727	0	0	0
	PM	2 SOV	545	934	0	0	0
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak				
	PM	1 SOV	95	271	0	0	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	312	523	0	0	0
	PM	2 SOV & 1 HOV	681	559	122	13.09	3538
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak				
	PM	2 SOV	636	458	178	23.32	5162

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicle

HOV = High Occupancy Vehicle

Observed Meter Delay & Queue

Location		Lanes on Ramps	Observed Delay (Min)	Observed Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	0.58	319
	PM	2 SOV	0.25	203
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak	
	PM	1 SOV	0.00	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	0.25	174
	PM	2 SOV & 1 HOV	0.52	348
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak	
	PM	2 SOV	3.50	1,131

TABLE 12-2

Existing + Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Lanes on Ramps	Demand (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	481	727	0	0	0
	PM	2 SOV	555	934	0	0	0
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak				
	PM	1 SOV	99	271	0	0	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	312	523	0	0	0
	PM	2 SOV & 1 HOV	681	559	122	13.09	3538
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak				
	PM	2 SOV	636	458	178	23.32	5162

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicle

HOV = High Occupancy Vehicle

TABLE 12-3

Near Term Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Lanes on Ramps	Demand (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	464	727	0	0	0
	PM	2 SOV	545	934	0	0	0
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak				
	PM	1 SOV	95	271	0	0	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	314	523	0	0	0
	PM	2 SOV & 1 HOV	694	559	135	14.49	3915
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak				
	PM	2 SOV	636	458	178	23.32	5162

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicle

HOV = High Occupancy Vehicle

TABLE 12-4

Near Term With Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Lanes on Ramps	Demand (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	481	727	0	0	0
	PM	2 SOV	555	934	0	0	0
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak				
	PM	1 SOV	99	271	0	0	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	314	523	0	0	0
	PM	2 SOV & 1 HOV	694	559	135	14.49	3915
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak				
	PM	2 SOV	636	458	178	23.32	5162

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicle

HOV = High Occupancy Vehicle

TABLE 12-5
Year 2030 Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Lanes on Ramps	Demand (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	502	727	0	0	0
	PM	2 SOV	591	934	0	0	0
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak				
	PM	1 SOV	95	271	0	0	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	366	523	0	0	0
	PM	2 SOV & 1 HOV	810	559	251	26.89	7265
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak				
	PM	2 SOV	636	458	178	23.32	5162

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicle

HOV = High Occupancy Vehicle

TABLE 12-6

Year 2030 With Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Lanes on Ramps	Demand (Veh/Hr/Ln)	Meter Rate (Veh/Hr/Ln)	Excess Demand (Veh/Hr/Ln)	Delay (Min)	Queue (Feet)
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	2 SOV	519	727	0	0	0
	PM	2 SOV	600	934	0	0	0
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	1 SOV	Ramp Meter is not turned on in this Peak				
	PM	1 SOV	99	271	0	0	0
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	2 SOV & 1 HOV	366	523	0	0	0
	PM	2 SOV & 1 HOV	810	559	251	26.89	7265
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	2 SOV	Ramp Meter is not turned on in this Peak				
	PM	2 SOV	636	458	178	23.32	5162

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

SOV = Single Occupancy Vehicle

HOV = High Occupancy Vehicle

TABLE 12-7

Existing With & Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Existing		Existing With Project		Freeway LOS	V	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	0.00	0	0.00	0	C	0.00	NO
	PM	0.00	0	0.00	0	C	0.00	NO
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	D	0.00	NO
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	C	0.00	NO
	PM	13.09	3,538	13.09	3,538	C	0.00	NO
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	Ramp Meter is not turned on in this Peak						
	PM	23.32	5,162	23.32	5,162	D	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes

TABLE 12-8

Near Term With & Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Near Term Without Project		Near Term With Project		Freeway LOS	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	0.00	0	0.00	0	C	0.00	NO
	PM	0.00	0	0.00	0	C	0.00	NO
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	D	0.00	NO
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	C	0.00	NO
	PM	14.49	3,915	14.49	3,915	C	0.00	NO
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	Ramp Meter is not turned on in this Peak						
	PM	23.32	5,162	23.32	5,162	D	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes

TABLE 12-9

Year 2030 With & Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Year 2030 Without Project		Year 2030 With Project		Freeway LOS	∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)			
Pomerado Rd. / I-15 SB on Ramp (Westbound) - Loop	AM	0.00	0	0.00	0	D	0.00	NO
	PM	0.00	0	0.00	0	D	0.00	NO
Pomerado Rd. / I-15 NB on Ramp (Westbound)	AM	Ramp Meter is not turned on in this Peak						
	PM	0.00	0	0.00	0	E	0.00	NO
Miramar Rd. / I-15 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	D	0.00	NO
	PM	26.89	7,265	26.89	7,265	D	0.00	NO
Miramar Rd. / I-15 NB on Ramp (Eastbound) - Loop	AM	Ramp Meter is not turned on in this Peak						
	PM	23.32	5,162	23.32	5,162	E	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, if change in delay is greater than 2 minutes

12.2 FREEWAY ANALYSIS

One segment south and one segment north on I-15 was evaluated for this analysis. **Table 12-10** through **Table 12-15** summarize the freeway analysis results for the conditions evaluated in this study. As shown in the tables, both freeway segments presently operate at acceptable levels of service and in the future (Year 2030 with project traffic) they are projected to continue to operate at acceptable levels of service except for the northbound direction from Miramar Way to Miramar Rd. and the northbound direction from Miramar Rd. to Carroll Canyon Rd. which operates at LOS E.

Table 12-16 and **Table 12-17** show that there are no direct freeway impacts related to the project.

Table 12-18 shows that there are no long term (Year 2030) cumulative freeway impacts related to the project.

TABLE 12-10

Existing Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT*	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	290,000	0.083	0.62	14,978	0.858	D
Miramar Way/ Miramar Road	6-GP+2-M	SB	17,460	290,000	0.082	0.57	13,626	0.780	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	273,000	0.083	0.62	14,100	0.808	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	273,000	0.082	0.57	12,827	0.735	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

GP lane capacity at LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes
 *Caltrans 2011 Count Data

TABLE 12-11

Existing + Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	290,583	0.083	0.62	15,008	0.860	D
Miramar Way/ Miramar Road	6-GP+2-M	SB	17,460	290,583	0.082	0.57	13,653	0.782	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	273,113	0.083	0.62	14,105	0.808	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	273,113	0.082	0.57	12,832	0.735	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-12

Near Term Without Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	292,652	0.083	0.62	15,115	0.866	D
Miramar Way/ Miramar Road	6-GP+2-M	SB	17,460	292,652	0.082	0.57	13,751	0.788	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	279,104	0.083	0.62	14,415	0.826	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	279,104	0.082	0.57	13,114	0.751	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-13

Near Term With Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	293,235	0.083	0.62	15,145	0.867	D
Miramar Way/ Miramar Road	6-GP+2-M	SB	17,460	293,235	0.082	0.57	13,778	0.789	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	279,217	0.083	0.62	14,421	0.826	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	279,217	0.082	0.57	13,119	0.751	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln. taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-14

Year 2030 Without Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	7-GP+4-M	NB	23,170	413,000	0.083	0.62	21,330	0.921	E
Miramar Way/ Miramar Road	7-GP+4-M	SB	23,170	413,000	0.082	0.57	19,405	0.838	D
Miramar Road/ Carroll Canyon Road	6-GP+4-M	NB	20,820	397,000	0.083	0.62	20,504	0.985	E
Miramar Road/ Carroll Canyon Road	7-GP+4-M	SB	23,170	397,000	0.082	0.57	18,653	0.805	D

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-15

Year 2030 With Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	7-GP+4-M	NB	23,170	413,583	0.083	0.62	21,360	0.922	E
Miramar Way/ Miramar Road	7-GP+4-M	SB	23,170	413,583	0.082	0.57	19,433	0.839	D
Miramar Road/ Carroll Canyon Road	6-GP+4-M	NB	20,820	397,113	0.083	0.62	20,510	0.985	E
Miramar Road/ Carroll Canyon Road	7-GP+4-M	SB	23,170	397,113	0.082	0.57	18,659	0.805	D

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-16

Existing With & Without Project Freeway Segment LOS Comparison

Segment	Dir.	Existing		Existing with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.858	D	0.860	D	0.002	NO
Miramar Way/ Miramar Road	SB	0.780	C	0.782	C	0.002	NO
Miramar Road/ Carroll Canyon Road	NB	0.808	D	0.808	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.735	C	0.735	C	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 12-17

Near Term With & Without Project Freeway Segment LOS Comparison

Segment	Dir.	Near Term		Near Term with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.866	D	0.867	D	0.002	NO
Miramar Way/ Miramar Road	SB	0.788	C	0.789	C	0.002	NO
Miramar Road/ Carroll Canyon Road	NB	0.826	D	0.826	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.751	C	0.751	C	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 12-18

Year 2030 With & Without Project Freeway Segment LOS Comparison

Segment	Dir.	Year 2030		Year 2030 + Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.921	E	0.922	E	0.001	NO
Miramar Way/ Miramar Road	SB	0.838	D	0.839	D	0.001	NO
Miramar Road/ Carroll Canyon Road	NB	0.985	E	0.985	E	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.805	D	0.805	D	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

13.0 UNIQUE CHARACTERISTICS OF THE PROPOSED PROJECT

This chapter was prepared because of the unique characteristics related to peak hour traffic impacts. More specifically, peak hour impacts due to the projects are significantly reduced from other projects due to:

- Staff work shift hours (3 Shifts) which are outside of the normal AM and PM roadway peaks.
- The age of residents (Normally 75-95).
- Extensive bus and car or van shuttles used for shopping, doctor visits and outings.
- The fact that both residents and visitors choose to avoid AM and PM peak traffic hours because they are uncomfortable with congestion or have the time and resources to travel during non peak times.

As a specific example of employees travel times we reviewed both the street segment and intersection AM and PM peaks which are based on actual traffic counts taken in March 2012. **See Table 13-1.** As shown in the table, the typical AM peak is from 7 to 8 AM and PM peak is from 4:45 to 5:45PM.

Next we obtained a summary of all proposed project staff arrival and departure times based on the applicants assignments and services provided. **See Table 13-2.** Please note that **Table 13-2** is a five (5) day period Monday through Friday. As shown in **Table 13-2**, there are 163 maximum employees at the site during the average weekday. Also shown in the right two columns of the table are the number of AM peak and PM peak employees either arriving or departing the site.

TABLE 13-1

Continuing Life Communities Traffic Study Street and Intersection Peaks Summary

Street	Segment	AM Peak Hour Begins	PM Peak Hour Begins
Miramar Road	I-15 SB Ramps to I15 NB Ramps	7:00	4:45
Pomerado Road	I-15 NB Ramps to Willow Creek Rd.	7:00	3:30
Pomerado Road	Willow Creek Rd. to Scripps Ranch Blvd.	7:00	4:45
Pomerado Road	Scripps Ranch Blvd. to Chabad Center Drwy.	7:00	4:30
Pomerado Road	Chabad Center Drwy. To Avenida Magnifica	7:00	4:15

Intersections	AM Peak Hour Begins	PM Peak Hour Begins
Miramar Road at I-15 Southbound Ramps	7:00	4:45
Miramar Road at I-15 Northbound Ramps	7:00	3:45
Pomerado Road at Willow Creek Road	7:00	4:45
Pomerado Road at Scripps Ranch Blvd.	7:00	4:15
Pomerado Road at Chabad Center Drwy.	7:00	4:00
Pomerado Road at Avenida Magnifica	7:00	4:15

Note: Based on counts taken on March 21, 2012

TABLE 13-2

Staff Arrival / Departure Times

(Note: This is a five (5) Week Day Schedule. Maximum During The Week is About 163 Employees)

The Glen

<u>Start-Time</u>	<u>End-Time</u>	<u>Employees</u>
4:00 AM	12:30 PM	1.5
6:00 AM	2:30 PM	7
6:30 AM	3:00 PM	10
7:30 AM	4:00 PM	3
7:30 AM	4:30 PM	1
7:30 AM	5:30 PM	1
8:00 AM	4:00 PM	2
8:00 AM	4:30 PM	7
8:00 AM	5:00 PM	6
8:00 AM	5:30 PM	3
8:15 AM	4:45 PM	22
8:30 AM	5:00 PM	3
9:00 AM	6:00 PM	1
9:30 AM	6:00 PM	1
10:00 AM	4:00 PM	
11:00 AM	7:30 PM	7
12:30 PM	9:00 PM	1
1:30 PM	10:00 PM	1
2:00 PM	7:00 PM	1
2:00 PM	10:30 PM	2
2:30 PM	11:00 PM	4
3:45 PM	8:45 PM	8
4:00 PM	12:00 AM	1.5
4:30 PM	9:30 PM	7
12:00 AM	8:00 AM	1.5

The Glen Employees (Mon-Fri) 102.5

The Glen - Health Center

<u>Start-Time</u>	<u>End-Time</u>	<u>Employees</u>
6:00 AM	2:30 PM	10.5
7:00 AM	11:00 AM	1.5
7:00 AM	3:30 PM	8
7:45 AM	4:45 PM	1.5
8:00 AM	5:00 PM	2
8:30 AM	5:00 PM	1
9:00 AM	5:30 PM	2
9:00 AM	6:00 PM	4
10:30 AM	7:00 PM	1
11:00 AM	7:30 PM	1
1130 am	8:00 PM	4
12:30 PM	9:00 PM	1
2:00 PM	10:30 PM	6.5
3:00 PM	7:00pm	1.5
3:00 PM	11:30 PM	7.5
10:00 PM	6:30 AM	3
11:00 PM	7:30 AM	4.5

The Glen Health Center Employees (Mon-Fri) 60.5

The Glen & Health Center Employees (Mon-Fri) = 163

Residents of the project, approximately 630, based on the number of units / beds and experience with other similar projects, also primarily travel outside of the typical AM and PM peaks. This is because experience in other communities has shown that although some residents have their own cars, they choose not to travel during the AM and PM peaks. Also, as previously noted the proposed project provides extensive bus, van and car services. For example if a resident is still able to travel, the car or van will take them to the airport and pick them up. Generally these service trips are almost all outside of the street peak hours. This is because they are scheduled to not occur during either the AM or PM peak.

