

## **APPENDIX K**

# **LAKE WOHLFORD DAM REPLACEMENT PROJECT TRAFFIC IMPACT ANALYSIS (OAKVALE ROAD REALIGNMENT)**



TRAFFIC IMPACT ANALYSIS  
**OAKVALE ROAD REALIGNMENT**  
Escondido, California  
July 29, 2014

LLG Ref. 3-14-2324

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## EXECUTIVE SUMMARY

The Oakvale Road Realignment project (“Project”), proposes to realign and straighten an approximately 1,200 foot stretch of Oakvale Road near the Lake Wohlford Dam. The Project site is located on Oakvale Road, approximately 750 feet east of its intersection with Lake Wohlford Road in an unincorporated area of San Diego County, just east of the City of Escondido. The Project will result in the removal of 56,000 cubic yards (cy) of material via truck to quarry locations outside of the area. The project study area includes four (4) intersections and two (2) roadway street segments. The traffic analyses for the project were conducted in accordance with the *City of Escondido’s Traffic Impact Study Guidelines*. The following scenarios are evaluated in this report:

- Existing
- Existing + Project
- Existing + Cumulative Projects
- Existing + Project + Cumulative Projects

The Project traffic generation calculations were conducted using a site-specific trip generation methodology described in detail in *Section 5.0*. Based on the number of employees, truck trips, and other Project characteristics, the Project is calculated to generate 497 daily trips with 59 trips (32 inbound/ 27 outbound) in the AM peak hour and 86 trips (30 inbound/ 56 outbound) during the PM peak hour. The duration of construction traffic will be four (4) months.

Project traffic was distributed via identified truck routes. The distribution was developed with respect to the Project’s location relative to local destinations and regional access via I-15 and the roadway characteristics and existing traffic patterns on the truck routes.

Cumulative projects were accounted for based on research conducted by LLG within the City of Escondido and County of San Diego, and an interpolated growth rate based on Year 2035 volumes and existing traffic counts was applied.

A Horizon Year (2035) analysis was not conducted since there will be no traffic volumes on the street system once the realignment of Oakvale Road is complete.

Based on the City of Escondido significance criteria, ***no significant impacts were identified***. Therefore no mitigation measures are proposed.

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TRAFFIC IMPACT ANALYSIS  
**OAKVALE ROAD REALIGNMENT**  
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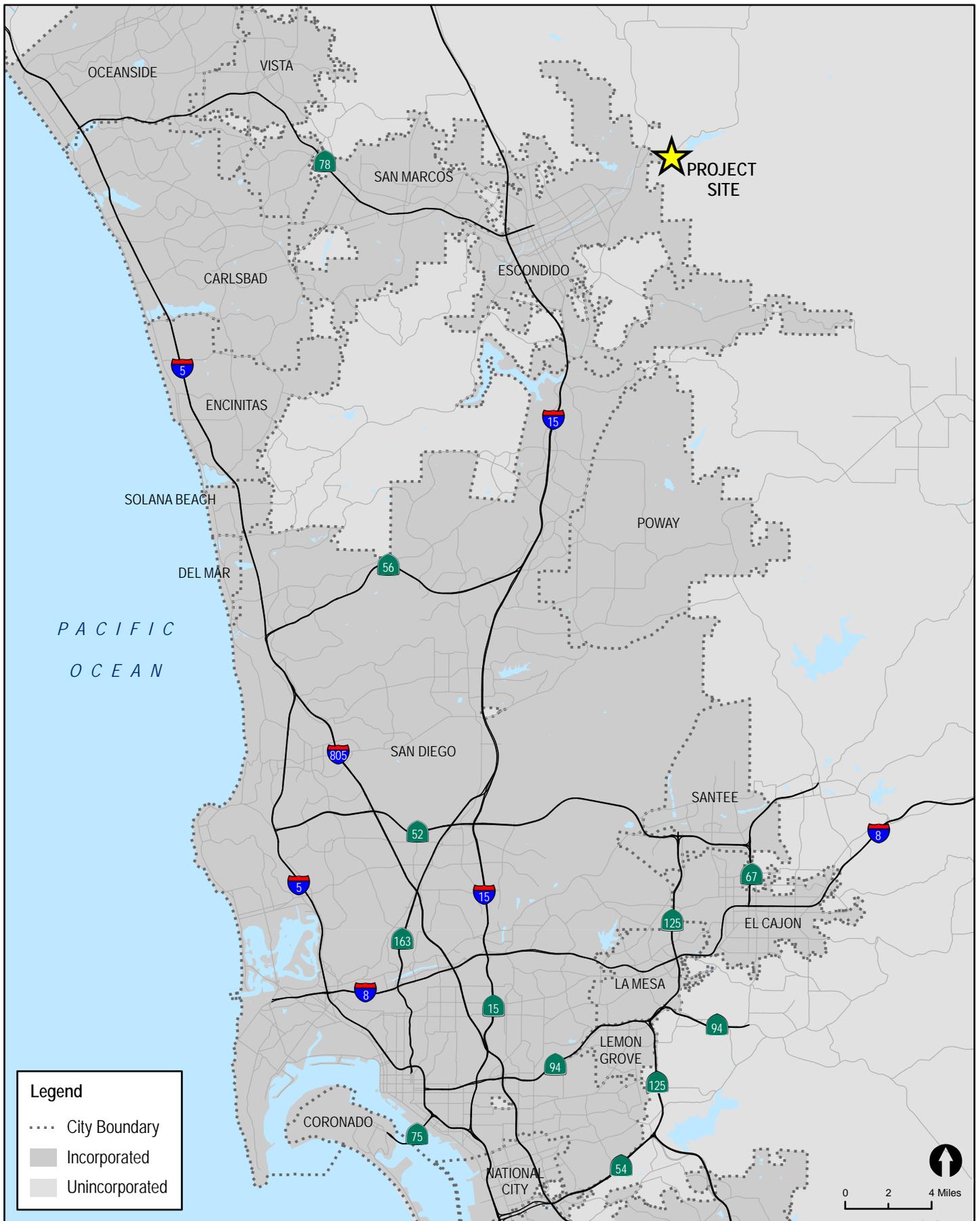
## 1.0 INTRODUCTION

