LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS

SVBF TEMPLE

County of San Diego, California
August 8, 2017

Prepared for the County of San Diego

Project Proponent:
SVBF Foundation
5 Yates Drive
East Brunswick, NJ 08816

LLG Ref. 3-14-2411

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1.0 INTRODUCTION

1.1 Purpose of the Report

Linscott, Law & Greenspan Engineers (LLG) has been retained to assess the potential traffic impacts associated with the proposed SVBF Temple project. The project is located on the northwest quadrant of the Old San Pasqual Road/San Pasqual Trail intersection in the North County Metro Subregion of San Diego County. Included in this traffic report are the following.

- Project Description
- Existing Conditions Discussion
- Analysis Approach and Methodology
- Significance Criteria
- Trip Generation/Distribution/Assignment
- Capacity Analysis
- Significance of Impacts and Mitigation Measures

2.0 PROJECT LOCATION AND DESCRIPTION

The proposed project is located on a vacant lot along Old San Pasqual Road between San Pasqual Road and California State Route 78 in the unincorporated area of the County of San Diego. The project consist of a proposed 17,500 square-foot building in which public worship services will be held and 5 dwelling units.

Figure 2–1 shows the vicinity map. ***Figure 2–2*** shows a more detailed project area map.

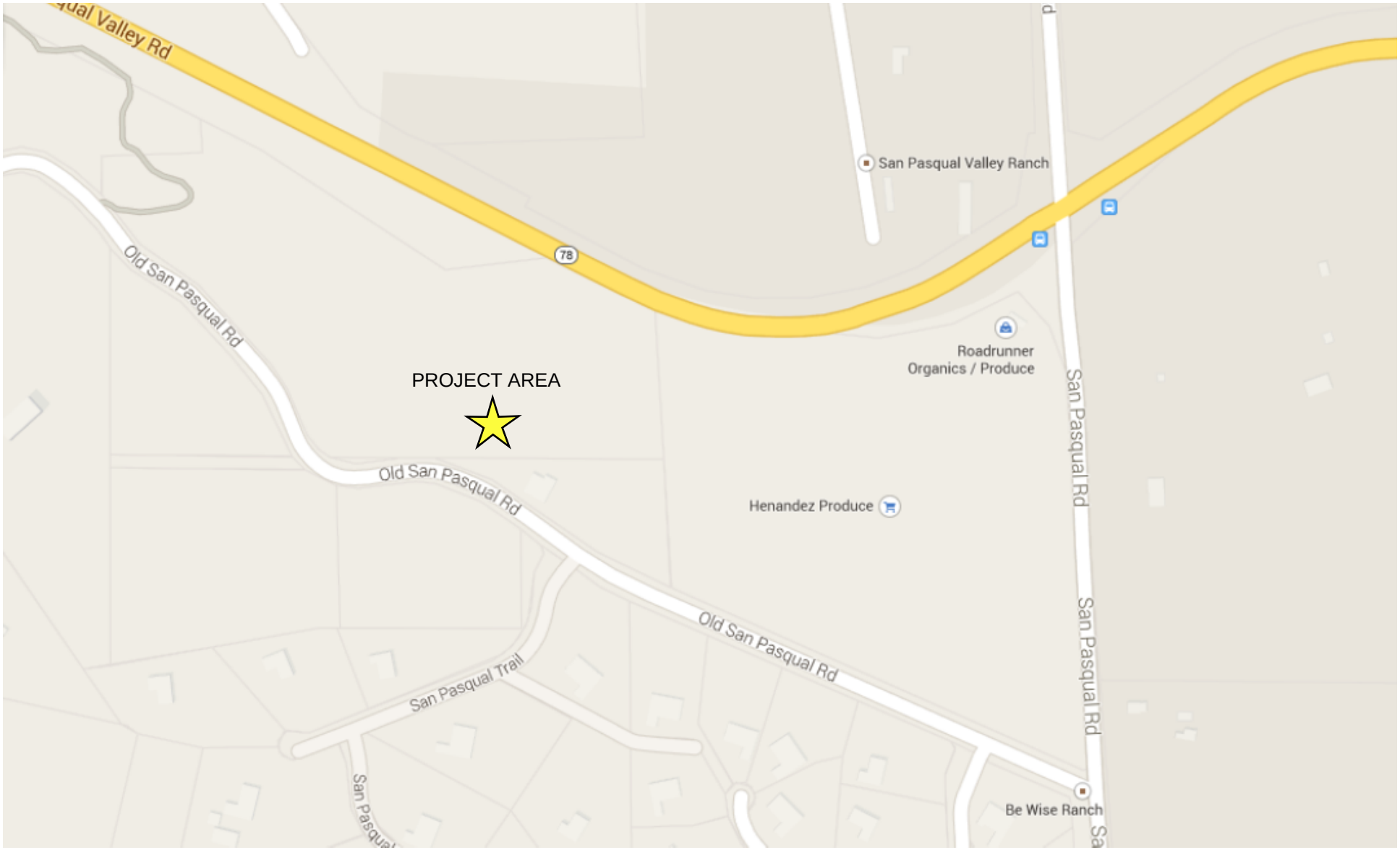

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Figure 2-2

Project Area Map

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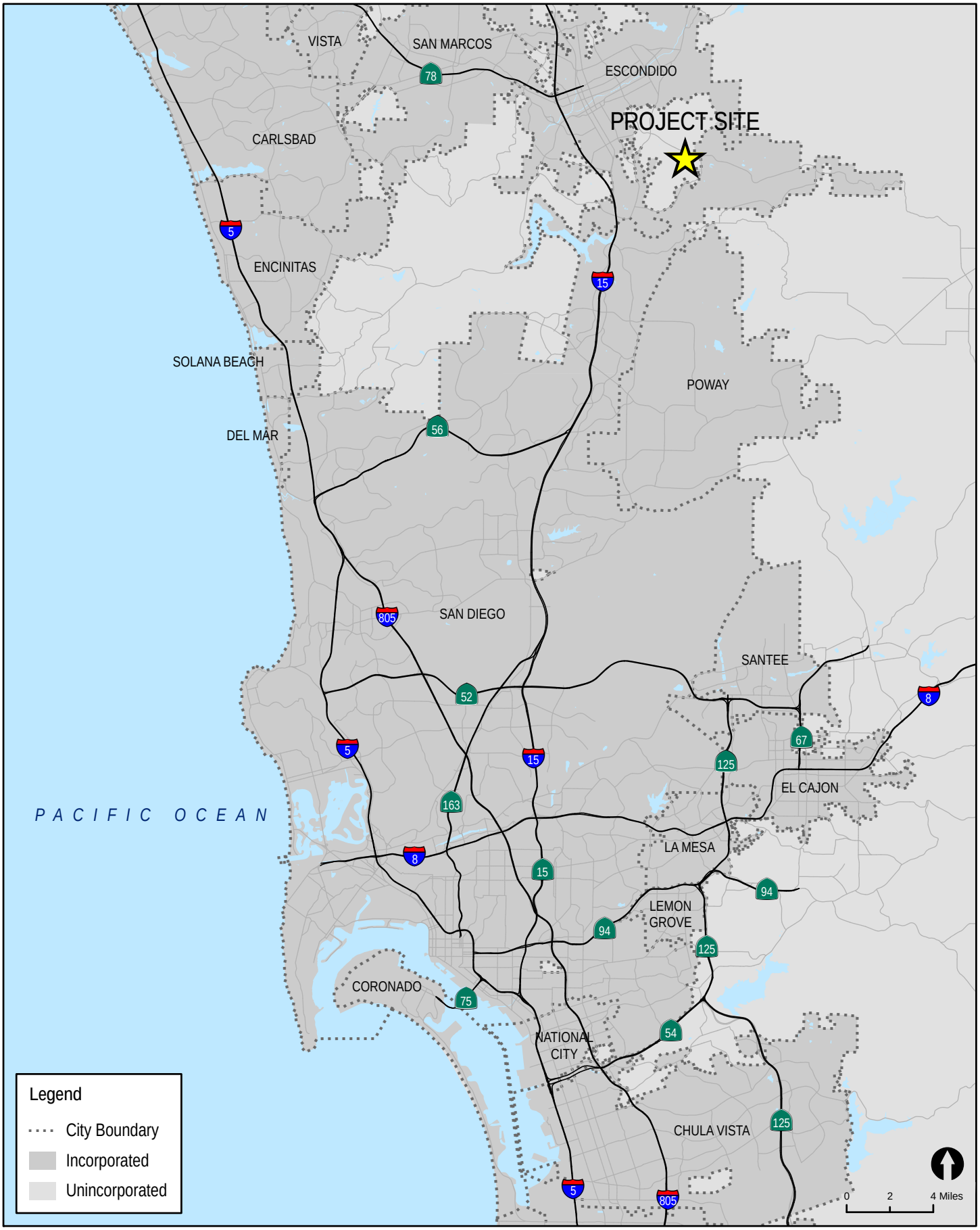

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Figure 2-1

Vicinity Map

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3.0 EXISTING CONDITIONS

The study area for this project encompasses roadway facilities of anticipated project related impacts. The specific study area includes the following intersections and street segments, based on the anticipated distribution of project traffic and area of potential impact:

Intersection:

1. San Pasqual Road / Old San Pasqual Road

Segments:

San Pasqual Road

- Old San Pasqual Road to San Pasqual Valley Road
- South of Old Pasqual Road

Old San Pasqual Road

- West of San Pasqual Road

3.1 Existing Transportation Conditions

The principal roadways in the project study area are described briefly below. Roadway classification was based on the County of San Diego *General Plan Mobility Element* and information gathered from field observations. ***Figure 3–1*** illustrates the existing transportation conditions including the lane geometry for the study intersections.

San Pasqual Road is classified as a *4.1B Major Road* with intermittent turn lanes from San Pasqual Valley Road to Bear Valley Parkway (excluding portions within Escondido city limits). It is currently constructed as a two-lane undivided roadway with a paved width of at least 24 feet. The posted speed limit is 45 mph and curbside parking is prohibited. Based on the existing conditions, it functions as a *2.1E Community Collector.*

Old San Pasqual Road is a County maintained public road and is classified as a *Non-Circulation Element Road*. From San Pasqual Road to Summit Drive, Old San Pasqual Road is constructed as a two-lane undivided roadway with no posted speed limit and a variable paved width (minimum 24 feet). Based on the existing conditions, it functions as a *Rural Residential Collector*. Curbside parking is prohibited.

3.2 Existing Traffic Volumes

Weekday AM/PM peak hour intersection turning movement and bi-directional daily traffic counts were conducted in May 2014 and January 2015 when schools were in session. The peak hour counts were conducted between the hours of 7:00-9:00 AM and 4:00-6:00 PM.

Table 3–1 is a summary of the average daily traffic volumes (ADTs) conducted in May 2014 and January 2015. ***Appendix A*** contains the intersection and segment manual count sheets.