Table 13-3 shows a comparison of transportation services at the proposed project (The Glen), and three other projects owned and operated by Continuing Life Communities (CLC). As shown in the table, these services completely avoid the peak hours i.e. they are only offered from 8:00AM until 4:30PM. Therefore all CLC sponsored bus, car and van trips are outside of the peak hours.

The table also shows that both a 28 passenger and 24 passenger bus are proposed for the project, along with one van and two cars. Also shown in the table are the day activity, evening activity and shopping shuttles which are routinely scheduled during the week and for Saturday services. Sunday shuttle services are also provided. Any other required services may be scheduled on a fee basis.

Visitors to the project typically also travel during non-peaks. As previously mentioned, visitors usually come to the facility on Saturdays or Sundays or during the day. There are a much smaller number of visitors that arrive after 6:00PM for dinner visits. Security personnel maintain logs of all vehicles entering and leaving the project site. Based on security personnel observations almost all visits occur during non-peak hours.

TABLE 13-3

Continuing Life Communities Transportation Summary and Comparisons

	La Costa Glen (Carlsbad)	University Village (Thousand Oaks)	Morningside (Fullerton)	The Glen (San Diego)
Transportation Office	Yes	Yes	Yes	Yes
Hours of Operation	M-F* 8:00am-4:30pm	M-F* 8:00am-4:30pm	M-F* 8:00am-4:30pm	M-F* 8:00am-4:30pm
Dispatch Service	Yes	Yes	Yes	Yes
Bus #1	20 passengers	16 passengers	28 passengers	28 passengers
Bus #2	22 passengers	20 passengers	28 passengers	24 passengers
Bus #3	42 passengers	N/A	N/A	N/A
Van #1** (max three passengers)	Handicap/Wheelchair	Handicap/Wheelchair	Handicap/Wheelchair	Handicap/Wheelchair
Van #2	N/A	N/A	Handicap/Wheelchair	N/A
Car (four passenger)	5	2	2	2
Seats	107	47	70	63
Assisted Independent Care Units	660	370	329	400
Assisted Acute Care Units	73	49	54	50
Ratio (units to seats)	6.85	8.91	5.47	7.14
Average Ratio (7.07 : 1)				
Activities Shuttle	Yes	Yes	Yes	Yes
Shopping Shuttle	Yes	Yes	Yes	Yes
Evening Activity Shuttle	Yes	Yes	Yes	Yes
Saturday Transportation Service	By Appointment	By Appointment	By Appointment	By Appointment
*Sunday Service Shuttle	Yes	Yes	Yes	Yes
Service Charge \$32/hr	After Hours Service	After Hours Service	After Hours Service	After Hours Service
**Primarily used for skilled nursing patients/residents				

The project impact analysis is therefore conservative because it assumes 144 AM peak and 181 PM peak trips (City trip generation rates) arrive and depart the site. Based on the forgoing discussion and actual experience of other similar projects and proposed staffing levels for this project it is expected that only about 11-15 AM peak trips and 12-15 PM peak trips are expected to occur. No credit is taken in this analysis for the expected reduced peak hour trips from this project.

14.0 CONCLUSIONS AND RECOMMENDATIONS

14.1 PROJECT TRIP GENERATION

The Glen at Scripps Ranch is expected to generate a maximum of 1,880 average daily vehicle trips with 144 AM peak hour trips and 181 PM peak hour trips, see **Table 3-1**.

14.2 EXISTING CONDITIONS

Street Segments:

All street segments currently operate at an unacceptable level of service “F” in the Existing condition except for the following location:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	C

Intersections:

All intersections except Pomerado Road at Willow Creek Road (LOS F/E) currently operate at level of service “D” or better in the Existing condition.

14.3 EXISTING + PROJECT CONDITIONS

Street Segments:

All street segments would continue to operate at an unacceptable level of service “F” in the Existing + Project condition except for the following location:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	C

Intersections:

All intersections except Pomerado Road at Willow Creek Road (LOS F/E) would continue to operate at level of service “D” or better in the Existing + Project condition.

14.4 NEAR TERM WITHOUT PROJECT

When “other” project traffic is added to existing traffic, the following levels of service result.

Street Segments:

All street segments are anticipated to operate at an unacceptable level of service in the Near Term without Project scenario except the following segment:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	D

Intersections:

Except for the intersection of Pomerado Road at Willow Creek Road (F/E), intersections are projected to operate at an acceptable level of service in Near Term Without Project condition and without any mitigation assumed.

14.5 NEAR TERM WITH PROJECT

When the existing plus the “other” projects plus the proposed project is added, the following results occur.

Street Segments:

All street segments are projected to operate at unacceptable levels of service in the Near Term With Project condition except the following segment:

<u>Road</u>	<u>Segment</u>	<u>LOS</u>
Miramar Road	I-15 NB Ramps to I-15 SB Ramps	D

Intersections:

Except for the intersection of Pomerado Road at Willow Creek Road (F/E), intersections are projected to operate at an acceptable level of service in the Near Term With Project condition and without any mitigation assumed.

14.6 DIRECT IMPACTS:

Segments:

Table 14-1 shows the summary of the Existing With Project direct impacts with and without the proposed project for street segments within the study area. **Table 14-2** shows the summary of Near Term direct impacts with and without the proposed project for street segments. As shown in both tables, significant impacts which occur and require mitigation are identified at four (4) locations shown highlighted in yellow. Mitigation for these impacts is discussed in Section 1.3 and 14.8 of this report.

Intersections:

Table 14-3 shows the summary of the Existing With Project direct impacts with and without the proposed project for intersections within the study area. **Table 14-4** shows the summary of Near Term direct impacts with and without the proposed project for intersections. As shown in both tables, significant impacts which occur and require mitigation are identified at one (1) location shown highlighted in yellow which is at Pomerado Road and Willow Creek. Mitigation for this impact is discussed in Section 1.3 and 14.8 of this report.

No Existing With Project or Near Term direct project impacts occur for freeway segments and ramp meters within the project study area as shown in **Tables 12-7, 12-8, 12-16, and 12-17.**

TABLE 14-1

Existing With and Without Project Street Segment Significance

Road	Segment	Class.	Existing			Existing + Project			Δ V/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	PA	C	41,208	0.69	C	42,449	0.71	0.021	<i>NO</i>
Pomerado Road	I-15 NB Ramps to Willow Creek Road	2-Ca	F	27,827	1.86	F	29,181	1.95	0.090	<i>YES</i>
	Willow Creek Road to Scripps Ranch Blvd.	2-Ca	F	22,038	1.47	F	23,410	1.56	0.091	<i>YES</i>
	Scripps Ranch Blvd. to Chabad Center Drwy.	2-Ca	F	22,199	1.48	F	23,703	1.58	0.100	<i>YES</i>
	Chabad Center Drwy to Avenida Magnifica	2-Ca	F	21,847	1.46	F	22,223	1.48	0.025	<i>YES</i>

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

TABLE 14-2

Near Term With and Without Project Street Segment Significance

Road	Segment	Class.	Near Term			Near Term + Project			Δ V/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	PA	C	41,723	0.70	C	42,964	0.72	0.021	<i>NO</i>
Pomerado Road	I-15 NB Ramps to Willow Creek Road	2-Ca	F	27,938	1.86	F	29,292	1.95	0.090	YES
	Willow Creek Road to Scripps Ranch Blvd.	2-Ca	F	22,119	1.47	F	23,491	1.57	0.091	YES
	Scripps Ranch Blvd. to Chabad Center Drwy.	2-Ca	F	22,260	1.48	F	23,764	1.58	0.100	YES
	Chabad Center Drwy to Avenida Magnifica	2-Ca	F	21,908	1.46	F	22,284	1.49	0.025	YES

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

TABLE 14-3

Existing With & Without Project Intersection LOS Comparison

#	Intersection	Existing				Existing + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	25.7	C	13.5	B	26.6	C	0.9	No	13.9	B	0.4	No
2	Miramar Road / I-15 NB Ramps	15.8	B	14.2	B	16.0	B	0.2	No	14.4	B	0.2	No
3	Pomerado Road / Willow Creek Road	82.0	F	58.2	E	93.2	F	11.2	Yes	68.4	E	10.2	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.3	C	50.0	D	10.6	No	29.9	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

TABLE 14-4

Near Term With & Without Project Intersection LOS Comparison

#	Intersection	Near Term				Near Term + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.1	C	14.3	B	27.4	C	1.3	No	14.7	B	0.4	No
2	Miramar Road / I-15 NB Ramps	16.2	B	14.2	B	16.4	B	0.2	No	14.6	B	0.4	No
3	Pomerado Road / Willow Creek Road	82.6	F	59.1	E	94.0	F	11.4	Yes	70.1	E	11.0	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.4	C	49.8	D	10.4	No	30.0	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

14.7 YEAR 2030 WITH & WITHOUT PROJECT

Street segments and intersections operating at an unacceptable level of service in these conditions were discussed in Section 10.0 & 11.0. These street segments and intersections are also shown on **Table 14-5** and **Table 14-6**. These tables summarize impacts which are expected to occur on street segments and intersections in the Year 2030 conditions. These impacts are considered long term Cumulative impacts and only require a fair-share contribution towards mitigation if mitigation is recommended.

Freeways and freeway ramps were also evaluated in this study. No significant freeway or ramp impacts were identified in the Year 2030 With Project condition. See **Table 12-9** and **Table 12-18** in Chapter 12 of this report for the analysis results.

TABLE 14-5

Year 2030 With & Without Project Street Segment Significance

Road	Segment	Class.	Year 2030			Year 2030 + Project			Δ V/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Miramar Road	I-15 SB Ramps to I-15 NB Ramps	PA	C	45,000	0.75	C	46,241	0.77	0.021	<i>NO</i>
Pomerado Road	I-15 NB Ramps to Willow Creek Road	2-Ca	F	36,000	2.40	F	37,354	2.49	0.090	YES
	Willow Creek Road to Scripps Ranch Blvd.	2-Ca	F	30,000	2.00	F	31,372	2.09	0.091	YES
	Scripps Ranch Blvd. to Chabad Center Drwy.	2-Ca	F	28,000	1.87	F	29,504	1.97	0.100	YES
	Chabad Center Drwy to Avenida Magnifica	2-Ca	F	28,000	1.87	F	28,376	1.89	0.025	YES

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

2-Ca = 2 lane Collector with painted median / turn lane

PA = 6 lane Prime Arterial

TABLE 14-6

Year 2030 With & Without Project Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.3	C	48.7	D	27.0	C	0.7	No	48.8	D	0.1	No
2	Miramar Road / I-15 NB Ramps	16.6	B	13.9	B	17.2	B	0.6	No	13.9	B	0.0	No
3	Pomerado Road / Willow Creek Road	167.5	F	165.8	F	181.5	F	14.0	Yes	189.9	F	24.1	Yes
4	Pomerado Road / Scripps Ranch Blvd.	136.5	F	82.9	F	160.7	F	24.2	Yes	105.0	F	22.1	Yes
5	Pomerado Road / Chabad Center Drwy.	19.2	B	28.5	C	33.3	C	14.1	No	39.0	D	10.5	No
6	Pomerado Road / Avenida Magnifica	99.5	F	83.6	F	100.3	F	0.8	No	83.9	F	0.3	No