Linscott, Law and Greenspan, Engineers (LLG) have prepared the following traffic impact analysis to assess the impacts to the street system as a result of the Oakvale Road Realignment project (“Project”), which proposes to realign and straighten an approximately 1,200 foot stretch of Oakvale Road near the Lake Wohlford Dam. The Project site is located on Oakvale Road, approximately 750 feet east of its intersection with Lake Wohlford Road in an unincorporated area of San Diego County, just east of the City of Escondido.

*Figure 1–1* shows the Project vicinity and *Figure 1–2* illustrates, in more detail, the site location.

The traffic analysis presented in this report includes the following:

- Project Description
- Existing Conditions
- Analysis Approach and Methodology
- Significance Criteria
- Analysis of Existing Conditions
- Project Trip Generation/Distribution/Assignment
- Cumulative Projects
- Analysis of Near-term Scenarios
- Significance of Impacts and Mitigation Measures



**Legend**

- City Boundary
- Incorporated
- Unincorporated

**Figure 1-1**

**Vicinity Map**

OAKVALE ROAD REALIGNMENT

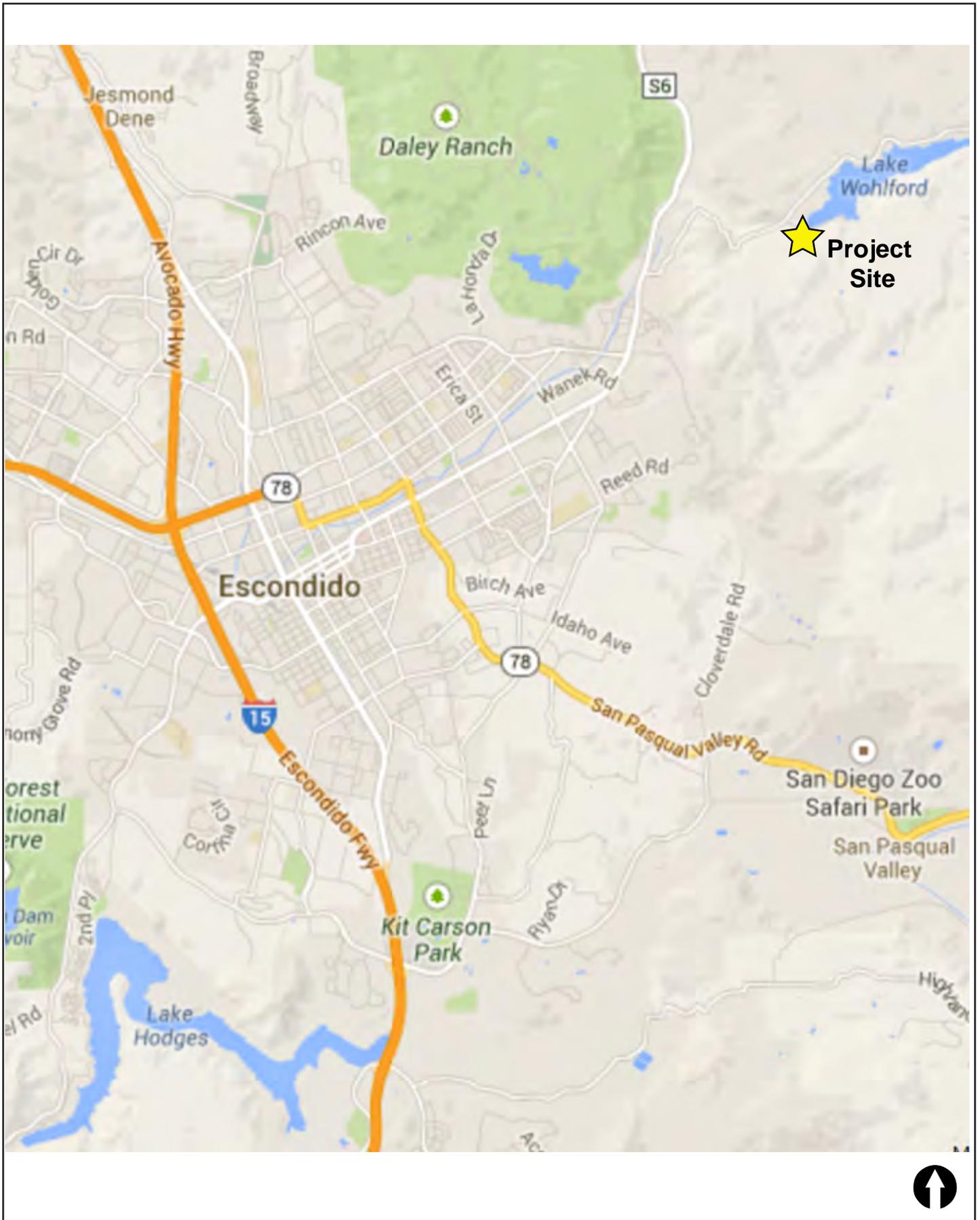


Figure 1-2

**Project Area Map**

## **2.0 PROJECT DESCRIPTION**

### **2.1 Project Description**

The City of Escondido (City) plans to realign an approximately 1,200 foot stretch of Oakvale Road near the Lake Wohlford Dam, straightening the road and moving it toward the south. This will be accomplished by excavating into the adjacent slope to remove approximately 56,000 cubic yards of rock and earth and create space for realigning the road, which would be shifted a maximum distance of approximately 150 feet to the south of the existing alignment.