TABLE 3–1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT[a]	Date	Source
San Pasqual Road			
San Pasqual Valley Road (SR 78) to Old San Pasqual Road	4,847	May 2014	LLG
South of Old San Pasqual Road	4,709	January 2015	LLG
Old San Pasqual Road			
West of San Pasqual Road	440	January 2015	LLG

Footnotes:

a. Average Daily Traffic Volumes.

Figure 3–2 depicts the peak hour intersection turning movement and 24-hour segment volumes at the study area intersection and segments.

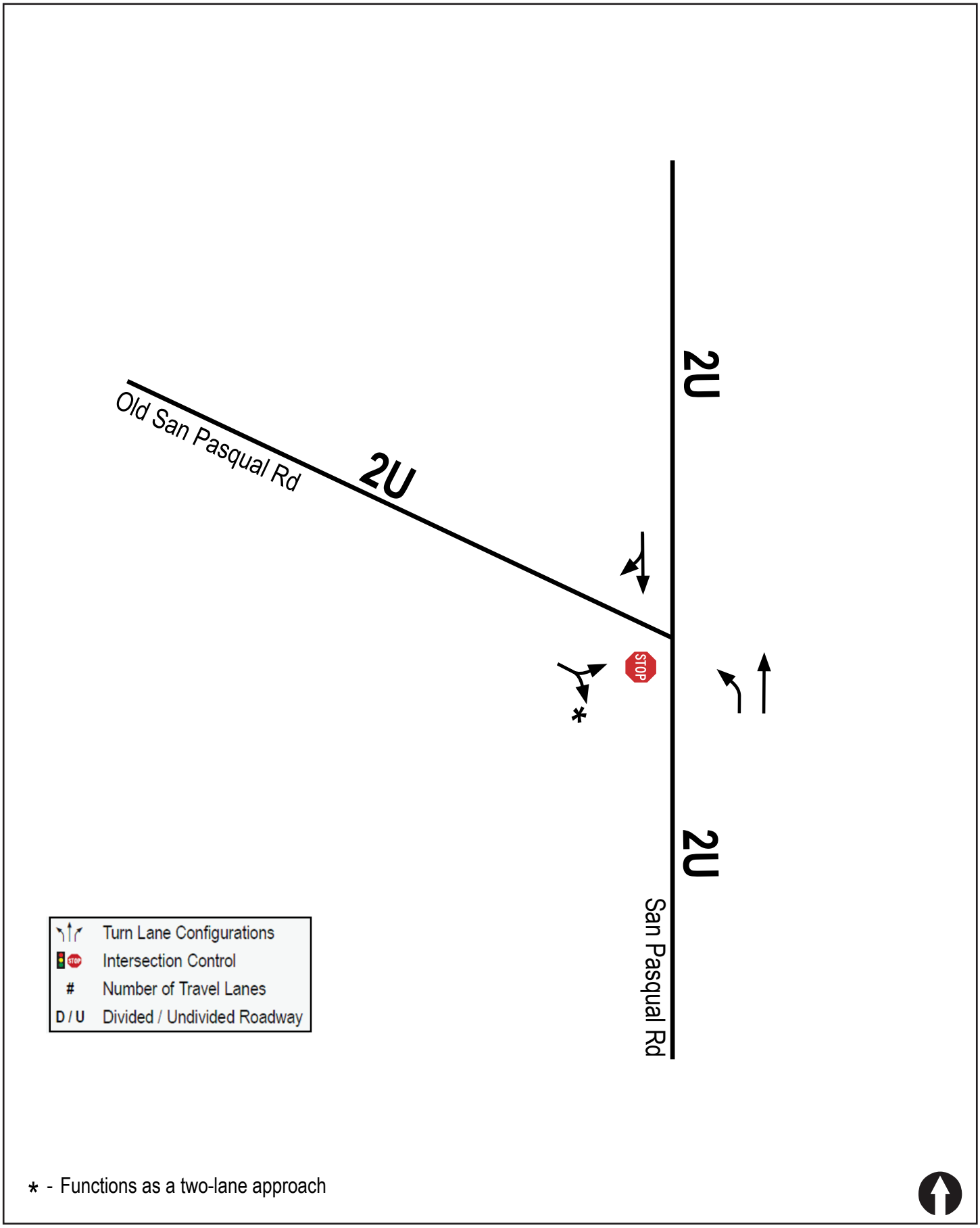

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Figure 3-1

Existing Conditions Diagram

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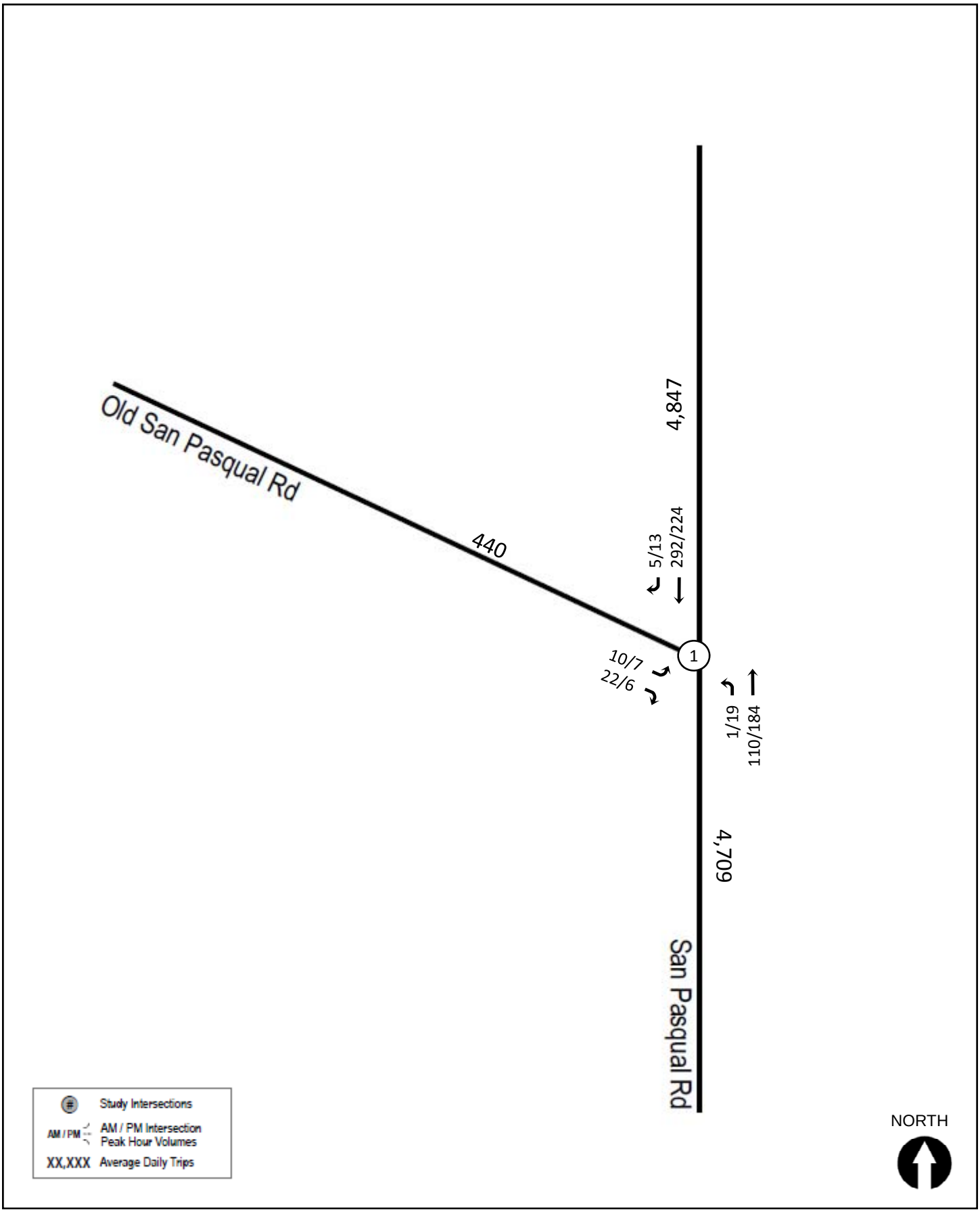

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Figure 3-2

Existing Traffic Volumes

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4.0 ANALYSIS APPROACH AND METHODOLOGY

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

4.1 Intersections

The ***Unsignalized Intersection*** was analyzed under AM and PM peak hour conditions. Average vehicle delay and Levels of Service (LOS) was determined based upon the procedures found in Chapter 19 and Chapter 20 of the *2010 Highway Capacity Manual (HCM),* with the assistance of the *Synchro 8* computer software. Unsignalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in ***Appendix B.***

4.2 Street Segments

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the County of San Diego's *Roadway Classification, Level of Service, and ADT Table*. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The County of San Diego's *Roadway Classification, Level of Service, and ADT Table* is attached in ***Appendix C.***

5.0 SIGNIFICANCE CRITERIA

The following criterion was utilized to evaluate potential significant impacts, based on the *County of San Diego Guidelines for Determining Significance—Transportation and Traffic*, dated June 30, 2009 with a second modification effective August 24, 2011. The County of San Diego's General Plan Mobility Element discusses the County's Level of Service criteria under Goal M-2. It requires that development projects provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County. The County maintains a list of such roads.

5.1 Road Segments

This section provides guidance for evaluating adverse environmental effects a project may have on street segments. The allowable ADT increases on LOS E/F operation roadways was obtained from County guidelines and are summarized in ***Table 5–1***. The thresholds in *Table 5–1* are based upon average operating conditions on County roadways. Exceeding the thresholds in Table 5-1 would result in a significant impact. It should be noted that these thresholds only establish general guidelines, and that the specific project location must be taken into account in conducting an analysis of traffic impact from new development.

TABLE 5–1
MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON
CIRCULATION ELEMENT ROAD SEGMENTS
ALLOWABLE INCREASES ON CONGESTED ROAD SEGMENTS

Level of Service	Two-Lane Road	Four-Lane Road	Six-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

General Notes:

1. By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts.
2. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

5.2 Intersections

This section provides guidance for evaluating adverse environmental effects a project may have on signalized and unsignalized intersections. ***Table 5–2*** was obtained from County guidelines and summarizes the allowable increases in delay or traffic volumes at signalized and unsignalized intersections. Exceeding the thresholds in Table 5-2 would result in a significant impact.

TABLE 5–2
MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON INTERSECTIONS
ALLOWABLE INCREASES ON CONGESTED INTERSECTIONS

Level of service	Signalized	Unsignalized
LOS E	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement
LOS F	Either a Delay of 1 second, or 5 peak hour trips or less on a critical movement	5 or less peak hour trips on a critical movement

General Notes:

1. A critical movement is an intersection movement (right-turn, left-turn, through-movement) that experiences excessive queues, which typically operate at LOS F.
2. By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project is responsible for mitigating its share of the cumulative impact.
3. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.
4. For determining significance at signalized intersections with LOS F conditions, the analysis must evaluate both the delay ***and*** the number of trips on a critical movement, exceedance of either criteria result in a significant impact.