Notes

Δ = Change
 LOS = Level of Service
 S = Significant
 D = Delay

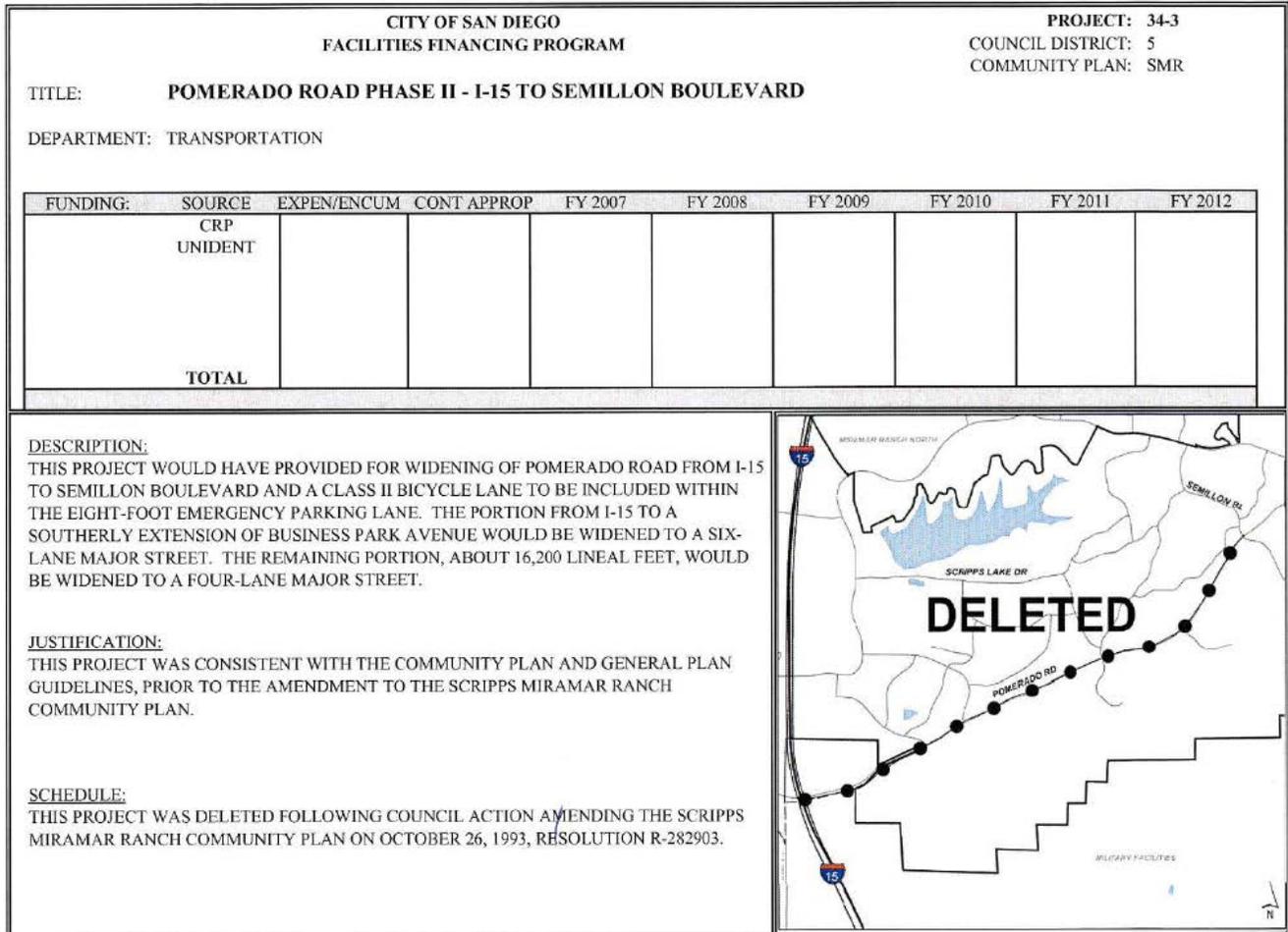
14.8 MITIGATION

Typically mitigation for project direct and cumulative impacts are determined based on the analysis of impacts to determine level of service and on significance criteria. As noted in the preceding sections of this chapter, both direct and cumulative impacts were identified. However, in the Scripps Miramar Ranch planning area, the City and Scripps Miramar Ranch Planning Board have determined that they did not, without a vote of the citizens that reside in the planning area, want to widen Pomerado Road east of Scripps Ranch Blvd. to four (4) lanes.

Figure 14-1 shows the former Pomerado Road Widening Capital Improvements Program (CIP) programming sheet (March 2007). As noted on **Figure 14-1**, the four lane major street widening of Pomerado Road adjacent to the project area has been deleted. More specifically, under schedule on the figure, the project was “deleted following Council action amending the Scripps Miramar Ranch Community Plan on October 26, 1993, Resolution R-282903”.

Figure 14-2 shows excerpts from the Community Plan which further describes the process and vote required to even consider the widening of Pomerado Road. Based on the action by the City Council, even though the project has both direct and cumulative street segment and intersection impacts, no mitigation is recommended so that the integrity of the City Council action and Community Plan are maintained.

Since this traffic study was prepared for an EIR, findings and overriding considerations would have to be adopted for the Planning Commission and City Council to approve this project without mitigation. **Table 1-13** and **Table 1-14** shows street segment levels of service and intersection levels of service if Pomerado Road is widened to a four lane Collector in the Near Term and a four lane Major in the future (Year 2030).



30

Figure 14-1

City CIP Facility Financing Program Project 34-3 Pomerado Road

FORECAST OF COMMUNITY CIRCULATION NEEDS

By using the land use elements of this Plan, the adopted Mira Mesa Community Plan, proposed land use and SANDAG population projections for surrounding areas, it is possible to project future travel demands and road network needs. Several alternative land uses were suggested and considered for the Scripps Miramar Ranch community, however, the feasible alternatives were limited by a number of factors other than travel considerations and their effect on alternative road networks was minor.

There are two major areas of potential growth which could affect the traffic loads traveling through the community: 1,700 homes in the northeast portion of the planning area and 1,200 homes south of Pomerado Road. The remaining development will occur in the northwest portion of the planning area and will probably use Mira Mesa Boulevard for primary access to and from the community.

Based on the Average Daily Trip (ADT) projections for the planning area, this community needs three four-lane streets with direct access to I-15. These would logically be at Pomerado Road, Carroll Canyon Road and Mira Mesa Boulevard. Together these three routes could efficiently and safely handle the community's traffic needs. However, the Scripps Miramar Ranch Planning Board strongly opposes widening of Pomerado Road from two to four lanes. Current levels of traffic congestion are acceptable to the community in order to retain Pomerado Road as a two-lane major street. Community representatives want Pomerado Road to remain as a two-lane street in the future, accepting estimated level-of-service at buildout of E or F for Pomerado Road where it intersects with Willow Creek Road, Scripps Ranch Boulevard, Avenida Magnifica and Scripps Poway Parkway. These levels of service are considered preferable to a four-lane future classification for Pomerado Road.

Recent years have shown a tremendous increase in the need for safe and convenient bicycle and pedestrian trails. It is assumed that demand for these systems will increase with the community's population.

The demand for public transit has also grown as traffic congestion and gasoline prices increase. However, this demand can be satisfied only by responsive service to the community. This Plan anticipates a growing need for convenient service to and from key employment, commercial and recreational areas in the metropolitan area, as well as better service to the Mira Mesa area.

Figure 14-2

Excerpts from the Scripps Miramar Ranch Community Plan

PROPOSALS

Transportation plans for the Scripps Miramar Ranch community must coincide with the existing community and public agency plans cited above. In addition, Council Policy 600-10 and the adopted principles of the residential growth management demand that developing communities, such as Scripps Ranch, bear the costs of their own improvement. This, in turn, throws the burden upon new increments within the community. The following proposals recognize these constraints in the implementation of this Plan. **Figure 15** approximates the location of the resulting roadways.

I-15 Interchanges

Based on the projected average daily traffic for the planning area, three interchanges providing access to I-15 are required for efficient movement of traffic in and out of Scripps Ranch. Each interchange should serve a four-lane roadway. Previous plans have designated Pomerado Road, Carroll Canyon Road and Mira Mesa Boulevard for this purpose. This Plan supports the latter two designations and encourages construction of adequate four-lane roadways within the community to connect with the facilities provided by the State Department of Transportation as part of their improvement program of I-15.

Pomerado Road

Pomerado Road within the present boundaries of Scripps Miramar Ranch should remain as a two-lane road with bike lanes. Improvement of Pomerado Road to four lanes between Scripps Ranch Boulevard and Spring Canyon Road is not advocated by this Plan.

The design of Pomerado Road should meet major street standards for curvature and design speeds. Necessary sight distance should be maintained for vehicle maneuvers at intersections.

Pomerado Road is classified as a contingency only four-lane street in the General Plan. In 1985, the road was improved from I-15 to east of Semillon Boulevard. These improvements consisted of two lanes and two Class II bikeways allowed on the street. Pomerado Road within the present boundaries of Scripps Ranch should remain as a two-lane road with two bike lanes, unless or until the City Council directs that the roadway be improved to a four-lane major road, as designated in the General Plan.

Improvement of Pomerado Road to four lanes between Scripps Ranch Boulevard and Spring Canyon Road is not advocated by this Plan and widening of this roadway should only be considered if Pomerado Road is widened to the northeast of the planning area. **Further, before the Council takes any action on increasing the size of Pomerado Road from two lanes to four lanes, there must first be an advisory vote or referendum conducted by the City, at City expense, in the Scripps Ranch community.** If Pomerado Road is ever improved to four lanes to the northeast of the planning area, improvements between Scripps Ranch Boulevard and Spring Canyon Road should result in two two-lane roadways separated by trees and elevational changes.

Pomerado Road shall be developed as a paved two-lane road within a four-lane graded right-of-way between Spring Canyon Road and the Poway city limits. The additional two lanes

Figure 14-2

Excerpts from the Scripps Miramar Ranch Community Plan

shall not be improved in this area until an advisory vote or referendum is conducted in the community as discussed previously and the improvements are approved by the Council at a noticed public hearing. Section 7b of the **Implementation Element** provides further discussion of the timing of improvements to Pomerado Road in this area. Additionally, as described in the **Implementation Element**, this portion of Pomerado Road is to be closed to through traffic upon annexation of the Pomerado/Spring Canyon Road County Island to the City of San Diego. This portion of Pomerado Road, which must be improved to two lanes within a four-lane graded roadbed, shall not be connected with the city of Poway until such time as the opening of Alternative 8A as a paved, four-lane road occurs.

In designing this roadway, preservation of mature trees and significant biological resources and the creation of two meandering, country-like roads should be stressed. Plans should also include bike paths, equestrian trails, and pedestrian routes along Pomerado Road, preferably in the open space of Carroll Canyon.

Scripps Poway Parkway

The alignment of Scripps Poway Parkway, also referred to as Alternative 8A, is proposed to traverse the northeastern portion of Scripps Miramar Ranch, as well as the northern portion of Miramar Ranch North. This roadway was approved by the City Council as the main south Poway to I-15 regional traffic circulation link subject to the following:

- a. Poway, as the designated lead agency for the construction of Alternative 8A through the county island annexation area (northeast portion of the plan area) and the McCrink property (within Miramar Ranch North) to connect with Miramar Ranch North shall have the responsibility to acquire and provide the right-of-way and construct Alternative 8A therein.
- b. As a result of the acquisition of the right-of-way for Alternative 8A through the Village and Country property, said property will not be able to attain the originally proposed plan density of 550 dwelling units. No changes of land use designation or dwelling unit density shall be approved for the subject property to restore any lost dwelling units since Poway, as the lead agency for the acquisition and development of Alternative 8A, will be responsible for acquiring the right-of-way from the property owner or owners by purchase or condemnation, if necessary. The said 550 dwelling units shall be reduced by 55 units pursuant to the City Council action to reduce the maximum unit count in the county island from 1,500 dwelling units to 1,350. The reduction in density resulting from the acquisition of right-of-way for Alternative 8A by the city of Poway shall be used in whole or in part to satisfy the proportionate dwelling unit reduction required by the Council for the Village and Country property.

Scripps Ranch Boulevard

Until such time as the new Pomerado/Miramar Road interchange and associated improvements are complete, more efficient movement of traffic onto and off of I-15 will depend upon the rerouting of peak-hour traffic to the Carroll Canyon and Mira Mesa Boulevard interchanges. This can be facilitated greatly by the construction of Scripps Ranch Boulevard through the industrial park and secondary school site to Mira Mesa Boulevard.

Figure 14-2

Excerpts from the Scripps Miramar Ranch Community Plan

Pomerado Road is currently a four lane facility between Spring Canyon Road to Legacy Road and also from Stonemill Drive to Scripps Poway Parkway. Within the City of Poway, Pomerado Road has been constructed as a four lane facility per Poway's General Plan.

15.0 REFERENCES

San Diego Region Traffic Engineer's Council (SANTEC) and Institute of Transportation Engineers (ITE),
California Border Section, Guidelines for Congestion Management Program (CMP)
Traffic Impact Report, San Diego, CA

City of San Diego, Development Services Department, San Diego Municipal Code, Land Development
Code, Trip Generation Manual, May 2003, San Diego, CA

City of San Diego, Development Services Department, California Environmental Quality Act, Significant
Determination Thresholds, January 2011, San Diego, CA

San Diego Association of Governments, 2006 Congestion Management Program Update, Appendix D,
July 2006, San Diego, CA

16.0 URBAN SYSTEMS ASSOCIATES, INC. PREPARERS

Principal Engineer

Andrew P. Schlaefli; M.S. Civil Engineering, B.S. Civil Engineering
Registered Civil Engineer, Licensed Traffic Engineer

Senior Project Manager

Justin P. Schlaefli; PE, TE, B.S. Civil Engineering, MCE

Project Manager

Jacob D. Swim; B.S. Civil Engineering

Senior Technical Support, Graphics and Illustrations

Jacob D. Swim; B.S. Civil Engineering

Word Processing, Report Production and Compilation

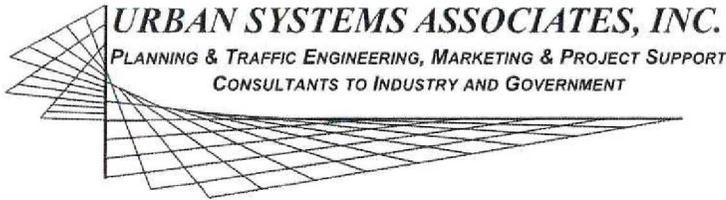
Ty Marooney

This report is site and time specific and is intended for a one-time use for this intended project under the conditions described as "Proposed Project". Any changes or delay in implementation may require re-analysis and re-consideration by the public agency granting approvals. California land development planning involves subjective political considerations as well as frequently re-interpreted principals of law as well as changes in regulations, policies, guidelines and procedures. Urban Systems and their professionals make no warrant, either express or implied, regarding our findings, recommendations, or professional advice as to the ability to successfully accomplish this land development project.