Once the rock and earth is removed from the hillside, it would be stockpiled on site and loaded into 10-cubic-yard (cy) dump trucks for hauling down the mountain to a nearby quarry. For planning purposes, project engineers have indicated that the hauling phase would entail approximately 70 trips per day.

Oakvale Road would remain open to traffic during project construction, though the eastbound lane may be periodically closed to enable more room for construction vehicle access or construction staging. A traffic control plan would be prepared that would identify measures to maintain traffic safety and ensure emergency access throughout project construction.

Roadway excavation is scheduled to begin in May 2015. The hauling phase of the project is expected to last approximately four months. Final construction completion is expected in December 2015.

### **2.2 Project Location**

The project is located on Oakvale Road, approximately 750 feet east of its intersection with Lake Wohlford Road and immediately south of Lake Wohlford Dam, in an unincorporated area of the County of San Diego east of the City of Escondido. Oakvale Road is a County of San Diego roadway. The surrounding land, including the Lake Wohlford dam and reservoir, is owned by the City of Escondido. With the exception of the Lake Wohlford Dam, the project setting is one of rural, natural open space and vegetation with dense chaparral and oak trees. The area is characterized by steep and rocky topography. Oakvale Road provides access to a small community of single-family residences located south of the dam, approximately 0.5 mile east of the project site.