Unsignalized Intersections – The operating parameters and conditions for unsignalized intersections differ dramatically from those of signalized intersections. Very small volume increases on one leg or turn and/or through movement of an unsignalized intersection can substantially affect the calculated delay for the entire intersection. Significance criteria for unsignalized intersections are based upon a minimum number of trips added to a critical movement at an unsignalized intersection.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic impact on an unsignalized intersection as listed in *Table 5–2* and described as text below:

- The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D, or
- The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E, or
- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F, or
- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F, or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection.

6.0 ANALYSIS OF EXISTING CONDITIONS

6.1 Peak Hour Intersection Levels of Service

Table 6–1 summarizes the existing intersections level of service. As seen in *Table 6–1*, the San Pasqual Road / Old San Pasqual Road intersection is calculated to currently operate at LOS B. It should be noted that the eastbound right turn movement was analyzed as a dedicated right turn lane due to the fact that the eastbound lane is approximately 30 feet wide. This configuration is also assumed for the capacity analysis.

Appendix D contains the existing intersection analysis worksheets.

6.2 Daily Street Segment Levels of Service

Table 6–2 summarizes the existing roadway segment operations. As seen in *Table 6–2*, the study area segments are calculated to currently operate at LOS C.

TABLE 6–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay[a]	LOS[b]
1. San Pasqual Road / Old San Pasqual Road	OWSC[c]	AM PM	10.6 10.8	B B

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. OWSC – One-Way Stop Controlled intersection. Minor street delay is reported.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 6–2
EXISTING STREET SEGMENT OPERATIONS

Street Segment	Functional Classification	Capacity (LOS E) [a]	ADT [b]	LOS [c]	V/C [d]
San Pasqual Road					
San Pasqual Valley Road (SR 78) to Old San Pasqual Road	2-Lane Community Collector (2.1E)	16,200	4,847	C	0.299
South of San Pasqual Road	2-Lane Community Collector (2.1E)	16,200	4,709	C	0.291
Old San Pasqual Road					
West of San Pasqual Road	2-Lane Rural Residential Collector	4,500	440	Under-Capacity[e]	0.098

Footnotes:

a. Capacities based on County of San Diego Roadway Classification Table.

b. Average Daily Traffic Volumes.

c. Level of Service.

d. Volume to Capacity.

e. For non-mobility element road segments, roadway design capacity (maximum amount of traffic obtainable on a given roadway) is used for analysis.

"Over Capacity" means that the traffic volume is greater than the design capacity for this road segment.

"Under Capacity" means that the traffic volume is less than the design capacity for the segment.

7.0 PROJECT TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT

7.1 Project Trip Generation

Table 7–1 tabulates the total project traffic generation. The total project is calculated to generate approximately 198 weekday ADT with 6 inbound / 5 outbound trips during the AM peak hour and 10 inbound / 7 outbound trips during the PM peak hour.

TABLE 7–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate[a]	Volume	% of ADT	In:Out Split	Volume In	Volume Out	% of ADT	In:Out Split	Volume In	Volume Out
Church	17.5 KSF	9 / KSF	158	5%	6:4	5	3	8%	5:5	7	6
Residential	5.0 DU	8 / KSF	40	8%	2:8	1	2	10%	7:3	3	1
Total		—	**198**	—	—	**6**	**5**	—	—	**10**	**7**

Footnotes:
a. Rate is based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002

Based on SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region,* the traffic generation rate for the Church on the weekend is higher than the weekday rate. The total project is then calculated to generate approximately 670 Weekend ADT with 20 inbound / 15 outbound during the AM peak hour and 28 inbound / 26 outbound trips during the PM peak hour. Although the project generates more trips on the weekend, the general traffic volumes are less and based on the preliminary assessment no impacts are anticipated.

7.2 Project Trip Distribution and Assignment

The project traffic was distributed and assigned to the street system based on the project's proximity to state highways and arterials. ***Figure 7–1*** depicts the *Project Traffic Distribution*, ***Figure 7–2*** depicts the *Project Traffic Assignment*, and ***Figure 7–3*** depicts the *Existing + Project Traffic Volumes*.

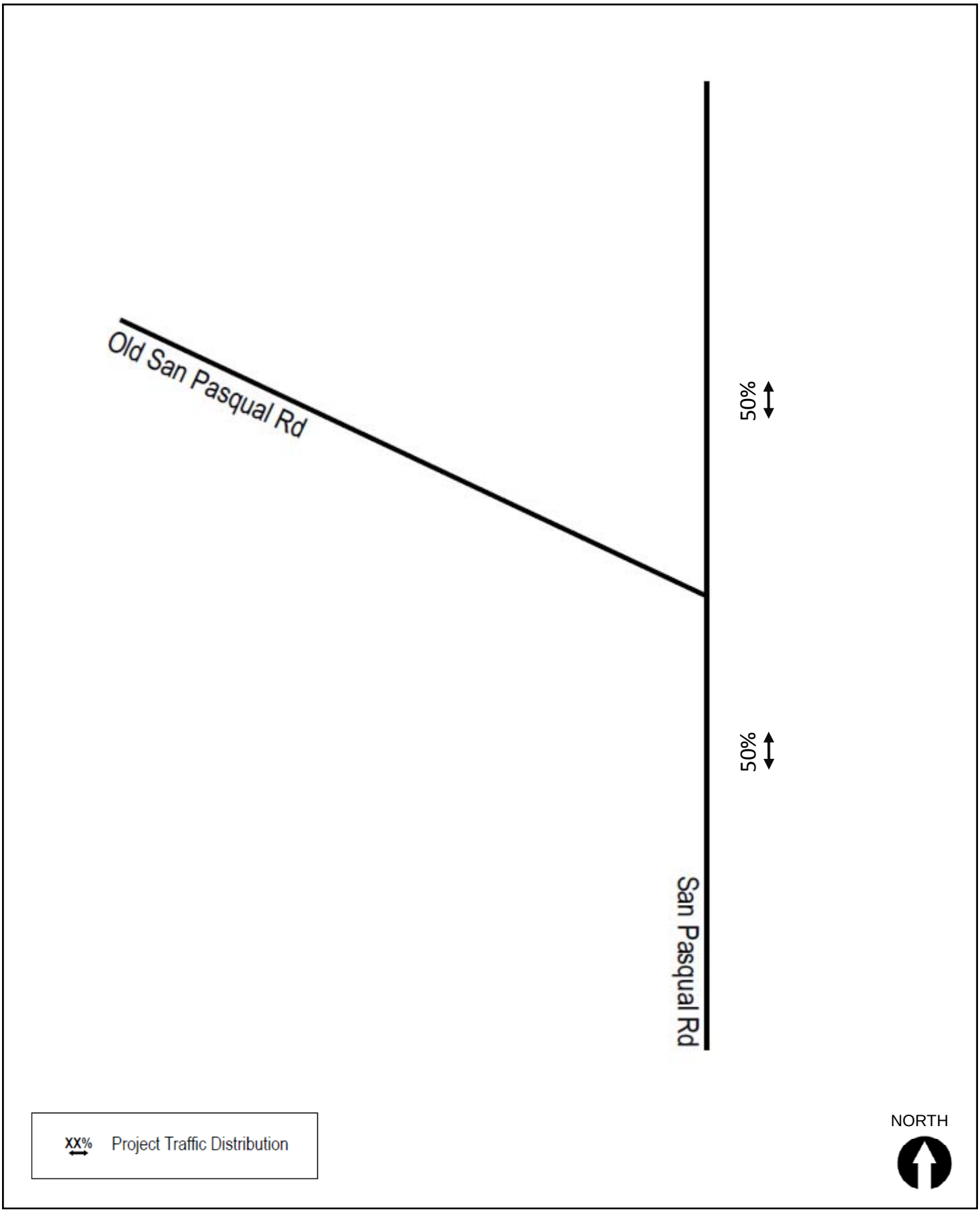

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Figure 7-1

Existing Traffic Volumes

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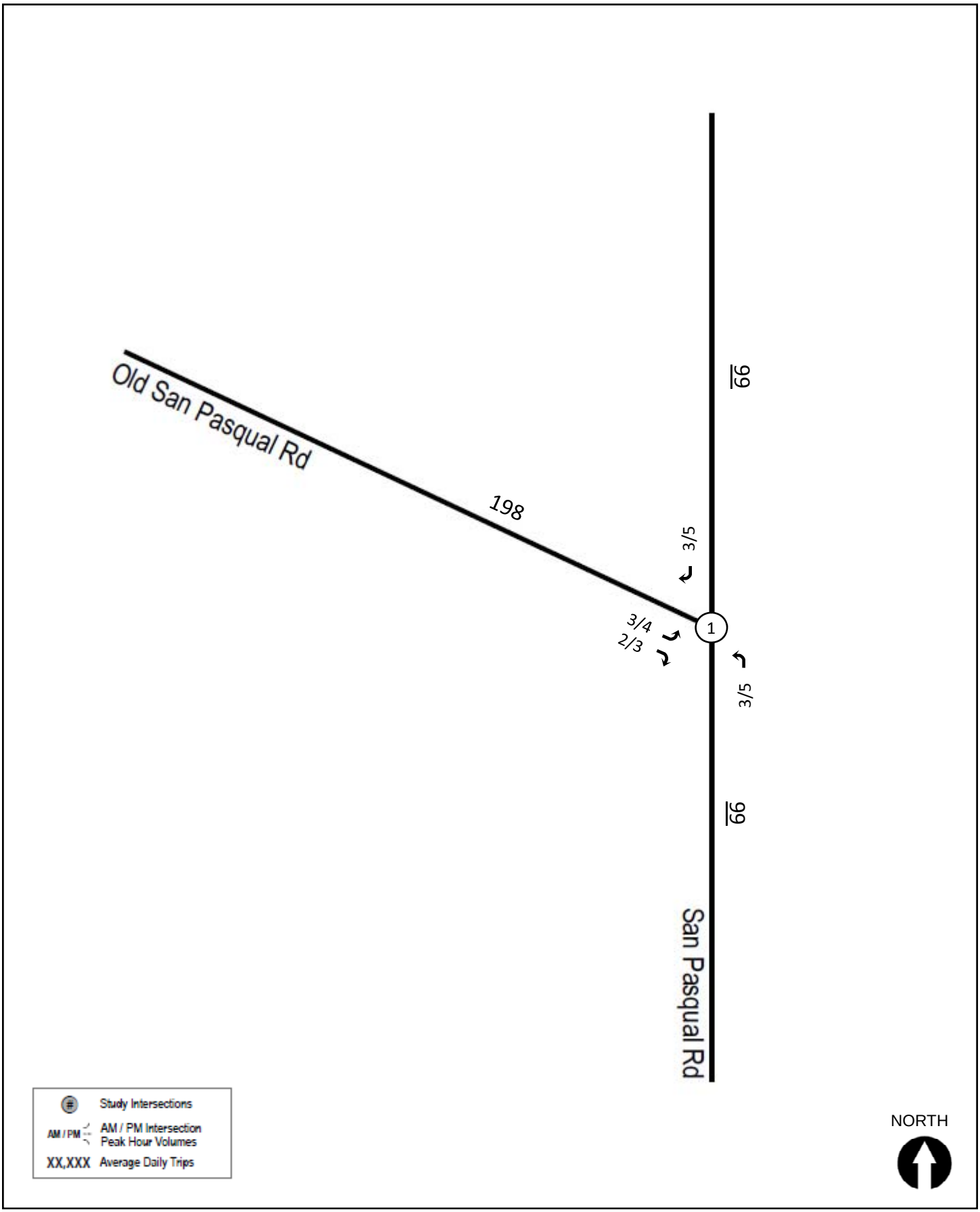