Traffic is a consequence of human behavior and as such is predictable only in a gross cumulative methodology of user opportunities, using accepted standards and following patterns of past behavior and physical constraints attempting to project into a future window of circumstances. Any counts or existing conditions cited are only as reliable as to the time and conditions under which they were recorded. As such the preparer of this analysis is unable to warrant, either express or implied, that any forecasts are statements of actual true conditions which will in fact exist at any future date.

Services performed by Urban Systems professionals resulting in this document are of a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation expressed or implied and no warranty or guarantee is included or intended in this report, document opinion or otherwise.

Any changes by others to this analysis or re-use of document at a later point in time or other location, without the express consent and concurrence of Urban Systems releases and relieves Urban Systems of any liability, responsibility or duty for subsequent questions, claims, or damages.



E-MEMO

ATTN: John Fisher – City of San Diego
Development Services Department

E-Mail: ▼
jsfisher@sandiego.gov

FROM: Andrew P. Schalefli, PE & Jacob Swim

DATE: July 22, 2015

TIME: 10:05:49 AM

JOB NUMBER: 003210

TOTAL PAGES (Including Cover): 4+Attachments

SUBJECT: Addendum to Approved Traffic Study – The Glen at Scripps Ranch

Confidential Communications

This transmittal is intended for the recipient named above. Unless otherwise expressly indicated, this entire communication is confidential and privileged information. If you are not the intended recipient, do not disclose, copy, distribute or use this information. If you received this transmission in error, please notify us immediately by telephone, at our expense and destroy the information.

This Addendum was prepared after the circulation of the Draft Environmental Impact Report (DEIR) for the proposed Glen at Scripps Ranch. This Addendum includes an updated analysis of the I-15 / Miramar Road interchange and the freeway analysis. However, the updated analysis in this Addendum does not result in any new significant impacts that have not already been identified in the approved traffic study. Any text revisions are underlined in this Addendum for clarification. All tables and figures included in this Addendum have been updated from the approved traffic study. Please refer to comments related to this Addendum in the peer review letter by Linscott, Law & Greenspan (LLG).

Sections in the approved traffic study that have been updated as part of this Addendum include:

Section 1.0 Executive Summary:

Tables 1-2, 1-6, and 1-10 includes updated delays and levels of service at the I-15 / Miramar interchange for the Existing with Project, Near Term with Project, and Year 2030 with Project scenarios, see attached. Project peak hour traffic was updated at the I-15 / Miramar Road interchange and the analysis shows no new direct or cumulative impacts compared to the approved traffic study.

The updated freeway analysis in the Existing with Project summary (Table 1-3) and Near Term with Project summary (Table 1-7) shows seven existing general purpose lanes on I-15 southbound between Miramar Road

and Miramar Way. Also, the Year 2030 freeway analysis (Table 1-11) has been updated to assume the existing freeway conditions versus the future network improvements to I-15. No future improvements to I-15 were assumed in the future Year 2030 freeway analysis to be conservative. Although I-15 is projected to operate at unacceptable levels of service “E” and “F” from Miramar Way to Carroll Canyon Road in the future, no new significant impacts occur as a result of the proposed project since the change in volume to capacity with the project is less than 0.005.

Section 3.0 Proposed Project:

As shown on page 3-1 of this Addendum, the project trip generation for AM peak hour has been rounded to 36 in / 108 out rather than 35 in / 109 out, refer to underlined text attached. This revision in the AM peak hour is considered minor and reflected on Table 3-1. Further, this revision would not change the results of the approved analysis. Figure 3-3 shows the updated project only AM and PM peak hour volumes, specifically in the southbound and northbound movements at the I-15 / Miramar interchange.

Section 4.0 Methodology:

The most current version of the Highway Capacity Manual is 2010 and is updated in the text on page 4-2. Section 4.5 of the traffic study has been updated to discuss how the City of San Diego elected to be exempt from the State Congestion Management Program (CMP) and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the regions continued compliance with the federal congestion management process. Section 4.6 has been expanded to discuss the procedures used to determine level of service on Caltrans freeway segments, see attached page 4-6.

Section 5.0 Existing Conditions:

On Section 5.1, additional clarification about the roadway classification on Miramar Road and Pomerado Road has been included in the text, see page 5-1. The existing intersection level of service (Table 5-2) has been updated at Miramar Road / I-15 NB Ramps in the PM peak hour (13.8 – LOS B) to be consistent with the Synchro worksheets.

Section 6.0 Existing With Project:

Figure 6-2 has been updated in this Addendum since the “project only” peak hour volumes were updated at the SB and NB movements at the I-15 / Miramar Road interchange. As a result of the volume updates at the interchange, the intersection delays and levels of service have been updated in Table 6-2. As shown, the I-15 / Miramar Road interchange is expected to operate at acceptable levels of service consistent with the approved traffic study.

Section 9.0 Near Term With Project:

Figure 9-2 has been updated in this Addendum since the project only peak hour volumes were updated at the I-15 / Miramar Road interchange. As a result of the volume updates at the interchange, the intersection delays and levels of service have been updated in Table 9-2. As shown, the I-15 / Miramar Road interchange is expected to operate at acceptable levels of service consistent with the approved traffic study.

Section 11.0 Year 2030 With Project:

Similar to the Existing with Project and Near Term with Project sections, Figure 11-2 has been updated in this Addendum since the project only peak hour volumes were updated at the I-15 / Miramar Road interchange. The interchange delays and levels of service have been updated in Table 11-2. As shown, the I-15 / Miramar Road interchange is expected to operate at acceptable levels of service consistent with the approved traffic study.

Section 12.0 Ramp Meter Analysis & Freeway Analysis:

Tables 12-10 through 12—18 have been updated in this Addendum to reflect seven existing general purpose lanes on I-15 southbound between Miramar Road and Miramar Way in all study scenarios. As discussed in the Executive Summary of this Addendum, Year 2030 freeway analysis assumes the existing freeway network. As shown in Table 12-14 and Table 12-15, the study freeway segments are projected to operate at level of service F. However, Table 12-18 in this Addendum shows no new significant impacts occur as a result of the proposed project.

Section 14.0 Conclusions and Recommendations:

This section provides further clarification in the text on page 14-9 regarding cumulative impacts and fair share contributions. Page 14-12 clarifies the impacts to Pomerado Road would remain significant and unmitigated due to the Communities decision to maintain Pomerado Road as a two lane Collector. Intersection summary tables (Table 14-3, Table 14-4, and Table 14-6) have been updated and included in this Addendum.

As discussed and illustrated in this Addendum, the updated analysis at study intersections and freeway segments are consistent with the approved traffic study. Synchro worksheets based on the updated intersection analysis at the I-15 / Miramar Road interchange have been attached to this Addendum.

TABLE 1-2

Existing & Existing With Project Intersection Summary

#	Intersection	Existing				Existing + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	25.7	C	13.5	B	26.3	C	0.6	No	13.8	B	0.3	No
2	Miramar Road / I-15 NB Ramps	15.8	B	13.8	B	17.9	B	2.1	No	14.8	B	1.0	No
3	Pomerado Road / Willow Creek Road	82.0	F	58.2	E	93.2	F	11.2	Yes	68.4	E	10.2	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.3	C	50.0	D	10.6	No	29.9	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

TABLE 1-3

Existing With & Without Project Freeway Level of Service Summary

Segment	Dir.	Existing		Existing with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.858	D	0.860	D	0.002	NO
Miramar Way/ Miramar Road	SB	0.688	C	0.690	C	0.002	NO
Miramar Road/ Carroll Canyon Road	NB	0.808	D	0.808	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.735	C	0.735	C	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 1-6

Near Term With & Near Term Without Project Intersection Comparison

#	Intersection	Near Term				Near Term + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.1	C	14.3	B	26.8	C	0.7	No	14.7	B	0.4	No
2	Miramar Road / I-15 NB Ramps	16.2	B	14.2	B	20.3	C	4.1	No	15.1	B	0.9	No
3	Pomerado Road / Willow Creek Road	82.6	F	59.1	E	94.0	F	11.4	Yes	70.1	E	11.0	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.4	C	49.8	D	10.4	No	30.0	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service
 Δ = Change
 S = Significant
 D = Delay

TABLE 1-7

Near Term With & Without Project Freeway Level of Service Summary

Segment	Dir.	Near Term		Near Term with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.866	D	0.867	D	0.001	NO
Miramar Way/ Miramar Road	SB	0.694	C	0.695	C	0.001	NO
Miramar Road/ Carroll Canyon Road	NB	0.826	D	0.826	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.751	C	0.751	C	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 1-10
Year 2030 & Year 2030 With Project Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.3	C	48.7	D	27.3	C	1.0	No	48.8	D	0.1	No
2	Miramar Road / I-15 NB Ramps	16.6	B	13.9	B	20.2	C	3.6	No	15.4	B	1.5	No
3	Pomerado Road / Willow Creek Road	167.5	F	165.8	F	181.5	F	14.0	Yes	189.9	F	24.1	Yes
4	Pomerado Road / Scripps Ranch Blvd.	136.5	F	82.9	F	160.7	F	24.2	Yes	105.0	F	22.1	Yes
5	Pomerado Road / Chabad Center Drwy.	19.2	B	28.5	C	33.3	C	14.1	No	39.0	D	10.5	No
6	Pomerado Road / Avenida Magnifica	99.5	F	83.6	F	100.3	F	0.8	No	83.9	F	0.3	No

Notes

Δ = Change
 LOS = Level of Service
 S = Significant
 D = Delay

TABLE 1-11

Year 2030 With & Without Project Freeway Level of Service Summary

Segment	Dir.	Year 2030		Year 2030 + Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	1.222	F	1.223	F	0.001	NO
Miramar Way/ Miramar Road	SB	0.980	E	0.981	E	0.001	NO
Miramar Road/ Carroll Canyon Road	NB	1.174	F	1.174	F	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	1.068	F	1.068	F	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

3.0 PROPOSED PROJECT

The project evaluated in this study proposes the development of a continuing care retirement community (CCRC).

3.1 TRIP GENERATION

A trip generation table for the project was developed as shown in **Table 3-1**. As shown, the proposed project would generate 1,880 average daily trips (ADT) with 144 (**36 in / 108 out**) trips in the AM peak hour and 181 (**121 in / 60 out**) trips in the PM peak hour per the City of San Diego Trip Generation Manual.

3.2 PROJECT ONLY TRAFFIC

Figure 3-1 shows the project only trip distribution percentages are based on existing counts at nearby intersections and engineering judgment during scoping of this traffic study. The expected distribution of project traffic is 20% to the east, 80% to the west from Chabad Center Driveway. The proposed project access Pomerado Road via Chabad Center Driveway. **Figure 3-2** shows the project only average daily traffic volumes which are based on the daily traffic generation from **Table 3-1** and the distribution of project only traffic from **Figure 3-1**.

Figure 3-3 shows the AM/PM peak hour project only traffic.