### 3.0 EXISTING CONDITIONS

#### 3.1 Study Area

The study area was determined in accordance with the City of Escondido's published *Traffic Impact Analysis Requirement Guidelines (2014)*. Further details on the City's guidelines for developing the study area can be found in *Section 4.0*. The study area includes the following four (4) existing public intersections and two (2) street segments.

##### **Intersections:**

1. Lake Wohlford Road / Oakvale Road
2. Lake Wohlford Road / Valley Center Road
3. Valley Parkway / El Norte Parkway
4. Valley Parkway / Bear Valley Parkway

##### **Segments:**

###### ***Lake Wohlford Road***

Valley Center Road to Oakvale Road

###### ***Valley Parkway***

El Norte Parkway to Lake Wohlford Road

#### 3.2 Existing Transportation Conditions

The following is a brief description of the streets in the Project area. Roadway classifications are taken from the City of Escondido's *General Plan Mobility Element (2011)*.

**Lake Wohlford Road** is a generally east/west facility with portions in both the City of Escondido and the unincorporated area of the County of San Diego. The majority of the roadway in the Project vicinity is within the City of Escondido where it is classified as a Local Collector. It is currently constructed as a two-lane undivided roadway with narrow shoulders and no passing lanes, through generally steep and mountainous terrain. The posted speed limit is 50 mph.

**Valley Parkway** is a north/south roadway within the City of Escondido and is classified as a Prime Arterial in the vicinity of the Project. From Bear Valley Parkway to Beven Drive, Valley Parkway is currently built as a five-lane divided roadway. From Beven Drive to Lake Wohlford Road, Valley Parkway transitions to a two-lane roadway with a two-way left-turn lane median. The posted speed limit is 45 mph.

**Bear Valley Parkway** is a north/south facility in the City of Escondido with varying classifications. In the Project study area, from Valley Parkway to Boyle Avenue it is currently constructed as a four-lane divided roadway and classified as a Major Road. The posted speed limit is 45 mph north of Boyle Avenue. Curbside parking is prohibited. Bear Valley Parkway provides Class II bicycle lanes from Valley Parkway to Boyle Avenue.

**El Norte Parkway** is currently built as a Four-Lane Collector west of Valley Parkway to Washington Avenue. Bike lanes and bus stops are provided on El Norte Parkway in the study area.

*Figure 3–1* shows an existing conditions diagram, including signalized/unsignalized intersections and lane configurations.

### 3.3 Existing Traffic Volumes

*Table 3–1* is a summary of the most recent available ADTs from LLG counts commissioned in February and March 2014 when schools were in session. Manual hand counts at the study area intersections were also conducted in February and March 2014.

**TABLE 3–1  
EXISTING TRAFFIC VOLUMES**

Street Segment	ADT <sup>a</sup>
<b>Lake Wohlford Road</b> Valley Center Road to Oakvale Road	4,680
<b>Valley Parkway</b> El Norte Parkway to Lake Wohlford Road	29,700 <sup>b</sup>

*Footnotes:*

- a. Average Daily Traffic Volume counts conducted in February and March 2014 by LLG Engineers.
- b. Volume based on Escondido General Plan Update Traffic Impact Analysis, December 5, 2011

*Figure 3–2* shows the Existing Traffic Volumes. *Appendix A* contains the manual count sheets.