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Figure 7-2

Project Traffic Volumes

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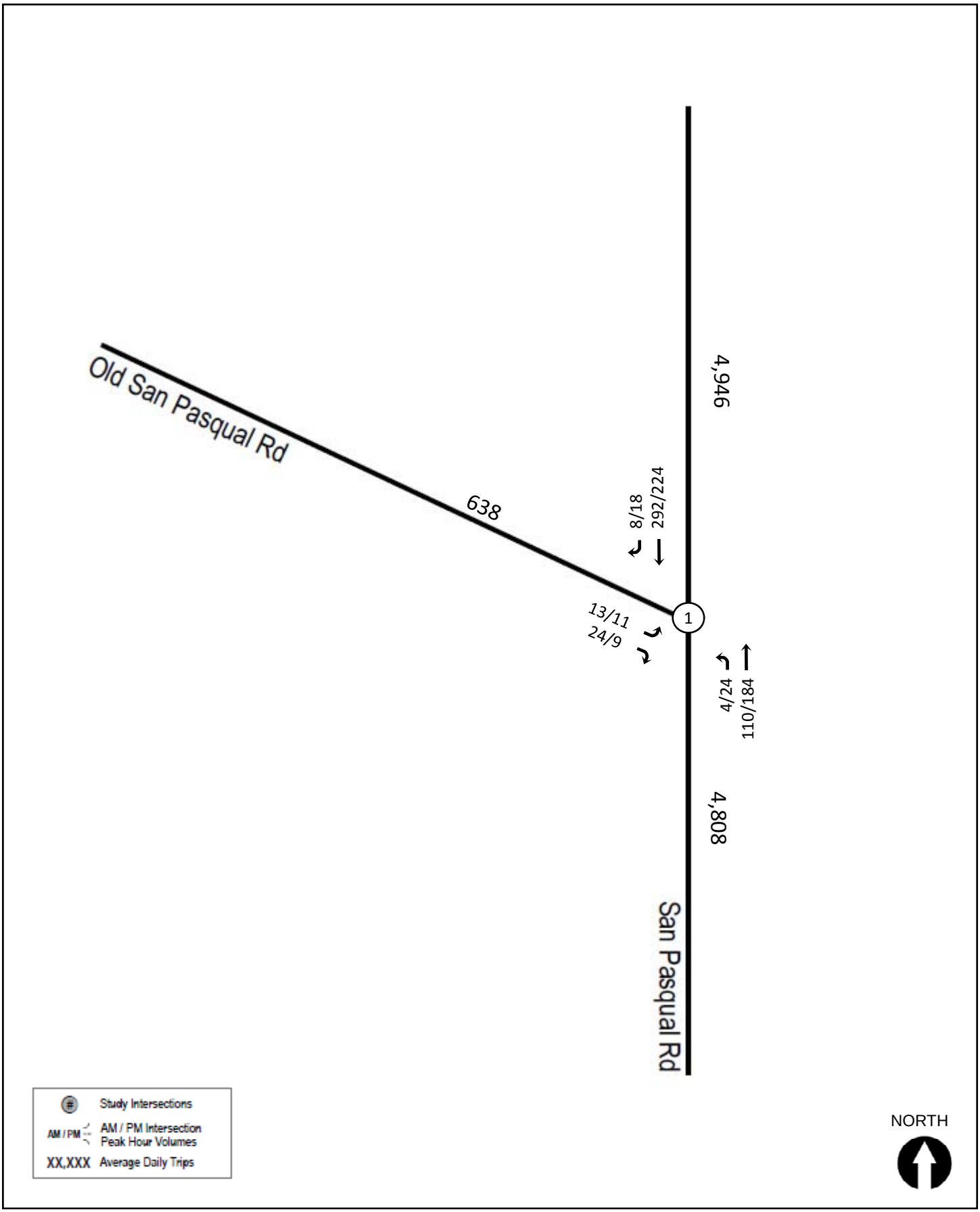

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Figure 7-3

Existing + Project Traffic Volumes

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8.0 CAPACITY ANALYSIS

8.1 Existing + Project Analysis

8.1.1 *Peak Hour Intersection Levels of Service*

Table 8–1 summarizes the *Existing + Project* intersections level of service. As seen in *Table 8–1*, with the addition of project traffic, the subject intersection is calculated to operate at LOS B.

Appendix D contains the *Existing + Project* intersection analysis worksheets.

8.1.2 *Segment Operations*

Table 8–2 summarizes the *Existing + Project* roadway segment level of service. As seen in *Table 8–2*, with the addition of project traffic, all the segments are calculated to continue to operate at LOS C.

8.2 Cumulative Analysis

There are other planned projects within the vicinity, which could potentially add traffic to the roadways and intersections in the study area. Based on a review of other traffic studies in the area, cumulative project traffic was estimated. In order to account for other unforeseen cumulative projects, traffic forecasts from SANDAG models were also utilized to estimate Year 2020 traffic volumes. The source for the *Existing + Cumulative* traffic volumes is the Series 12 Forecast Model from SANDAG for the Year 2020.

Figure 3–1 illustrates the transportation conditions including the lane geometry utilized for the cumulative analysis. ***Figure 8–1*** and ***Figure 8–2*** depicts the *Existing + Cumulative* and the *Existing + Cumulative + Project* traffic volumes, respectively.

8.2.1 *Peak Hour Intersection Levels of Service*

Table 8–1 summarizes the *Existing + Cumulative* intersections level of service. As seen in *Table 8–1*, the subject intersection is calculated to operate at LOS B.

Appendix D contains the *Existing + Cumulative* intersection analysis worksheets.

8.2.2 *Segment Operations*

Existing + Cumulative traffic segment volumes were obtained by applying a growth factor to the existing traffic volumes. ***Table 8–2*** summarizes the segment level of service. As seen in *Table 8–1* the subject segments are calculated to operate at LOS C or under-capacity.

8.3 Existing + Cumulative + Project Analysis

8.3.1 *Peak Hour Intersection Levels of Service*

Table 8–3 summarizes the *Existing + Cumulative + Project* intersections level of service. As seen in *Table 8–3,* with the addition of project traffic, the subject intersection is calculated to operate at LOS B.

Appendix D contains the *Existing +Cumulative + Project* intersection analysis worksheets.

8.3.2 *Segment Operations*

*Table 8–4*summarizes the *Existing + Cumulative + Project* roadway segment level of service. As seen in *Table 8–4*, with the addition of project traffic, all the segments are calculated to operate at LOS C or under capacity.

TABLE 8–1
EXISTING+PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project			Significant?
			Delay[a]	LOS[b]	Delay	LOS	Δ[d]	
1. San Pasqual Road / Old San Pasqual Road	OWSC[C]	AM	10.6	B	10.7	B	0.1	**No**
		PM	10.8	B	11.0	B	0.2	**No**

Footnotes:

a. Average delay expressed in seconds per vehicle.

b. Level of Service.

c. OWSC: One-Way Stop Controlled. Minor street delay is reported.

d. "Δ" denotes the project-induced increase in delay.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 8–2
EXISTING+PROJECT SEGMENT OPERATIONS

Street Segment	Functional Classification	Capacity (LOS E) [a]	Existing		Existing + Project			Sig?
			ADT[b]	LOS[c]	ADT	LOS	Δ[d]	
San Pasqual Road								
San Pasqual Valley Road (SR 78) to Old San Pasqual Road	2-Lane Community Collector (2.1E)	16,200	4,847	C	4,946	C	99	No
South of Old San Pasqual Road	2-Lane Community Collector (2.1E)	16,200	4,709	C	4,808	C	99	No
Old Pasqual Road								
West of San Pasqual Road	2-Lane Rural Residential Collector	4,500	440	Under-Capacity[e]	638	Under-Capacity[e]	198	No

Footnotes:

a. Capacities based on County of San Diego Roadway Classification Table.

b. ADT - Average Daily Traffic Volumes.

c. LOS - Level of Service.

d. "Δ" denotes the project-induced increase in ADT for segments.

e. For non-mobility element road segments, roadway design capacity (maximum amount of traffic obtainable on a given roadway) is used for analysis.
"Over Capacity" means that the traffic volume is greater than the design capacity for this road segment.
"Under Capacity" means that the traffic volume is less than the design capacity for the segment.

TABLE 8–3
CUMULATIVE PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Ex+Cumulative		Ex+Cumulative+P			Significant?
			Delay[a]	LOS[b]	Delay	LOS	Δ[d]	
1. San Pasqual Road / Old San Pasqual Road	OWSC[C]	AM	11.1	B	11.2	B	0.1	**No**
		PM	11.1	B	11.3	B	0.2	**No**

Footnotes:

a. Average delay expressed in seconds per vehicle.

b. Level of Service.

c. OWSC: One-Way Stop Controlled. Minor street delay is reported.

d. "Δ" denotes the project-induced increase in delay.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 8–4
CUMULATIVE PROJECT SEGMENT OPERATIONS

Street Segment	Functional Classification	Capacity (LOS E) [a]	Ex+Cumulative		Ex+Cumulative+P			Sig?
			ADT[b]	LOS[c]	ADT	LOS	Δ[d]	
San Pasqual Road								
San Pasqual Valley Road (SR 78) to Old San Pasqual Road	2-Lane Community Collector (2.1E)	16,200	4,970	C	5,069	C	99	No
South of Old San Pasqual Road	2-Lane Community Collector (2.1E)	16,200	4,830	C	4,929	C	99	No
Old Pasqual Road								
West of San Pasqual Road	2-Lane Rural Residential Collector	4,500	450	Under-Capacity[e]	648	Under-Capacity[e]	198	No

Footnotes:

a. Capacities based on County of San Diego Roadway Classification Table.

b. ADT - Average Daily Traffic Volumes.

c. LOS - Level of Service.

d. "Δ" denotes the project-induced increase in ADT for segments.

e. For non-mobility element road segments, roadway design capacity (maximum amount of traffic obtainable on a given roadway) is used for analysis. "Over Capacity" means that the traffic volume is greater than the design capacity for this road segment. "Under Capacity" means that the traffic volume is less than the design capacity for the segment.