TABLE 3-1
Project Trip Generation

Use	Amount	*Trip	ADT	AM Peak Hour						PM Peak Hour					
				% *	#	In	: Out	In	Out	% *	#	In	: Out	In	Out
Congregate Care	50 DU	2 /DU	100	3%	3	6	: 4	2	1	8%	8	5	: 5	4	4
Convalescent / Nursing	60 beds	3 /bed	180	7%	13	6	: 4	8	5	7%	13	4	: 6	5	8
Retirement / Senior Housing	400 DU	4 /DU	1,600	8%	128	2	: 8	26	102	10%	160	7	: 3	112	48
TOTAL			1,880		144			36	108		181			121	60

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

DU = Dwelling Unit

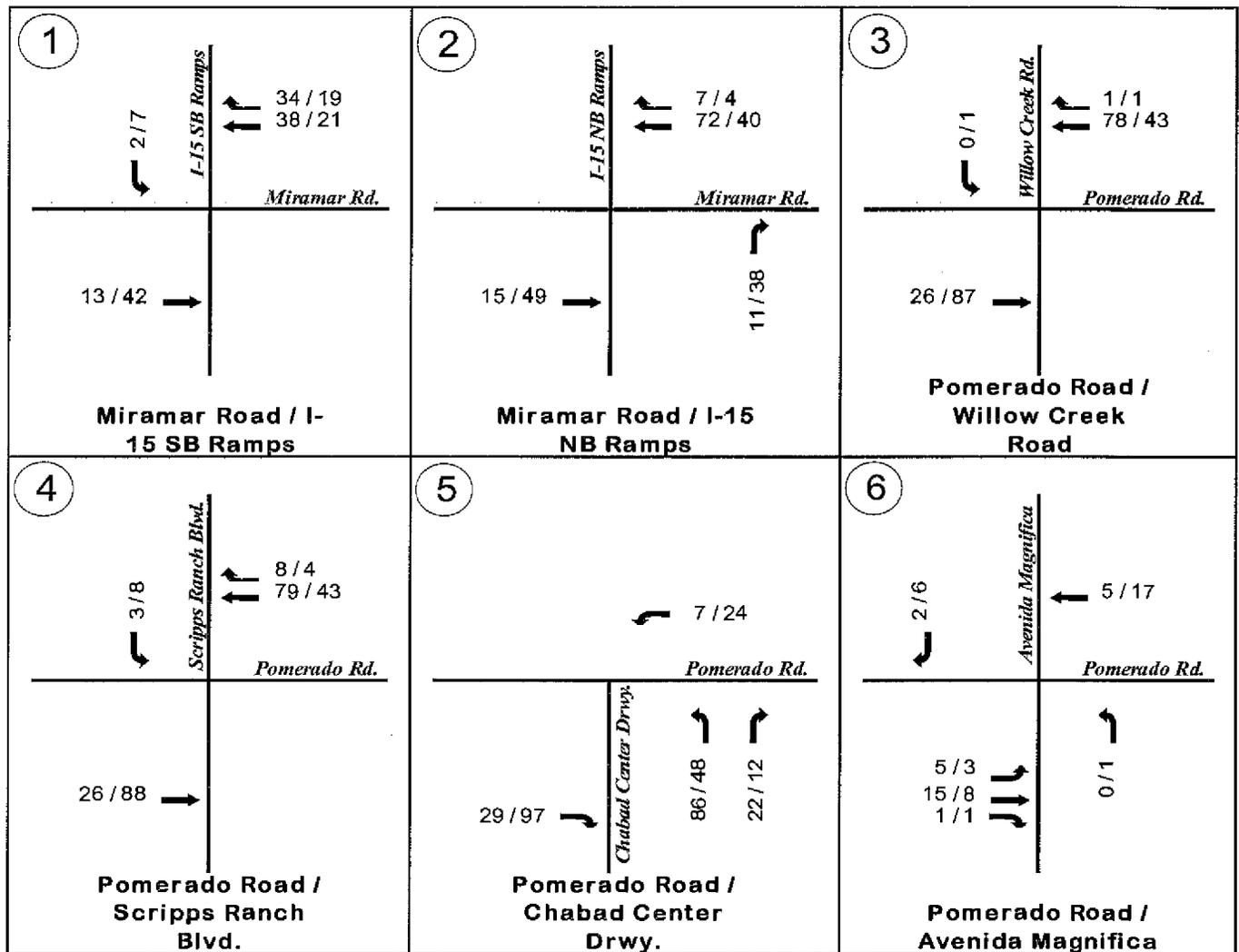


FIGURE 3-3

Project Only AM / PM Peak Hour Traffic

City of San Diego. Since the proposed project is located in City of San Diego, this traffic impact report follows the procedures outlined in their traffic manual. The manual includes guidelines for forecasting, trip generation and assignment, and analysis procedures.

The City's Traffic Impact Study Manual also establishes criteria which identify the allowable change in delay or volume to capacity ratio (V/C) due to project impacts. The manual also establishes criteria for measuring project impacts at intersections. This method establishes an allowable increase in delay at intersections due to the addition of project trips. The City Traffic Impact Study Manual specifies use of the most current Highway Capacity Manual (HCM) operational method for studying intersections. The most current HCM is HCM 2010. For analyzing intersections, a software package called Synchro is used. This software package is a direct and faithful application of the HCM methodology.

4.2 TRIP DISTRIBUTION

The projected trips were distributed based on existing counts at nearby intersections and engineering judgment during scoping of this project. See Appendix A for existing traffic flow on city streets, and city staff review and refinements received as comments during scoping review.

4.3 STREET LOS THRESHOLD

When analyzing street segments, the level of service (LOS) must be determined. LOS is a measure used to describe the conditions of traffic flow. LOS is expressed using letter designations from "A" to "F". LOS "A" represents the best case, and LOS "F" represents the worst case. Generally LOS "A" through "C" represents free flowing traffic conditions with little or no delay. LOS "D" represents limited

4.5 CONGESTION MANAGEMENT PROGRAM (CMP)

Federal Highway Administration 23 CFR 450.320 requires that each transportation management area (TMA) address congestion management through a process involving an analysis of multimodal metropolitan wide strategies that are cooperatively developed to foster safety and integrated management of new and existing transportation facilities eligible for federal funding.

SANDAG has been designated as the TMA for the San Diego region. The 2050 Regional Transportation Plan meets the requirements of 23 CFR 450.320 by incorporating the following federal congestion management process: performance monitoring and measurement of the regional transportation system, multimodal alternatives and non-SOV analysis, land use impact analysis, the provision of congestion management tools, and integration with the regional transportation improvement program process.

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region's continued compliance with the federal congestion management process. Therefore, the City of San Diego has been exempted from the requirements of the State CMP. The City's Growth Management Plan and participation in the Trans Net Local Street Improvement Program complies with the requirement to address local Near-Term and Long-Term congestion.

4.6 CALTRANS FREEWAY SEGMENT LOS PROCEDURES

To determine the LOS of main lane freeway segments, Caltrans Guide for the Preparation of Traffic Impacts Studies, December 2002, specifies the use of the Highway Capacity Manual operational analysis. This method determines levels of service based on the volume to capacity ratio (V/C) ratio. The resulting V/C is then compared to accepted ranges of V/C values corresponding to the various levels of service for each of the facility classifications. The corresponding level of service represents an approximation of existing or anticipated future freeway operating conditions in the peak direction of travel during the peak hour. Traffic count data, peak hour factors, and truck factors are provided on the Department of Transportation website in the Business section under Traffic Counts.

4.7 SIGNIFICANCE THRESHOLDS

As discussed above, two criteria must be met before project traffic mitigation is required. First, an unacceptable LOS (i.e. E or F) must occur or degrade from D to E, and second, significance thresholds for only project traffic must be exceeded. The City has significance thresholds which are summarized in **Table 4-2**. These thresholds are used in this analysis along with levels of service to determine if project mitigation is required. **Table 4-3** shows the roadway classifications for the City of San Diego.

5.0 EXISTING CONDITIONS

The proposed project is located in the Scripps Miramar Ranch North Community area within the City of San Diego.

5.1 EXISTING ROADWAY FACILITIES

Miramar Road – Miramar Road is functionally and ultimately classified per the Mira Mesa Community Plan as a six (6) lane Primary Arterial that is primarily an east-west roadway. On-street parking is not allowed along either side of the roadway within the interchange area evaluated. The roadway width curb to curb is 102 feet and the posted speed limit is 45 mph. Class II bike lanes are included on the bridge.

Pomerado Road – Pomerado Road is functionally classified as a two (2) lane Collector with painted median and is primarily an east-west roadway. The ultimate classification in the Scripps Miramar Ranch Community Plan shows Pomerado Road as a six lane Major Roadway from I-15 NB ramps to Willow Creek Road and four lane Major Roadway from Willow Creek Road to Avenida Magnifica. On-street parking is not allowed along either side of the roadway. The roadway width curb to curb is 50 feet and the posted speed limit is 45 mph. Class II bike lanes are included on the roadway.

5.2 EXISTING TRAFFIC VOLUMES

Figure 5-1 shows the existing average weekday 24-hour traffic volumes for street segments in the project study area. Existing street segment functional classifications were used for purposes of this analysis. Traffic counts summarized on this figure were compiled by Transportation Studies, Inc. in March, April and May of 2012. **Appendix B** includes the existing count data for street segments, intersections, and freeway segments. Freeway volumes were provided via Caltrans website and counted in Year 2011.

TABLE 5-2

Existing Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	25.7	C	13.5	B
2	Miramar Road / I-15 NB Ramps	Signalized	15.8	B	13.8	B
3	Pomerado Road / Willow Creek Road	Signalized	82.0	F	58.2	E
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	39.4	D	26.3	C
5	Pomerado Road / Chabad Center Drwy.	Signalized	11.0	B	10.1	B
6	Pomerado Road / Avenida Magnifica	Signalized	39.4	D	36.4	D

Notes:

Delay = seconds per vehicle

LOS = Level of Service

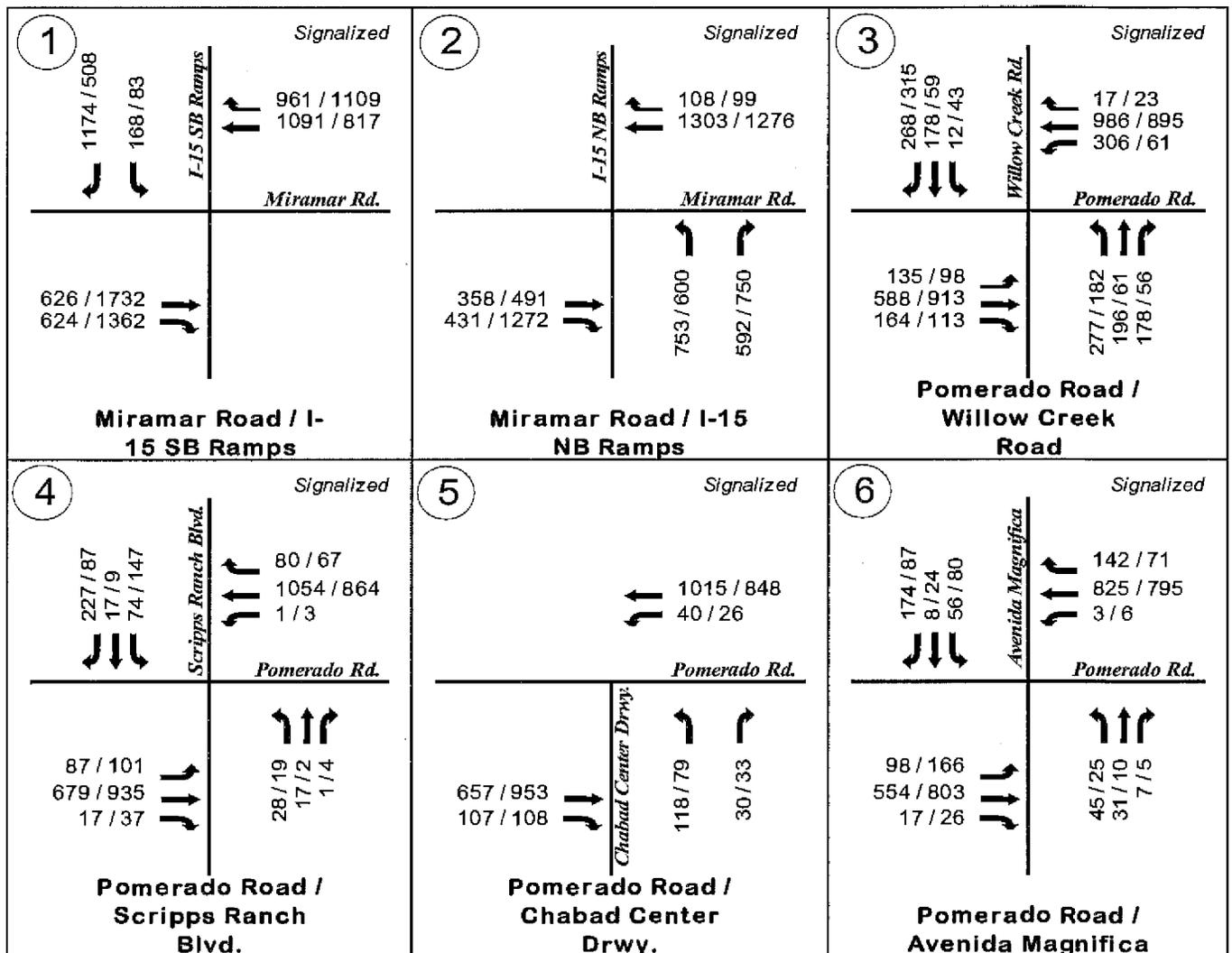


FIGURE 6-2

Existing With Project AM / PM Peak Hour Traffic

TABLE 6-2

Existing With Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	26.3	C	13.8	B
2	Miramar Road / I-15 NB Ramps	Signalized	17.9	B	14.8	B
3	Pomerado Road / Willow Creek Road	Signalized	93.2	F	68.4	E
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	50	D	29.9	C
5	Pomerado Road / Chabad Center Drwy.	Signalized	15.5	B	13.6	B
6	Pomerado Road / Avenida Magnifica	Signalized	40.4	D	38	D

Notes:

Delay= sec./veh.