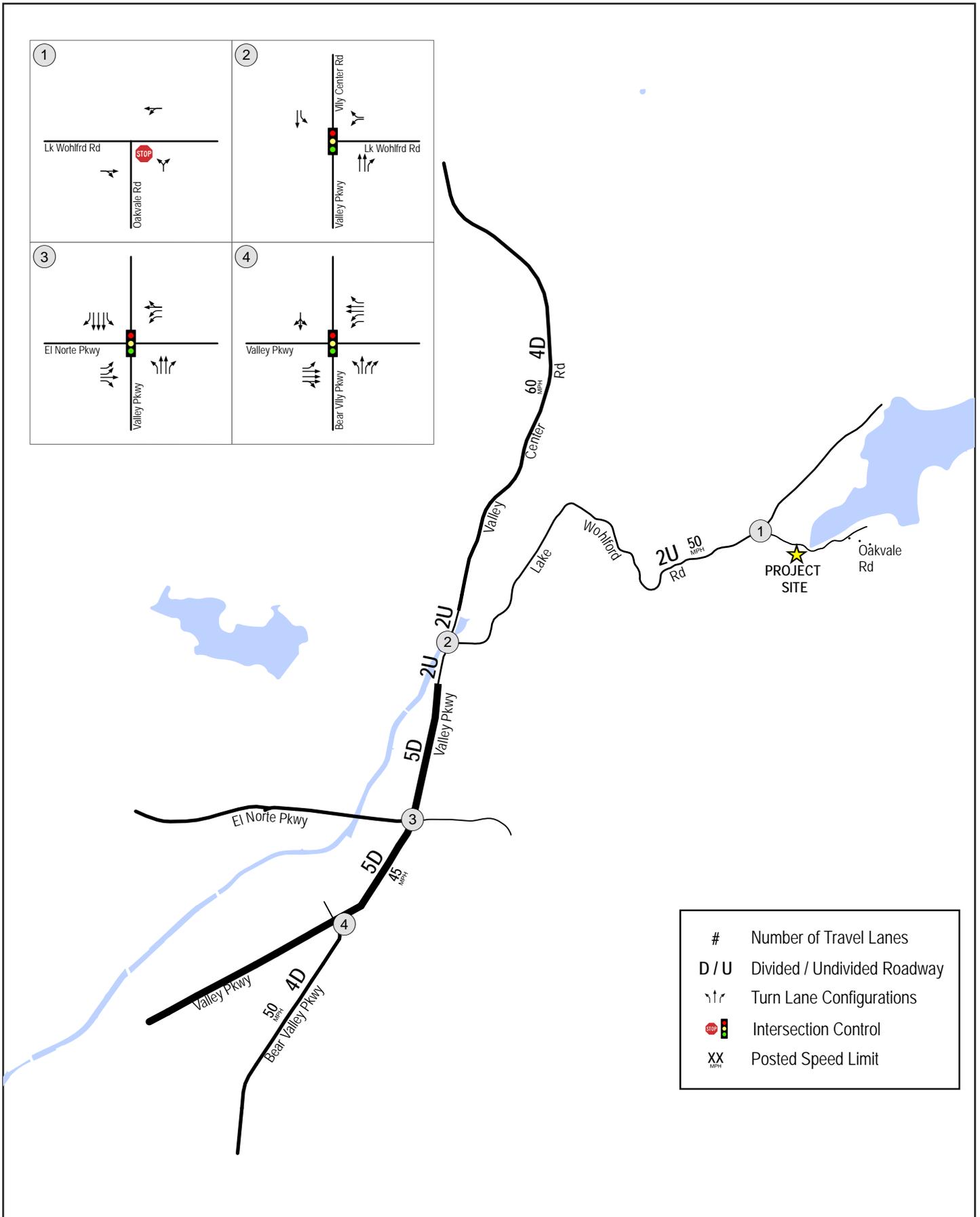
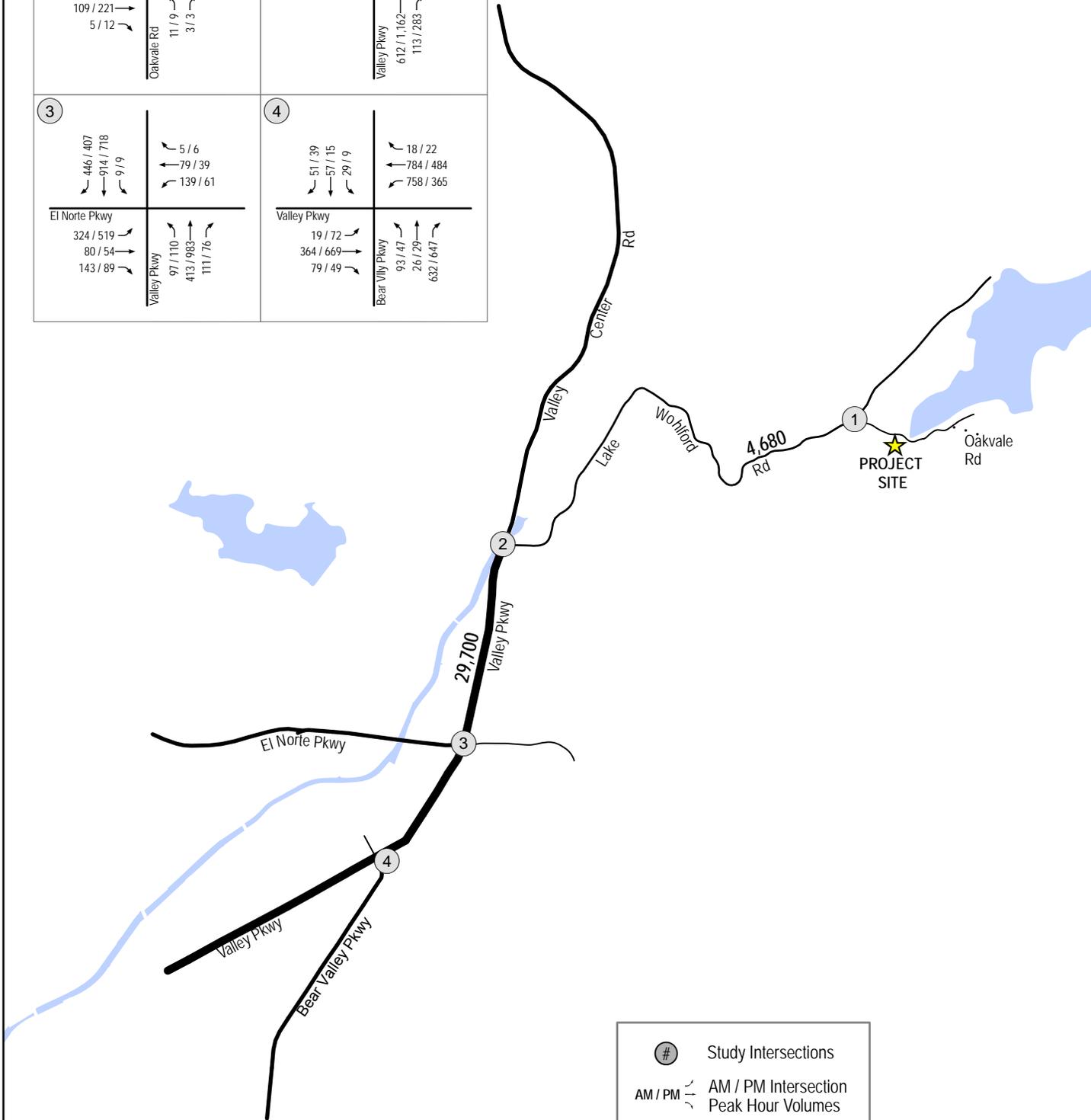
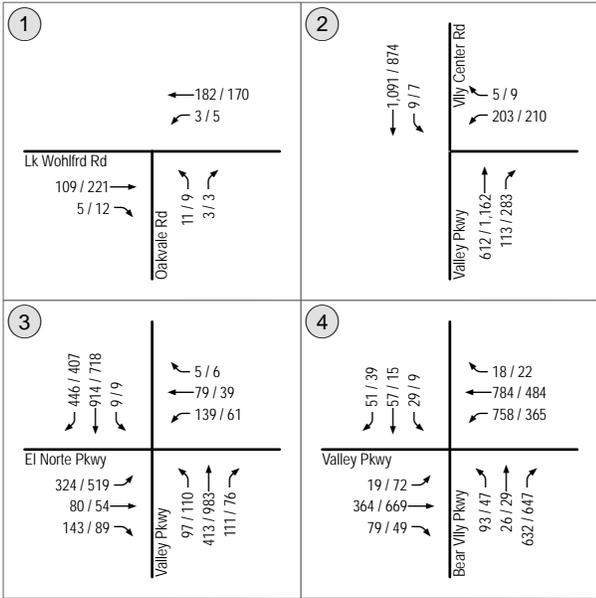