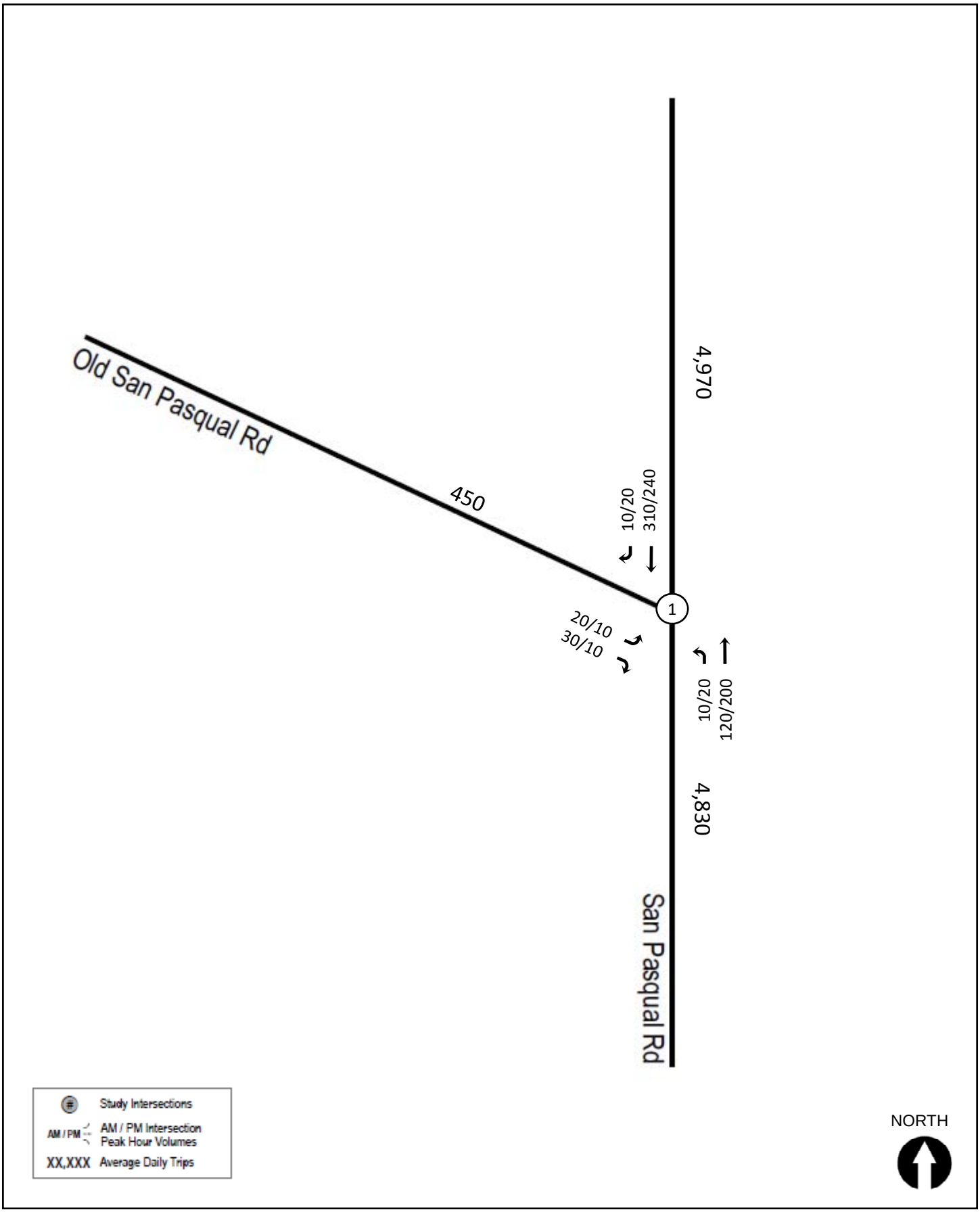

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Figure 8-1

Existing + Cumulatvie Traffic Volumes

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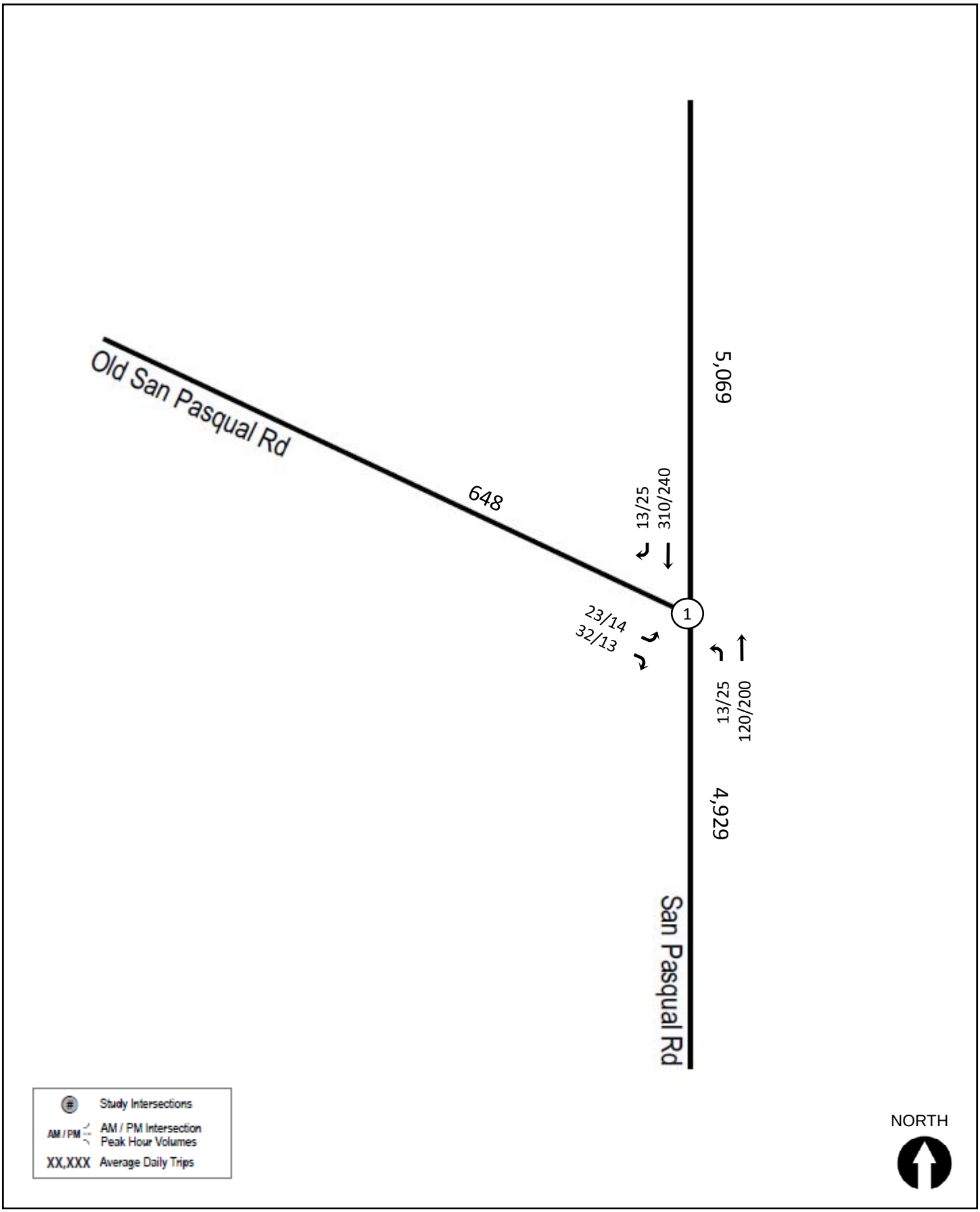

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Figure 8-2

Existing+Cumulative+Project Traffic Volumes

SVBF Temple

9.0 SUMMARY OF SIGNIFICANT IMPACTS & MITIGATION MEASURES

Per the County's significance thresholds and the analysis methodology presented in this report, no significant capacity impacts were calculated due to the addition of the project traffic at the study area intersection and segments. However, the project may result in local and regional cumulative traffic impacts and will be mitigated via a traffic impact fee (TIF) payment.

10.0 REFERENCES AND LIST OF PREPARERS AND ORGANIZATIONS CONTACTED

10.1 References

The following references were utilized in preparing this Traffic Impact Study.

- Highway Capacity Manual (HCM)
- SANDAG (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.
- SANDAG Series 12 Forecast Model
- County of San Diego Guidelines for Determining Significance—Transportation and Traffic, dated June 30, 2009 (modified August 24, 2011).
- County of San Diego Traffic Report Format & Content Requirements, dated June 30, 2009 (modified August 24, 2011).
- County of San Diego Circulation Element

10.2 List of Preparers

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- Mario Flores, E.I.T., Engineering Aide—Linscott, Law & Greenspan, Engineers

10.3 Organizations Contacted

- County of San Diego, Department of Public Works Transportation Division
- Sitaram Inguva, SBVF Foundation

LINSCOTT LAW & GREENSPAN engineers

TECHNICAL APPENDICES
SVBF TEMPLE
County of San Diego, California

LLG Ref. 3-14-2411

Linscott, Law & Greenspan, Engineers
4542 Ruffner Street
Suite 100
San Diego, CA 92111
858.300.8800 T
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APPENDIX A