LOS = Level of Service

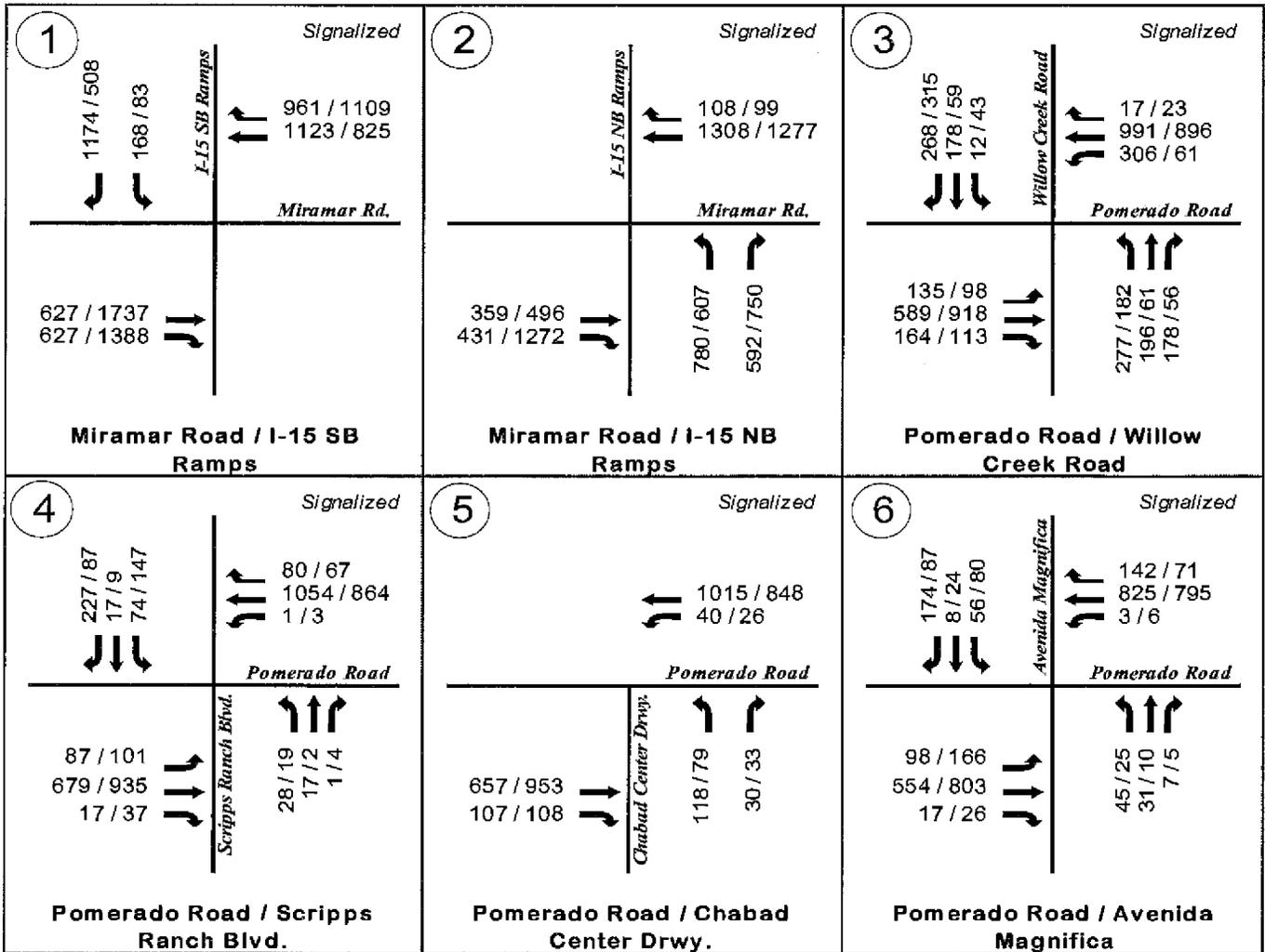


FIGURE 9-2

Near Term With Project AM/PM Peak Hour Traffic

TABLE 9-2

Near Term With Project Intersection Levels Of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	26.8	C	14.7	B
2	Miramar Road / I-15 NB Ramps	Signalized	20.3	C	15.1	B
3	Pomerado Road / Willow Creek Road	Signalized	94.0	F	70.1	E
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	49.8	D	30.0	C
5	Pomerado Road / Chabad Center Drwy.	Signalized	15.5	B	13.6	B
6	Pomerado Road / Avenida Magnifica	Signalized	40.4	D	38.0	D

Notes:

Delay = sec./veh.

LOS = Level of Service

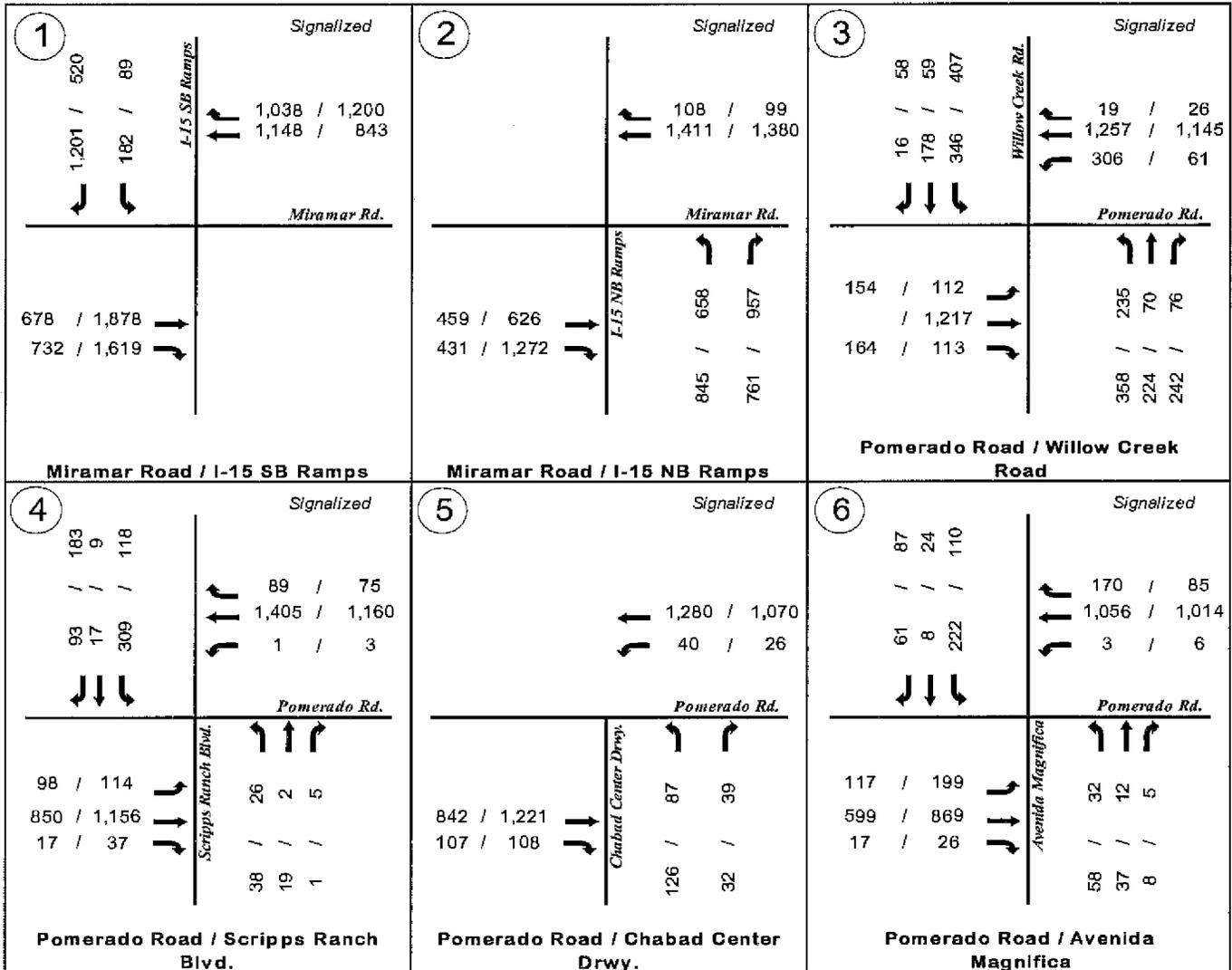


FIGURE 11-2

Year 2030 With Project AM / PM Peak Hour Traffic Volumes

TABLE 11-2
Year 2030 With Project Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Miramar Road / I-15 SB Ramps	Signalized	27.3	C	48.8	D
2	Miramar Road / I-15 NB Ramps	Signalized	20.2	C	15.4	B
3	Pomerado Road / Willow Creek Road	Signalized	181.5	F	189.9	F
4	Pomerado Road / Scripps Ranch Blvd.	Signalized	160.7	F	105.0	F
5	Pomerado Road / Chabad Center Drwy.	Signalized	33.3	C	39.0	D
6	Pomerado Road / Avenida Magnifica	Signalized	100.3	F	83.9	F

Notes:

Delay = sec./veh.

LOS = Level of Service

TABLE 12-10

Existing Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT*	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	290,000	0.083	0.62	14,978	0.858	D
Miramar Way/ Miramar Road	7-GP+2-M	SB	19,810	290,000	0.082	0.57	13,626	0.688	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	273,000	0.083	0.62	14,100	0.808	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	273,000	0.082	0.57	12,827	0.735	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

GP lane capacity at LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes
 *Caltrans 2011 Count Data

TABLE 12-11

Existing + Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	290,583	0.083	0.62	15,008	0.860	D
Miramar Way/ Miramar Road	7-GP+2-M	SB	19,810	290,583	0.082	0.57	13,653	0.690	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	273,113	0.083	0.62	14,105	0.808	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	273,113	0.082	0.57	12,832	0.735	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-12

Near Term Without Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	292,652	0.083	0.62	15,115	0.866	D
Miramar Way/ Miramar Road	7-GP+2-M	SB	19,810	292,652	0.082	0.57	13,751	0.694	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	279,104	0.083	0.62	14,415	0.826	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	279,104	0.082	0.57	13,114	0.751	C

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-13

Near Term With Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	293,235	0.083	0.62	15,145	0.867	D
Miramar Way/ Miramar Road	7-GP+2-M	SB	19,810	293,235	0.082	0.57	13,778	0.695	C
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	279,217	0.083	0.62	14,421	0.826	D
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	279,217	0.082	0.57	13,119	0.751	C

Legend:

Dir. = Direction
 Cap. = Capacity
 ADT = Average Daily Traffic
 V/C = Volume to Capacity Ratio
 LOS = Level of Service
 PHV = Peak Hour Volume
 #-GP = # of General Purpose Lanes
 #-M = # of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln. taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-14

Year 2030 Without Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	413,000	0.083	0.62	21,330	1.222	F
Miramar Way/ Miramar Road	7-GP+2-M	SB	19,810	413,000	0.082	0.57	19,405	0.980	E
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	397,000	0.083	0.62	20,504	1.174	F
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	397,000	0.082	0.57	18,653	1.068	F

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002
 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-15

Year 2030 With Project Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	PHV	V/C	LOS
I-15									
Miramar Way/ Miramar Road	6-GP+2-M	NB	17,460	413,583	0.083	0.62	21,360	1.223	F
Miramar Way/ Miramar Road	7-GP+2-M	SB	19,810	413,583	0.082	0.57	19,433	0.981	E
Miramar Road/ Carroll Canyon Road	6-GP+2-M	NB	17,460	397,113	0.083	0.62	20,510	1.174	F
Miramar Road/ Carroll Canyon Road	6-GP+2-M	SB	17,460	397,113	0.082	0.57	18,659	1.068	F

Legend:

Dir.= Direction
 Cap. = Capacity
 ADT= Average Daily Traffic
 V/C= Volume to Capacity Ratio
 LOS= Level of Service
 PHV= Peak Hour Volume
 #-GP= # of General Purpose Lanes
 #-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.
 Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

 Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE 12-16

Existing With & Without Project Freeway Segment LOS Comparison

Segment	Dir.	Existing		Existing with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.858	D	0.860	D	0.002	NO
Miramar Way/ Miramar Road	SB	0.688	C	0.690	C	0.002	NO
Miramar Road/ Carroll Canyon Road	NB	0.808	D	0.808	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.735	C	0.735	C	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 12-17

Near Term With & Without Project Freeway Segment LOS Comparison

Segment	Dir.	Near Term		Near Term with Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	0.866	D	0.867	D	0.001	NO
Miramar Way/ Miramar Road	SB	0.694	C	0.695	C	0.001	NO
Miramar Road/ Carroll Canyon Road	NB	0.826	D	0.826	D	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	0.751	C	0.751	C	0.000	NO

Legend:

- Dir.= Direction
- V/C= Volume to Capacity Ratio
- LOS= Level of Service
- Sig.?= Is this significant?