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

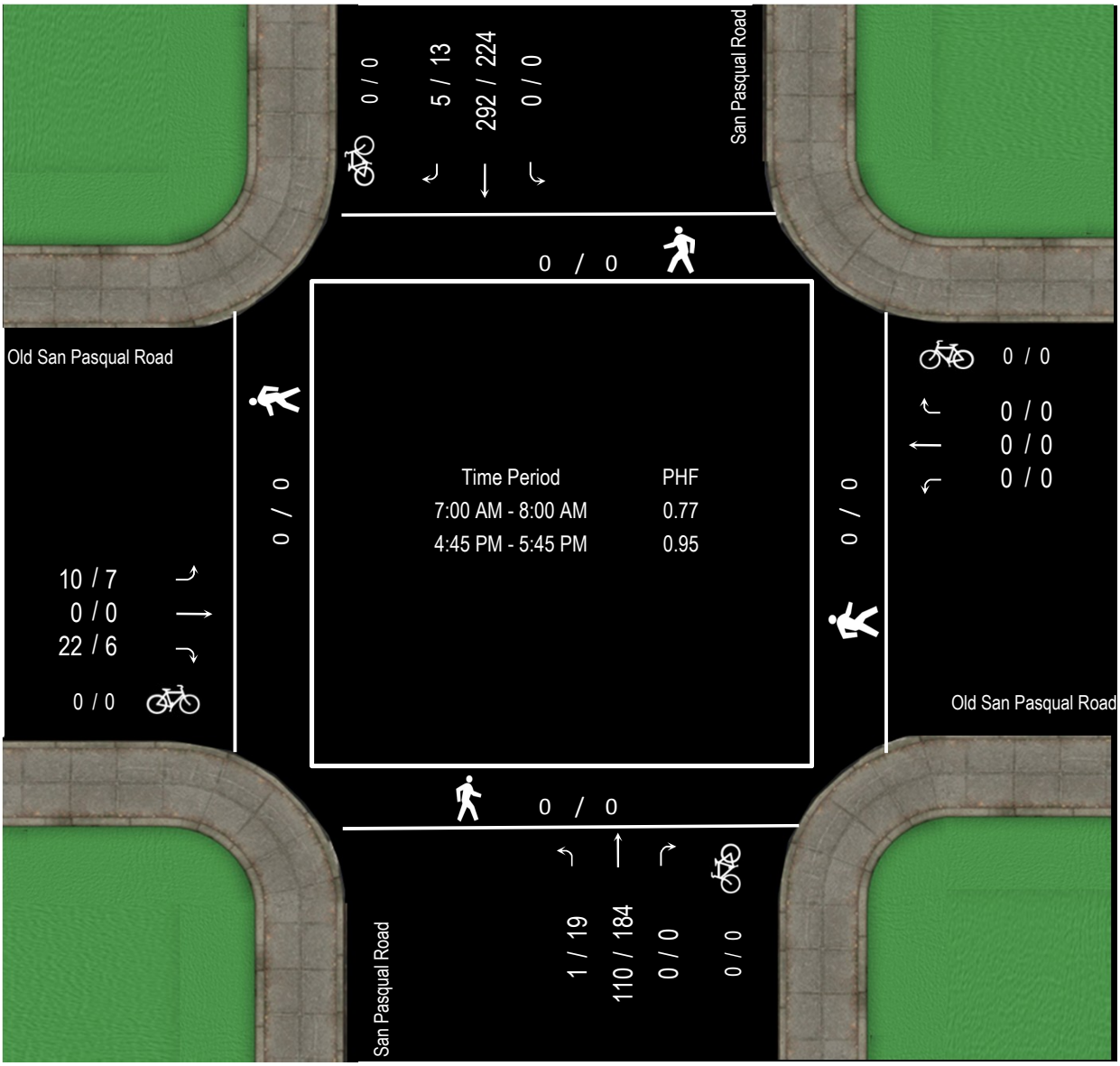
Location: Old San Pasqual Road @ San Pasqual Road

Date of Count: *Wednesday, January 07, 2015*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *15-0286*



LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Old San Pasqual Road @ San Pasqual Road

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
7:00 AM	1	93	0	0	0	0	0	19	0	10	0	1	124
7:15 AM	3	102	0	0	0	0	0	26	0	8	0	3	142
7:30 AM	1	50	0	0	0	0	0	33	0	3	0	3	90
7:45 AM	0	47	0	0	0	0	0	32	1	1	0	3	84
8:00 AM	4	50	0	0	0	0	0	28	2	6	0	8	98
8:15 AM	4	44	0	0	0	0	0	39	2	6	0	10	105
8:30 AM	1	51	0	0	0	0	0	35	1	4	0	2	94
8:45 AM	4	22	0	0	0	0	0	48	1	2	0	4	81
Total	18	459	0	0	0	0	0	260	7	40	0	34	818

AM Intersection Peak Hour : **7:00 AM - 8:00 AM** Intersection PHF : **0.77**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	5	292	0	0	0	0	0	110	1	22	0	10	440
PHF	0.42	0.72	#####	#####	#####	#####	#####	0.83	0.25	0.55	#####	0.83	0.77
Movement PHF		0.71			#DIV/0!			0.84			0.73		0.77

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
4:00 PM	0	60	0	0	0	0	0	33	2	3	0	1	99
4:15 PM	1	53	0	0	0	0	0	43	1	2	0	5	105
4:30 PM	0	61	0	0	0	0	0	36	0	1	0	0	98
4:45 PM	6	59	0	0	0	0	0	42	4	2	0	2	115
5:00 PM	1	61	0	0	0	0	0	46	4	2	0	1	115
5:15 PM	3	62	0	0	0	0	0	45	7	1	0	1	119
5:30 PM	3	42	0	0	0	0	0	51	4	1	0	3	104
5:45 PM	2	26	0	0	0	0	0	47	3	1	0	1	80
Total	16	424	0	0	0	0	0	343	25	13	0	14	835

PM Intersection Peak Hour : **4:45 PM - 5:45 PM** Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	13	224	0	0	0	0	0	184	19	6	0	7	453
PHF	0.54	0.903	#####	#####	#####	#####	#####	0.902	0.679	0.75	#####	0.583	0.95
Movement PHF		0.91			#DIV/0!			0.92			0.81		0.95

LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: 4. San Pasqual Road btw San Pasqual Valley Road to Old San Pasqual Road

Orientation: *North-South*

Date of Count: *Tuesday, May 06, 2014*

Analysts: *DASH*

Weather: *Sunny*

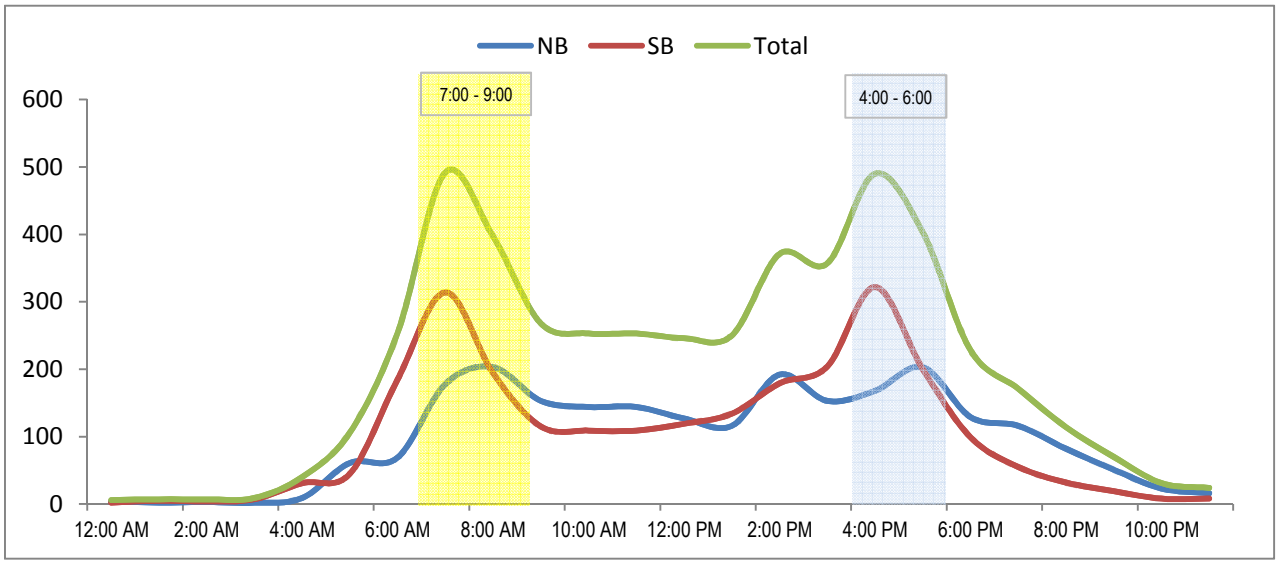
AVC Proj. No: *14-0198*

24 Hour Segment Volume			4,847

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	4	2	6
1:00 AM - 2:00 AM	2	5	7
2:00 AM - 3:00 AM	3	4	7
3:00 AM - 4:00 AM	2	7	9
4:00 AM - 5:00 AM	9	31	40
5:00 AM - 6:00 AM	61	45	106
6:00 AM - 7:00 AM	69	185	254
7:00 AM - 8:00 AM	178	314	492
8:00 AM - 9:00 AM	203	194	397
9:00 AM - 10:00 AM	153	115	268
10:00 AM - 11:00 AM	144	109	253
11:00 AM - 12:00 PM	144	109	253
Total	**972**	**1,120**	**2,092**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	127	119	246
1:00 PM - 2:00 PM	116	134	250
2:00 PM - 3:00 PM	192	179	371
3:00 PM - 4:00 PM	153	204	357
4:00 PM - 5:00 PM	168	322	490
5:00 PM - 6:00 PM	203	200	403
6:00 PM - 7:00 PM	129	99	228
7:00 PM - 8:00 PM	116	55	171
8:00 PM - 9:00 PM	82	32	114
9:00 PM - 10:00 PM	51	19	70
10:00 PM - 11:00 PM	23	8	31
11:00 PM - 12:00 AM	16	8	24
Total	**1,376**	**1,379**	**2,755**

24-Hour NB Volume	2,348	24-Hour SB Volume	2,499



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: 2. San Pasqual Road, south of Old San Pasqual Road