TABLE 12-18

Year 2030 With & Without Project Freeway Segment LOS Comparison

Segment	Dir.	Year 2030		Year 2030 + Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-15							
Miramar Way/ Miramar Road	NB	1.222	F	1.223	F	0.001	NO
Miramar Way/ Miramar Road	SB	0.980	E	0.981	E	0.001	NO
Miramar Road/ Carroll Canyon Road	NB	1.174	F	1.174	F	0.000	NO
Miramar Road/ Carroll Canyon Road	SB	1.068	F	1.068	F	0.000	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

TABLE 14-3

Existing With & Without Project Intersection LOS Comparison

#	Intersection	Existing				Existing + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	25.7	C	13.5	B	26.3	C	0.6	No	13.8	B	0.3	No
2	Miramar Road / I-15 NB Ramps	15.8	B	13.8	B	17.9	B	2.1	No	14.8	B	1.0	No
3	Pomerado Road / Willow Creek Road	82.0	F	58.2	E	93.2	F	11.2	Yes	68.4	E	10.2	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.3	C	50.0	D	10.6	No	29.9	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

TABLE 14-4

Near Term With & Without Project Intersection LOS Comparison

#	Intersection	Near Term				Near Term + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.1	C	14.3	B	26.8	C	0.7	No	14.7	B	0.4	No
2	Miramar Road / I-15 NB Ramps	16.2	B	14.2	B	20.3	C	4.1	No	15.1	B	0.9	No
3	Pomerado Road / Willow Creek Road	82.6	F	59.1	E	94.0	F	11.4	Yes	70.1	E	11.0	Yes
4	Pomerado Road / Scripps Ranch Blvd.	39.4	D	26.4	C	49.8	D	10.4	No	30.0	C	3.6	No
5	Pomerado Road / Chabad Center Drwy.	11.0	B	10.1	B	15.5	B	4.5	No	13.6	B	3.5	No
6	Pomerado Road / Avenida Magnifica	39.4	D	36.4	D	40.4	D	1.0	No	38.0	D	1.6	No

Notes:

LOS = Level of Service
 Δ = Change
 S = Significant
 D = Delay

14.7 YEAR 2030 WITH & WITHOUT PROJECT

Street segments and intersections operating at an unacceptable level of service in these conditions were discussed in Section 10.0 & 11.0. These street segments and intersections are also shown on **Table 14-5** and **Table 14-6**. These tables summarize impacts which are expected to occur on street segments and intersections in the Year 2030 conditions. These impacts are considered long term Cumulative impacts and only require a fair-share contribution towards planned improvements per the City's Public Facilities Financing Plan mitigation if mitigation is recommended. For Caltrans improvements, a fair share contribution would be required towards a project identified in a Project Study Report.

Freeways and freeway ramps were also evaluated in this study. No significant freeway or ramp impacts were identified in the Year 2030 With Project condition. See **Table 12-9** and **Table 12-18** in Chapter 12 of this report for the analysis results.

TABLE 14-6

Year 2030 With & Without Project Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	Miramar Road / I-15 SB Ramps	26.3	C	48.7	D	27.3	C	1.0	No	48.8	D	0.1	No
2	Miramar Road / I-15 NB Ramps	16.6	B	13.9	B	20.2	C	3.6	No	15.4	B	1.5	No
3	Pomerado Road / Willow Creek Road	167.5	F	165.8	F	181.5	F	14.0	Yes	189.9	F	24.1	Yes
4	Pomerado Road / Scripps Ranch Blvd.	136.5	F	82.9	F	160.7	F	24.2	Yes	105.0	F	22.1	Yes
5	Pomerado Road / Chabad Center Drwy.	19.2	B	28.5	C	33.3	C	14.1	No	39.0	D	10.5	No
6	Pomerado Road / Avenida Magnifica	99.5	F	83.6	F	100.3	F	0.8	No	83.9	F	0.3	No

Notes

- Δ = Change
- LOS = Level of Service
- S = Significant
- D = Delay

14.8 MITIGATION

Typically mitigation for project direct and cumulative impacts are determined based on the analysis of impacts to determine level of service and on significance criteria. As noted in the preceding sections of this chapter, both direct and cumulative impacts were identified. However, in the Scripps Miramar Ranch planning area, the City and Scripps Miramar Ranch Planning Board have determined that they did not, without a vote of the citizens that reside in the planning area, want to widen Pomerado Road east of Scripps Ranch Blvd. to four (4) lanes.

Figure 14-1 shows the former Pomerado Road Widening Capital Improvements Program (CIP) programming sheet (March 2007). As noted on **Figure 14-1**, the four lane major street widening of Pomerado Road adjacent to the project area has been deleted. More specifically, under schedule on the figure, the project was “deleted following Council action amending the Scripps Miramar Ranch Community Plan on October 26, 1993, Resolution R-282903”.

Figure 14-2 shows excerpts from the Community Plan which further describes the process and vote required to even consider the widening of Pomerado Road. Based on the action by the City Council, even though the project has both direct and cumulative street segment and intersection impacts, no mitigation is recommended so that the integrity of the City Council action and Community Plan are maintained. However, since there are no planned improvements to Pomerado Road, the impacts to Pomerado Road would remain significant and unmitigated.

Since this traffic study was prepared for an EIR, findings and overriding considerations would have to be adopted for the Planning Commission and City Council to approve this project without mitigation. **Table 1-13** and **Table 1-14** shows street segment levels of service and intersection levels of service if Pomerado Road is widened to a four lane Collector in the Near Term and a four lane Major in the future (Year 2030).

HCM Signalized Intersection Capacity Analysis
 2: I-15 NB Ramps & Miramar Rd./Pomerado Road

Existing PM
 7/20/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑↑	↗	↘↘		↘↘			
Volume (vph)	0	442	1272	0	1236	95	600	0	712	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	13	12	12	12
Total Lost time (s)		6.5	4.0		6.5	4.0	5.6		6.5			
Lane Util. Factor		0.95	1.00		*0.90	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3539	1583		6706	1583	3433		2880			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3539	1583		6706	1583	3433		2880			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	491	1413	0	1373	106	667	0	791	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	491	1413	0	1373	106	667	0	791	0	0	0
Turn Type		NA	Free		NA	Free	Perm		Perm			
Protected Phases		2			6							
Permitted Phases			Free			Free	8		6 8			
Actuated Green, G (s)		102.1	150.0		102.1	150.0	35.8		150.0			
Effective Green, g (s)		102.1	150.0		102.1	150.0	35.8		144.4			
Actuated g/C Ratio		0.68	1.00		0.68	1.00	0.24		0.96			
Clearance Time (s)		6.5			6.5		5.6					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2408	1583		4564	1583	819		2772			
v/s Ratio Prot		0.14			0.20							
v/s Ratio Perm			c0.89			0.07	0.19		0.27			
v/c Ratio		0.20	0.89		0.30	0.07	0.81		0.29			
Uniform Delay, d1		8.9	0.0		9.6	0.0	54.0		0.1			
Progression Factor		0.87	1.00		1.02	1.00	1.00		1.00			
Incremental Delay, d2		0.2	6.6		0.1	0.0	6.2		0.1			
Delay (s)		7.8	6.6		9.9	0.0	60.2		0.2			
Level of Service		A	A		A	A	E		A			
Approach Delay (s)		6.9			9.2			27.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 1: I-15 SB Ramps & Miramar Rd.

Existing + Project AM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑↑				↑↑		↑↑
Volume (vph)	0	626	624	0	1091	961	0	0	0	168	0	1174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	4.0		5.5	4.0				4.0		4.0
Lane Util. Factor		0.95	1.00		0.95	0.88				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3539	1583		3539	2787				3433		2787
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3539	1583		3539	2787				3433		2787
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	696	693	0	1212	1068	0	0	0	187	0	1304
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	17
Lane Group Flow (vph)	0	696	693	0	1212	1068	0	0	0	187	0	1287
Turn Type		NA	Free		NA	Free				Perm		Perm
Protected Phases		2			6							
Permitted Phases			Free		Free					8		8
Actuated Green, G (s)		65.1	150.0		65.1	150.0				75.4		75.4
Effective Green, g (s)		65.1	150.0		65.1	150.0				75.4		75.4
Actuated g/C Ratio		0.43	1.00		0.43	1.00				0.50		0.50
Clearance Time (s)		5.5			5.5					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		1535	1583		1535	2787				1725		1400
v/s Ratio Prot		0.20			0.34							
v/s Ratio Perm			0.44			0.38				0.05		0.46
v/c Ratio		0.45	0.44		0.79	0.38				0.11		0.92
Uniform Delay, d1		29.9	0.0		36.6	0.0				19.6		34.5
Progression Factor		1.00	1.00		1.07	1.00				1.00		1.00
Incremental Delay, d2		1.0	0.9		3.9	0.4				0.0		9.8
Delay (s)		30.9	0.9		42.9	0.4				19.6		44.3
Level of Service		C	A		D	A				B		D
Approach Delay (s)		15.9			23.0			0.0			41.2	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: I-15 NB Ramps & Miramar Rd./Pomerado Road

Existing + Project AM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SER
Lane Configurations		↑↑	↗		↑↑↑	↗	↗		↗			
Volume (vph)	0	358	431	0	1303	108	753	0	592	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	4.0		6.5	4.0	5.6		6.5			
Lane Util. Factor		0.95	1.00		0.86	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Frt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3539	1583		6408	1583	3433		2787			
Frt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3539	1583		6408	1583	3433		2787			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	398	479	0	1448	120	837	0	658	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	398	479	0	1448	120	837	0	658	0	0	0
Turn Type		NA	Free		NA	Free	Perm		Perm			
Protected Phases		2			6							
Permitted Phases			Free			Free	8		6 8			
Actuated Green, G (s)		93.3	150.0		93.3	150.0	44.6		150.0			
Effective Green, g (s)		93.3	150.0		93.3	150.0	44.6		144.4			
Actuated g/C Ratio		0.62	1.00		0.62	1.00	0.30		0.96			
Clearance Time (s)		6.5			6.5		5.6					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2201	1583		3985	1583	1020		2682			
v/s Ratio Prot		0.11			0.23							
v/s Ratio Perm			0.30			0.08	0.24		0.24			
v/c Ratio		0.18	0.30		0.36	0.08	0.82		0.25			
Uniform Delay, d1		12.1	0.0		13.8	0.0	49.0		0.1			
Progression Factor		1.20	1.00		0.94	1.00	1.00		1.00			
Incremental Delay, d2		0.2	0.5		0.0	0.0	5.4		0.0			
Delay (s)		14.6	0.5		13.0	0.0	54.4		0.2			
Level of Service		B	A		B	A	D		A			
Approach Delay (s)		6.9			12.0			30.5			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: I-15 SB Ramps & Miramar Rd.

Existing + Project PM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑↑				↑↑		↑↑
Volume (vph)	0	1732	1362	0	817	1109	0	0	0	83	0	508
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	4.0		5.5	4.0				4.0		4.0
Lane Util. Factor		0.95	1.00		0.95	0.88				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3539	1583		3539	2787				3433		2787
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3539	1583		3539	2787				3433		2787
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1924	1513	0	908	1232	0	0	0	92	0	564
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	264
Lane Group Flow (vph)	0	1924	1513	0	908	1232	0	0	0	92	0	300
Turn Type		NA	Free		NA	Free				Perm		Perm
Protected Phases		2			6							
Permitted Phases			Free			Free				8		8
Actuated Green, G (s)		119.5	150.0		119.5	150.0				21.0		21.0
Effective Green, g (s)		119.5	150.0		119.5	150.0				21.0		21.0
Actuated g/C Ratio		0.80	1.00		0.80	1.00				0.14		0.14
Clearance Time (s)		5.5			5.5					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		2819	1583		2819	2787				480		390
v/s Ratio Prot		0.54			0.26							
v/s Ratio Perm			0.96			0.44				0.03		0.11
v/c Ratio		0.68	0.96		0.32	0.44				0.19		0.77
Uniform Delay, d1		6.8	0.0		4.2	0.0				57.0		62.2
Progression Factor		1.00	1.00		0.68	1.00				1.00		1.00
Incremental Delay, d2		1.4	14.3		0.3	0.5				0.2		8.8
Delay (s)		8.2	14.3		3.1	0.5				57.2		71.0
Level of Service		A	B		A	A				E		E
Approach Delay (s)		10.9			1.6			0.0			69.1	
Approach LOS		B			A			A			E	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: I-15 NB Ramps & Miramar Rd./Pomerado Road

Existing + Project PM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑↑	↗	↖		↖			
Volume (vph)	0	491	1272	0	1276	99	600	0	750	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	4.0		6.5	4.0	5.6		6.5			
Lane Util. Factor		0.95	1.00		0.86	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3539	1583		6408	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3539	1583		6408	1583	3433		2787			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	546	1413	0	1418	110	667	0	833	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	546	1413	0	1418	110	667	0	833	0	0	0
Turn Type		NA	Free		NA	Free	Perm		Perm			
Protected Phases		2			6							
Permitted Phases			Free			Free	8		6 8			
Actuated Green, G (s)		105.9	150.0		105.9	150.0	32.0		150.0			
Effective Green, g (s)		105.9	150.0		105.9	150.0	32.0		144.4			
Actuated g/C Ratio		0.71	1.00		0.71	1.00	0.21		0.96			
Clearance Time (s)		6.5			6.5		5.6					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2498	1583		4524	1583	732		2682			
v/s Ratio Prot		0.15			0.22							
v/s Ratio Perm			c0.89			0.07	0.19		0.30			
v/c Ratio		0.22	0.89		0.31	0.07	0.91		0.31			
Uniform Delay, d1		7.7	0.0		8.3	0.0	57.6		0.1			
Progression Factor		0.88	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		0.2	6.3		0.2	0.1	15.5		0.1			
Delay (s)		6.9	6.3		8.5	0.1	73.2		0.2			
Level of Service		A	A		A	A	E		A			
Approach Delay (s)		6.5			7.9			32.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: I-15 SB Ramps & Miramar Rd.