Orientation: *North-South*

Date of Count: *Wednesday, January 07, 2015*

Analysts: *DASH*

Weather: *Sunny*

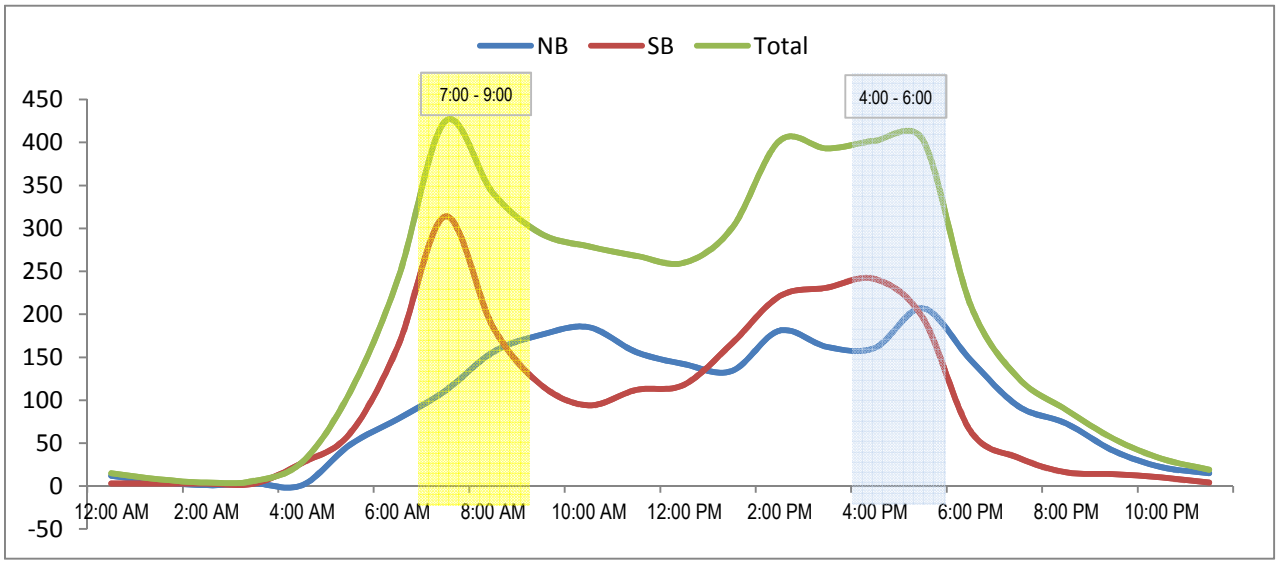
AVC Proj. No: *15-0286*

24 Hour Segment Volume			*4,709*

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	12	3	15
1:00 AM - 2:00 AM	5	3	8
2:00 AM - 3:00 AM	1	3	4
3:00 AM - 4:00 AM	3	3	6
4:00 AM - 5:00 AM	1	27	28
5:00 AM - 6:00 AM	48	61	109
6:00 AM - 7:00 AM	78	162	240
7:00 AM - 8:00 AM	111	314	425
8:00 AM - 9:00 AM	156	185	341
9:00 AM - 10:00 AM	176	118	294
10:00 AM - 11:00 AM	185	94	279
11:00 AM - 12:00 PM	156	112	268
Total	**932**	**1,085**	**2,017**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	142	118	260
1:00 PM - 2:00 PM	134	166	300
2:00 PM - 3:00 PM	181	221	402
3:00 PM - 4:00 PM	162	231	393
4:00 PM - 5:00 PM	161	241	402
5:00 PM - 6:00 PM	207	196	403
6:00 PM - 7:00 PM	147	64	211
7:00 PM - 8:00 PM	93	33	126
8:00 PM - 9:00 PM	73	16	89
9:00 PM - 10:00 PM	41	14	55
10:00 PM - 11:00 PM	22	10	32
11:00 PM - 12:00 AM	15	4	19
Total	**1,378**	**1,314**	**2,692**

24-Hour	*NB*	*Volume*	*2,310*	*24-Hour*	*SB*	*Volume*	*2,399*



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: 1. Old San Pasqual Road, west of San Pasqual Road

Orientation: *East-West*

Date of Count: *Wednesday, January 07, 2015*

Analysts: *DASH*

Weather: *Sunny*

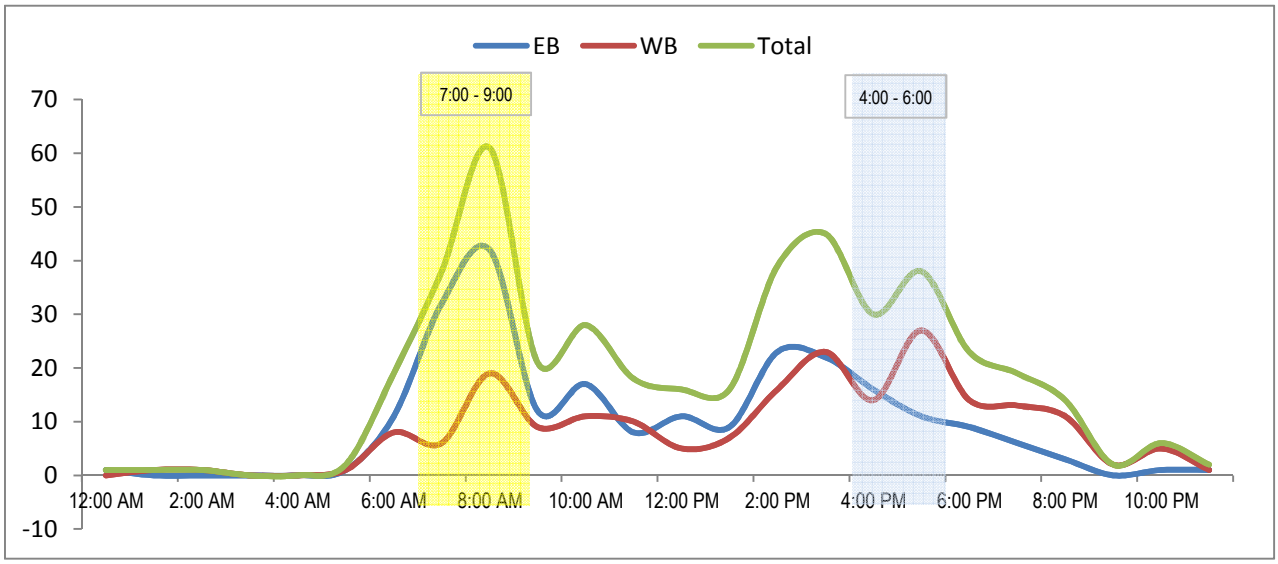
AVC Proj. No: *15-0286*

24 Hour Segment Volume			440

Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	1	0	1
1:00 AM - 2:00 AM	0	1	1
2:00 AM - 3:00 AM	0	1	1
3:00 AM - 4:00 AM	0	0	0
4:00 AM - 5:00 AM	0	0	0
5:00 AM - 6:00 AM	1	1	2
6:00 AM - 7:00 AM	11	8	19
7:00 AM - 8:00 AM	32	6	38
8:00 AM - 9:00 AM	42	19	61
9:00 AM - 10:00 AM	12	9	21
10:00 AM - 11:00 AM	17	11	28
11:00 AM - 12:00 PM	8	10	18
Total	**124**	**66**	**190**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	11	5	16
1:00 PM - 2:00 PM	9	7	16
2:00 PM - 3:00 PM	23	16	39
3:00 PM - 4:00 PM	22	23	45
4:00 PM - 5:00 PM	16	14	30
5:00 PM - 6:00 PM	11	27	38
6:00 PM - 7:00 PM	9	14	23
7:00 PM - 8:00 PM	6	13	19
8:00 PM - 9:00 PM	3	11	14
9:00 PM - 10:00 PM	0	2	2
10:00 PM - 11:00 PM	1	5	6
11:00 PM - 12:00 AM	1	1	2
Total	**112**	**138**	**250**

24-Hour EB Volume	236	24-Hour WB Volume	204



APPENDIX B

2010 HIGHWAY CAPACITY MANUAL LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

In the 2010 Highway Capacity Manual (HCM), Level of Service for unsignalized intersections is determined by the computed or measured control delay and is defined for each minor movement. Level of Service is not defined for the intersection as a whole. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The criteria are given in the following the table, and are based on the average control delay for any particular minor movement.

LEVEL OF SERVICE	AVERAGE CONTROL DELAY SEC/VEH			EXPECTED DELAY TO MINOR STREET TRAFFIC
A	0.0	≤	10.0	Little or no delay
B	10.1	to	15.0	Short traffic delays
C	15.1	to	25.0	Average traffic delays
D	25.1	to	35.0	Long traffic delays
E	35.1	to	50.0	Very long traffic delays
F		>	50.0	Severe congestion

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This Level of Service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form on side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

In most cases at Two-Way Stop Controlled (TWSC) intersections, the critical movement is the minor-street left-turn movement. As such, the minor-street left-turn movement can generally be considered the primary factor affecting overall intersection performance. The lower threshold for LOS F is set at 50 seconds of delay per vehicle. There are many instances, particularly in urban areas, in which the delay equations will predict delays of 50 seconds (LOS F) or more for minor-street movements under very low volume conditions on the minor street (less than 25 vehicle/hour). Since the first term of the equation is a function only of the capacity, the LOS F threshold of 50 sec/vehicle is reached with a movement capacity of approximately 85 vehicle/hour or less.

This procedure assumes random arrivals on the major street. For a typical four-lane arterial with average daily traffic volumes in the range of 15,000 to 20,000 vehicles per day (peak hour, 1,500 to 2,000 vehicle/hour), the delay equation used in the TWSC capacity analysis procedure will predict 50 seconds of delay or more (LOS F) for many urban TWSC intersections that allow minor-street left-turn movements. **The LOS F threshold will be reached regardless of the volume of minor-street left-turn traffic.** Not-withstanding this fact, most low-volume minor-street approaches would not meet any of the volume or delay warrants for signalization of the *Manual on Uniform Traffic Control Devices* (MUTCD) since the warrants define an asymptote at 100 vehicle/hour on the minor approach. As a result, many public agencies that use the HCM Level of Service thresholds to determine the design adequacy of TWSC intersections may be forced to eliminate the minor-street left-turn movement, even when the movement may not present any operational problem, such as the formation of long queues on the minor street or driveway approach.

APPENDIX C

TABLE 2A: COUNTY OF SAN DIEGO - PUBLIC ROAD STANDARDS

MOBILITY ELEMENT ROAD CLASSIFICATIONS

ROAD CLASSIFICATION	# LANES / LANE WIDTH	MEDIAN WIDTH	ROAD SURFACING WIDTH	R.O.W. WIDTH	PAVED SHOULDERS (# / WIDTH)	PARKWAY WIDTH	MIN. CURVE RADIUS	MAX. DESIRABLE GRADE	MIN. DESIGN SPEED (MPH)
Expressway (6.1)	6 / 12'	34'	126'	146'	2 / 10'	10'	1,700'	6%	65
Prime Arterial (6.2)	6 / 12'	14'	102'	122'	2 / 8'	10'	1,700'	6%	65
Major Road									
With Raised Median (4.1A)	4 / 12'	14'	78'	98'	2 / 8'	10'	1,200'	7%	55
With Intermittent Turn Lanes (4.1B)	4 / 12'	-	64' - 78'	84' - 98'	2 / 8'	10'	1,200'	7%	55
Boulevard									
With Raised Median (4.2A)	4 / 12'	14'	78'	106'	2 / 8'	14'	500'	9%	40
With Intermittent Turn Lanes (4.2B)	4 / 12'	-	64' - 78'	92' - 106'	2 / 8'	14'	500'	9%	40
Community Collector									
With Raised Median (2.1A)	2 / 12'	14'	54'	74'	2 / 8'	10'	700'	9%	45
With Continuous Left Turn Lane (2.1B)	2 / 12'	14'	54'	74'	2 / 8'	10'	700'	9%	45
With Intermittent Turn Lanes (2.1C)	2 / 12'	-	40' - 54'	60' - 74'	2 / 8'	10'	700'	9%	45
With Improvement Options (2.1D)	2 / 12'	-	40' - 54'	84'	2 / 8'	15' - 22'	700'	9%	45
No Median (2.1E)	2 / 12'	-	40'	60'	2 / 8'	10'	700'	9%	45
Light Collector									
With Raised Median (2.2A)	2 / 12'	14'	54'	78'	2 / 8'	12'	500'	9%	40
With Continuous Left Turn Lane (2.2B)	2 / 12'	14'	54'	78'	2 / 8'	12'	500'	9%	40
With Intermittent Turn Lanes (2.2C)	2 / 12'	-	40' - 54'	64' - 78'	2 / 8'	12'	500'	9%	40
With Improvement Options (2.2D)	2 / 12'	-	40' - 54'	88'	2 / 8'	17' - 24'	500'	9%	40
No Median (2.2E)	2 / 12'	-	40'	64'	2 / 8'	12'	500'	9%	40
With Reduced Shoulder (2.2F)	2 / 12'	-	28'	52'	2 / 2'	12'	500'	9%	40
Minor Collector									
With Raised Median (2.3A)	2 / 12'	14'	54'	82'	2 / 8'	14'	350'	12%	35
With Intermittent Turn Lanes (2.3B)	2 / 12'	-	40' - 54'	68' - 82'	2 / 8'	14'	350'	12%	35
No Median (2.3C)	2 / 12'	-	40'	68'	2 / 8'	14'	350'	12%	35

NOTES:

1 Minimum longitudinal gradient shall be 1.0 percent for all road classificationis shown above.

2 The maximum grade for a permanent cul-de-sac street turning area shall be 6 percent.

3 The maximum grade for a temporary cul-de-sac street turning area shall be that of the classification of the road being constructed.

4 For standards, see County Design Standard Drawing DS-2, DS-3, DS-4, and Section 4.5N of these Standards.

5 Additional pavement and ROW may be required for ME Boulevards / Community Collectors (4 feet) and Light Collectors (12 feet) in Industrial/Commercial Zones.

6 ME roads needing additional turn or passing lanes will require an additional 12 to 14 feet of pavement and ROW for each lane.

7 The maximum superelevation allowed on ME roads is 6%. Superelevation is not normally required on Non-ME roads.

8 ME roads designated with Bike Lanes will require an additional 10 feet of pavement and ROW. This may be increased to 12' for four-lane roads and above based upon the provisions in Section 7.3 of these standards.

9 The minimum curve radii, shown in the table above, are based on the design speed with 6% superelevation.

10 Interim roads are to be a minimum of 28 feet A.C. within a 40 feet graded roadbed. They may be larger if traffic volumes require more travel lanes.

11 Road surfacing widths include median width.

TABLE 2B: COUNTY OF SAN DIEGO - PUBLIC ROAD STANDARDS

NON-MOBILITY ELEMENT ROAD CLASSIFICATIONS

ROAD CLASSIFICATION	# LANES / LANE WIDTH	MEDIAN WIDTH	ROAD SURFACING WIDTH	R.O.W. WIDTH	PAVED SHOULDERS (# / WIDTH)	PARKWAY WIDTH	MINIMUM CURVE RADIUS	MAXIMUM DESIRABLE GRADE	MINIMUM DESIGN SPEED (MPH)
Residential Collector	2 / 12'	-	40'	60'	2 / 8'	10'	300'	12%	30
Rural Residential Collector *	2 / 12'	-	28'	48'	2 / 2'	10'	300'	12%	30
Residential Road	2 / 12'	-	36'	56'	2 / 6'	10'	200'	15%	30
Rural Residential Road *	2 / 12'	-	28'	48'	2 / 2'	10'	200'	15%	30
Residential Cul-de-sac	2 / 12'	-	32'	52'	2 / 4'	10'	200'	15%	30
Residential Loop	2 / 12'	-	32'	52'	2 / 4'	10'	200'	15%	30
Industrial/Commerical Collector	4 / 12'	-	68'	88'	2 / 10'	10'	300'	8%	30
Industrial/Commerical	2 / 16'	-	52'	72'	2 / 10'	10'	200'	8%	30
Industrial/Commercial Cul-de-sac	2 / 16'	-	52'	72'	2 / 10'	10'	200	8%	30
Frontage	2 / 12'	-	32' min	52' min	1 / 8'	10'	See above	See above	-
Alley	2 / 10'	-	20-30'	20-30'	None	None	50'	12%	n/a
Hillside Residential	See NOTE 4	-	-	-	-	-	-	-	-

NOTES:

1 Minimum longitudinal gradient shall be 1.0 percent for all road classificationis shown above.

2 The maximum grade for a permanent cul-de-sac street turning area shall be 6 percent.

3 The maximum grade for a temporary cul-de-sac street turning area shall be that of the classification of the road being constructed.

4 For standards, see County Design Standard Drawing DS-2, DS-3, DS-4, and Section 4.5N of these Standards.

5 The minimum curve radii, shown in the table above, are based on the design speed with 6% superelevation.

6 Interim roads are to be a minimum of 28 feet A.C. within a 40 feet graded roadbed. They may be larger if traffic volumes require more travel lanes.

LEGEND: * Serves lots > 2 acres in size w/ no demand for on-street parking

TABLE 1
AVERAGE DAILY VEHICLE TRIPS*

MOBILITY ELEMENT ROADS			LEVELS OF SERVICE				
Road Classification		# of Travel Lanes	A	B	C	D	E
Expressway (6.1)		6	<36,000	<54,000	<70,000	<86,000	<108,000
Prime Arterial (6.2)		6	<22,200	<37,000	<44,600	<50,000	<57,000
Major Road	w/ Raised Median (4.1A)	4	<14,800	<24,700	<29,600	<33,400	<37,000
	w/ Intermittent Turn Lanes (4.1B)	4	<13,700	<22,800	<27,400	<30,800	<34,200
Boulevard	w/ Raised Median (4.2A)	4	<18,000	<21,000	<24,000	<27,000	<30,000
	w/ Intermittent Turn Lanes (4.2B)	4	<16,800	<19,600	<22,500	<25,000	<28,000
Community Collector	w/ Raised Median (2.1A)	2	<10,000	<11,700	<13,400	<15,000	<19,000
	w/ Continuous Left Turn Lane (2.1B)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Intermittent Turn Lane (2.1C)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Passing Lane (2.1D)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	No Median (2.1E)	2	<1,900	<4,100	<7,100	<10,900	<16,200
Light Collector	w/ Raised Median (2.2A)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Continuous Left Turn Lane (2.2B)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Intermittent Turn Lane (2.2C)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Passing Lane (2.2D)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	No Median (2.2E)	2	<1,900	<4,100	<7,100	<10,900	<16,200
	w/ Reduced Shoulder (2.2F)	2	<5,800	<6,800	<7,800	<8,700	<9,700
Minor Collector	w/ Raised Median (2.3A)	2	<3,000	<6,000	<7,000	<8,000	<9,000
	w/ Intermittent Turn Lane (2.3B)	2	<3,000	<6,000	<7,000	<8,000	<9,000
	No Median (2.3C)	2	<1,900	<4,100	<6,000	<7,000	<8,000
NON-MOBILITY ELEMENT ROADS**			LEVELS OF SERVICE				
Residential Collector		2	-	-	<4,500	-	-
Rural Residential Collector***		2	-	-	<4,500	-	-
Residential Road		2	-	-	<1,500	-	-
Rural Residential Road***		2	-	-	<1,500	-	-
Residential Cul-de-Sac or Loop Road		2	-	-	<200	-	-

* The values shown are subject to adjustment based on the geometry of the roadway, side frictions, and other relevant factors as determined by the Director, Department of Public Works.

** 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.

*** Rural Residential Collectors and Rural Residential Roads are intended to serve areas with lot sizes of 2 acres or more which do not have a demand for on-street parking. On-street parking is not assured for these cross sections. Additional right-of-way is needed if on-street parking is in paved area.

**** See Tables 2A and 2B for roadway surfacing and right-of-way widths.

APPENDIX D

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	22	1	110	292	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	24	1	120	317	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	442	320	323	0	-	0
Stage 1	320	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	573	721	1237	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	573	721	1237	-	-	-
Mov Cap-2 Maneuver	573	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	902	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1237	-	573	721	-	-
HCM Lane V/C Ratio	0.001	-	0.019	0.033	-	-
HCM Control Delay (s)	7.9	-	11.4	10.2	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	6	19	184	224	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	7	21	200	243	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	492	251	258	0	-	0
Stage 1	251	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	536	788	1307	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	799	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	527	788	1307	-	-	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1307	-	527	788	-	-
HCM Lane V/C Ratio	0.016	-	0.014	0.008	-	-
HCM Control Delay (s)	7.8	-	11.9	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	13	24	4	110	292	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	26	4	120	317	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	450	322	326	0	-	0
Stage 1	322	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	567	719	1234	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	565	719	1234	-	-	-
Mov Cap-2 Maneuver	565	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1234	-	565	719	-	-
HCM Lane V/C Ratio	0.004	-	0.025	0.036	-	-
HCM Control Delay (s)	7.9	-	11.5	10.2	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	11	9	24	184	224	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	10	26	200	243	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	505	253	263	0	-	0
Stage 1	253	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	527	786	1301	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	516	786	1301	-	-	-
Mov Cap-2 Maneuver	516	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	774	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1301	-	516	786	-	-
HCM Lane V/C Ratio	0.02	-	0.023	0.012	-	-
HCM Control Delay (s)	7.8	-	12.1	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	20	30	10	120	310	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	33	11	130	337	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	494	342	348	0	-	0
Stage 1	342	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	535	701	1211	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	530	701	1211	-	-	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1211	-	530	701	-	-
HCM Lane V/C Ratio	0.009	-	0.041	0.047	-	-
HCM Control Delay (s)	8	-	12.1	10.4	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	10	10	20	200	240	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	22	217	261	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	533	272	283	0	-	0
Stage 1	272	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	507	767	1279	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	498	767	1279	-	-	-
Mov Cap-2 Maneuver	498	-	-	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1279	-	498	767	-	-
HCM Lane V/C Ratio	0.017	-	0.022	0.014	-	-
HCM Control Delay (s)	7.9	-	12.4	9.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	23	32	13	120	310	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	35	14	130	337	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	503	344	351	0	-	0
Stage 1	344	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	528	699	1208	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	522	699	1208	-	-	-
Mov Cap-2 Maneuver	522	-	-	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	860	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1208	-	522	699	-	-
HCM Lane V/C Ratio	0.012	-	0.048	0.05	-	-
HCM Control Delay (s)	8	-	12.2	10.4	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0.2	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	14	13	25	200	240	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	240	190	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	14	27	217	261	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	546	274	288	0	-	0
Stage 1	274	-	-	-	-	-
Stage 2	272	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	499	765	1274	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	488	765	1274	-	-	-
Mov Cap-2 Maneuver	488	-	-	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1274	-	488	765	-	-
HCM Lane V/C Ratio	0.021	-	0.031	0.018	-	-
HCM Control Delay (s)	7.9	-	12.6	9.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.1	-	-