Near Term + Project AM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑	↗				↖		↖
Volume (vph)	0	627	627	0	1123	961	0	0	0	168	0	1174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	4.0		5.5	4.0				4.0		4.0
Lane Util. Factor		0.95	1.00		0.95	0.88				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3539	1583		3539	2787				3433		2787
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3539	1583		3539	2787				3433		2787
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	697	697	0	1248	1068	0	0	0	187	0	1304
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	18
Lane Group Flow (vph)	0	697	697	0	1248	1068	0	0	0	187	0	1286
Turn Type		NA	Free		NA	Free				Perm		Perm
Protected Phases		2			6							
Permitted Phases			Free			Free				8		8
Actuated Green, G (s)		66.2	150.0		66.2	150.0				74.3		74.3
Effective Green, g (s)		66.2	150.0		66.2	150.0				74.3		74.3
Actuated g/C Ratio		0.44	1.00		0.44	1.00				0.50		0.50
Clearance Time (s)		5.5			5.5					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		1561	1583		1561	2787				1700		1380
v/s Ratio Prot		0.20			c0.35							
v/s Ratio Perm			0.44			0.38				0.05		c0.46
v/c Ratio		0.45	0.44		0.80	0.38				0.11		0.93
Uniform Delay, d1		29.2	0.0		36.2	0.0				20.2		35.5
Progression Factor		1.00	1.00		1.05	1.00				1.00		1.00
Incremental Delay, d2		0.9	0.9		4.2	0.4				0.0		11.5
Delay (s)		30.1	0.9		42.0	0.4				20.2		47.0
Level of Service		C	A		D	A				C		D
Approach Delay (s)		15.5			22.8			0.0			43.7	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: I-15 NB Ramps & Miramar Rd./Pomerado Road

Near Term + Project AM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑↑↑	↗	↖↗		↖↗			
Volume (vph)	0	359	431	0	1308	108	780	0	592	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	4.0		6.5	4.0	5.6		6.5			
Lane Util. Factor		0.95	1.00		0.86	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3539	1583		6408	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3539	1583		6408	1583	3433		2787			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	399	479	0	1453	120	867	0	658	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	399	479	0	1453	120	867	0	658	0	0	0
Turn Type		NA	Free		NA	Free	Perm		Perm			
Protected Phases		2			6							
Permitted Phases			Free			Free	8		6 8			
Actuated Green, G (s)		91.6	150.0		91.6	150.0	46.3		150.0			
Effective Green, g (s)		91.6	150.0		91.6	150.0	46.3		144.4			
Actuated g/C Ratio		0.61	1.00		0.61	1.00	0.31		0.96			
Clearance Time (s)		6.5			6.5		5.6					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2161	1583		3913	1583	1059		2682			
v/s Ratio Prot		0.11			c0.23							
v/s Ratio Perm			0.30			0.08	c0.25		0.24			
v/c Ratio		0.18	0.30		0.37	0.08	0.82		0.25			
Uniform Delay, d1		12.8	0.0		14.7	0.0	48.0		0.1			
Progression Factor		1.23	1.00		1.31	1.00	1.00		1.00			
Incremental Delay, d2		0.2	0.5		0.0	0.0	5.0		0.0			
Delay (s)		16.0	0.5		19.3	0.0	53.0		0.2			
Level of Service		B	A		B	A	D		A			
Approach Delay (s)		7.5			17.8			30.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: I-15 SB Ramps & Miramar Rd.

Near Term + Project PM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑↑				↑↑		↑↑
Volume (vph)	0	1737	1388	0	825	1109	0	0	0	83	0	508
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	4.0		5.5	4.0				4.0		4.0
Lane Util. Factor		0.95	1.00		0.95	0.88				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3539	1583		3539	2787				3433		2787
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3539	1583		3539	2787				3433		2787
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1930	1542	0	917	1232	0	0	0	92	0	564
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	352
Lane Group Flow (vph)	0	1930	1542	0	917	1232	0	0	0	92	0	212
Turn Type		NA	Free		NA	Free				Perm		Perm
Protected Phases		2			6							
Permitted Phases			Free			Free				8		8
Actuated Green, G (s)		124.5	150.0		124.5	150.0				16.0		16.0
Effective Green, g (s)		124.5	150.0		124.5	150.0				16.0		16.0
Actuated g/C Ratio		0.83	1.00		0.83	1.00				0.11		0.11
Clearance Time (s)		5.5			5.5					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		2937	1583		2937	2787				366		297
v/s Ratio Prot		0.55			0.26							
v/s Ratio Perm			c0.97			0.44				0.03		0.08
v/c Ratio		0.66	0.97		0.31	0.44				0.25		0.71
Uniform Delay, d1		4.8	0.0		2.9	0.0				61.5		64.8
Progression Factor		1.00	1.00		2.60	1.00				1.00		1.00
Incremental Delay, d2		1.2	17.2		0.3	0.5				0.4		7.9
Delay (s)		5.9	17.2		7.9	0.5				61.9		72.7
Level of Service		A	B		A	A				E		E
Approach Delay (s)		11.0			3.6			0.0			71.2	
Approach LOS		B			A			A			E	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: I-15 NB Ramps & Miramar Rd./Pomerado Road

Near Term + Project PM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑↑↑	↗	↖↗		↖↗			
Volume (vph)	0	496	1272	0	1277	99	607	0	750	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	4.0		6.5	4.0	5.6		6.5			
Lane Util. Factor		0.95	1.00		0.86	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3539	1583		6408	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3539	1583		6408	1583	3433		2787			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	551	1413	0	1419	110	674	0	833	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	551	1413	0	1419	110	674	0	833	0	0	0
Turn Type		NA	Free		NA	Free	Perm		Perm			
Protected Phases		2			6							
Permitted Phases			Free			Free	8		6 8			
Actuated Green, G (s)		101.5	150.0		101.5	150.0	36.4		150.0			
Effective Green, g (s)		101.5	150.0		101.5	150.0	36.4		144.4			
Actuated g/C Ratio		0.68	1.00		0.68	1.00	0.24		0.96			
Clearance Time (s)		6.5			6.5		5.6					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2394	1583		4336	1583	833		2682			
v/s Ratio Prot		0.16			0.22							
v/s Ratio Perm			c0.89			0.07	0.20		0.30			
v/c Ratio		0.23	0.89		0.33	0.07	0.81		0.31			
Uniform Delay, d1		9.3	0.0		10.1	0.0	53.5		0.1			
Progression Factor		1.12	1.00		1.43	1.00	1.00		1.00			
Incremental Delay, d2		0.2	6.4		0.0	0.0	5.8		0.1			
Delay (s)		10.6	6.4		14.4	0.0	59.4		0.2			
Level of Service		B	A		B	A	E		A			
Approach Delay (s)		7.6			13.4			26.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: I-15 SB Ramps & Miramar Rd.

Year 2030 + Project AM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑↑				↑↑		↑↑
Volume (vph)	0	678	732	0	1148	1038	0	0	0	182	0	1201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	4.0		5.5	4.0				4.0		4.0
Lane Util. Factor		0.95	1.00		0.95	0.88				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3539	1583		3539	2787				3433		2787
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3539	1583		3539	2787				3433		2787
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	753	813	0	1276	1153	0	0	0	202	0	1334
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	19
Lane Group Flow (vph)	0	753	813	0	1276	1153	0	0	0	202	0	1315
Turn Type		NA	Free		NA	Free				Perm		Perm
Protected Phases		2			6							
Permitted Phases			Free			Free				8		8
Actuated Green, G (s)		67.4	150.0		67.4	150.0				73.1		73.1
Effective Green, g (s)		67.4	150.0		67.4	150.0				73.1		73.1
Actuated g/C Ratio		0.45	1.00		0.45	1.00				0.49		0.49
Clearance Time (s)		5.5			5.5					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		1590	1583		1590	2787				1673		1358
v/s Ratio Prot		0.21			0.36							
v/s Ratio Perm			0.51			0.41				0.06		0.47
v/c Ratio		0.47	0.51		0.80	0.41				0.12		0.97
Uniform Delay, d1		28.9	0.0		35.6	0.0				20.9		37.3
Progression Factor		1.00	1.00		0.99	1.00				1.00		1.00
Incremental Delay, d2		1.0	1.2		4.1	0.4				0.0		17.1
Delay (s)		29.9	1.2		39.1	0.4				21.0		54.4
Level of Service		C	A		D	A				C		D
Approach Delay (s)		15.0			20.8			0.0			50.0	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: I-15 NB Ramps & Miramar Rd./Pomerado Road

Year 2030 + Project AM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗			↗	↖		↖			
Volume (vph)	0	626	431	0	1411	108	845	0	761	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	4.0		6.5	4.0	5.6		6.5			
Lane Util. Factor		0.95	1.00		0.86	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3539	1583		6408	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3539	1583		6408	1583	3433		2787			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	696	479	0	1568	120	939	0	846	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	696	479	0	1568	120	939	0	846	0	0	0
Turn Type		NA	Free		NA	Free	Perm		Perm			
Protected Phases		2			6							
Permitted Phases			Free			Free	8		6 8			
Actuated Green, G (s)		89.1	150.0		89.1	150.0	48.8		150.0			
Effective Green, g (s)		89.1	150.0		89.1	150.0	48.8		144.4			
Actuated g/C Ratio		0.59	1.00		0.59	1.00	0.33		0.96			
Clearance Time (s)		6.5			6.5		5.6					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2102	1583		3806	1583	1116		2682			
v/s Ratio Prot		0.20			c0.24							
v/s Ratio Perm			0.30			0.08	c0.27		0.30			
v/c Ratio		0.33	0.30		0.41	0.08	0.84		0.32			
Uniform Delay, d1		15.4	0.0		16.4	0.0	47.0		0.2			
Progression Factor		0.90	1.00		1.42	1.00	1.00		1.00			
Incremental Delay, d2		0.4	0.5		0.0	0.0	5.9		0.1			
Delay (s)		14.3	0.5		23.2	0.0	52.9		0.2			
Level of Service		B	A		C	A	D		A			
Approach Delay (s)		8.7			21.6			27.9			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 1: I-15 SB Ramps & Miramar Rd.

Year 2030 + Project PM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑	↑↑				↑↑		↑↑
Volume (vph)	0	1878	1619	0	843	1200	0	0	0	89	0	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	4.0		5.5	4.0				4.0		4.0
Lane Util. Factor		0.95	1.00		0.95	0.88				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3539	1583		3539	2787				3433		2787
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3539	1583		3539	2787				3433		2787
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	2087	1799	0	937	1333	0	0	0	99	0	578
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	279
Lane Group Flow (vph)	0	2087	1799	0	937	1333	0	0	0	99	0	299
Turn Type		NA	Free		NA	Free				Perm		Perm
Protected Phases		2			6							
Permitted Phases			Free			Free				8		8
Actuated Green, G (s)		119.7	150.0		119.7	150.0				20.8		20.8
Effective Green, g (s)		119.7	150.0		119.7	150.0				20.8		20.8
Actuated g/C Ratio		0.80	1.00		0.80	1.00				0.14		0.14
Clearance Time (s)		5.5			5.5					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		2824	1583		2824	2787				476		386
v/s Ratio Prot		0.59			0.26							
v/s Ratio Perm			c1.14			0.48				0.03		0.11
v/c Ratio		0.74	1.14		0.33	0.48				0.21		0.77
Uniform Delay, d1		7.5	75.0		4.2	0.0				57.3		62.3
Progression Factor		1.00	1.00		1.37	1.00				1.00		1.00
Incremental Delay, d2		1.8	69.7		0.3	0.5				0.2		9.4
Delay (s)		9.2	144.7		6.0	0.5				57.5		71.7
Level of Service		A	F		A	A				E		E
Approach Delay (s)		72.0			2.8			0.0			69.6	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM 2000 Control Delay	48.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 2: I-15 NB Ramps & Miramar Rd./Pomerado Road

Year 2030 + Project PM
 7/21/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑		↑↑↑↑	↑	↑↑		↑↑			
Volume (vph)	0	626	1272	0	1380	99	658	0	957	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	4.0		6.5	4.0	5.6		6.5			
Lane Util. Factor		0.95	1.00		0.86	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3539	1583		6408	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3539	1583		6408	1583	3433		2787			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	696	1413	0	1533	110	731	0	1063	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	696	1413	0	1533	110	731	0	1063	0	0	0
Turn Type		NA	Free		NA	Free	Perm		Perm			
Protected Phases		2			6							
Permitted Phases			Free			Free	8		6 8			
Actuated Green, G (s)		99.8	150.0		99.8	150.0	38.1		150.0			
Effective Green, g (s)		99.8	150.0		99.8	150.0	38.1		144.4			
Actuated g/C Ratio		0.67	1.00		0.67	1.00	0.25		0.96			
Clearance Time (s)		6.5			6.5		5.6					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2354	1583		4263	1583	871		2682			
v/s Ratio Prot		0.20			0.24							
v/s Ratio Perm			0.89			0.07	0.21		0.38			
v/c Ratio		0.30	0.89		0.36	0.07	0.84		0.40			
Uniform Delay, d1		10.5	0.0		11.0	0.0	53.0		0.2			
Progression Factor		1.07	1.00		1.47	1.00	1.00		1.00			
Incremental Delay, d2		0.2	6.0		0.0	0.0	7.1		0.1			
Delay (s)		11.4	6.0		16.3	0.0	60.2		0.3			
Level of Service		B	A		B	A	E		A			
Approach Delay (s)		7.7			15.2			24.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			