Figure 3-1

Existing Conditions Diagram



# Study Intersections  
 AM / PM ↙ ↘ AM / PM Intersection Peak Hour Volumes  
 XX,XXX Average Daily Trips



## 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 intersections, unsignalized intersections and roadway segments.

The City of Escondido's recently published Traffic Impact Analysis Guidelines provide the following direction on report approach and methodology:

1. The traffic study should include a SANDAG prepared Select Zone Assignment for the project to determine the project traffic distribution.
2. The traffic study should utilize the Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (April 2002) published by SANDAG, to determine the project traffic volume.
3. Traffic should utilize the following scenarios to determine project traffic impacts at intersections and along roadway segments.
  - a. Existing Condition (based on new traffic counts)
  - b. Existing + Project Traffic Condition
  - c. Existing + Cumulative Projects Traffic Condition
  - d. Existing + Cumulative Projects + Project Traffic Condition
  - e. Year 2035 Traffic Condition
4. Highway Capacity Manual (Year 2010) should be utilized to determine level of service for intersections.
5. The study area should include at least all site access points and major intersections (signalized and un-signalized) adjacent to the site. The tables below contain the trigger-points to identify if a roadway segment or intersection should be included in the Traffic Impact Analysis.

**Table 4-1** below contains the trigger-points for roadway segments within the City of Escondido for different street classifications based on Average Daily Traffic (ADT) added to the segment. **Table 4-2** below contains the trigger-points for intersections based on peak hour volumes.

**TABLE 4-1**  
**TRAFFIC IMPACT ANALYSIS ADT THRESHOLDS FOR ROADWAY SEGMENTS**

Street Classification	Lanes	Cross Sections (ft.)	TIA Trigger-Points (ADT generation)
Prime Arterial	(8 lanes)	116/136 (NP)	900
	(6 lanes)	106/126 (NP)	800
Major Road	(6 lanes)	90/110 (NP)	700
	(4 lanes)	82/102 (NP)	500
Collector	(4 lanes)	64/84 (NP)	500
	(4 lanes)	(WP)	250
Local Collector and all other	(2 lanes)	42/66 (NP)	200
		(WP)	

**TABLE 4-2**  
**TRAFFIC IMPACT ANALYSIS ADT THRESHOLDS FOR INTERSECTIONS**

Intersection Classification (Minor leg of the intersection)	TIA Trigger-Points (AM or PM peak hour trips added to any leg)
Prime Arterial	50
Major Road	40
Collector	30
Local Collector	20

**Signalized intersections** were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 18 of the *2010 Highway Capacity Manual (HCM)*, with the assistance of the *Synchro* (version 8) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. Signalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in *Appendix B*.

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

***Street segment*** analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Escondido *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 City of Escondido *Roadway Classification, Level of Service, and ADT Table* is attached in ***Appendix C***.

## 5.0 SIGNIFICANCE CRITERIA

The project study area includes locations that lie exclusively within the City of Escondido. The following is a summary of the City’s published significance criteria.

### 5.1 City of Escondido

In accordance with “SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region”, the following thresholds shall be used to identify if a project is of significant traffic impact under any scenario. Based on SANTEC/ITE guidelines, if now or in the future, the project’s traffic impact causes the values in **Table 5-1** below to be exceeded in a roadway segment or an intersection that is operating at LOS D or worse, it is determined to be a significant impact and the project shall identify mitigation measures.

**TABLE 5-1  
CITY OF ESCONDIDO TRAFFIC IMPACT SIGNIFICANCE THRESHOLDS**

Level of Service With Project	Allowable Change due to Project Impact		
	Roadway Segments		Intersections
	V/C	Speed Reduction (mph)	Delay (sec.)
D, E, or F	<b>0.02</b>	<b>1</b>	<b>2</b>

## 6.0 ANALYSIS OF EXISTING CONDITIONS

### 6.1 Peak Hour Intersection Levels of Service

*Table 6–1* summarizes the existing peak hour intersection operations. As shown, all the study area intersections are calculated to currently operate at service levels of LOS C or better during both the AM and PM peak hours.

**TABLE 6–1  
EXISTING INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing	
			Delay <sup>a</sup>	LOS <sup>b</sup>
1. Lake Wohlford Road / Oakvale Road	MSSC <sup>c</sup>	AM	10.4	B
		PM	11.5	B
2. Lake Wohlford Road / Valley Center Road	Signal	AM	15.5	B
		PM	10.7	B
3. Valley Parkway / El Norte Parkway	Signal	AM	22.8	C
		PM	26.6	C
4. Valley Parkway / Bear Valley Parkway	Signal	AM	24.9	C
		PM	20.3	C

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Minor Street Stop Controlled intersection, minor street left-turn 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

### 6.2 Daily Street Segment Levels of Service

*Table 6–2* summarizes the existing segment operations along the key study area roadways. As shown, all roadway segments currently operate at LOS C or better.

**TABLE 6-2  
EXISTING STREET SEGMENT OPERATIONS**

Street Segment	Existing Classification	Capacity (LOS E) <sup>a</sup>	ADT <sup>b</sup>	LOS <sup>c</sup>	V/C <sup>d</sup>
<b>Lake Wohlford Road</b> Valley Center Road to Oakvale Road	Local Collector	9,700 <sup>e</sup>	4,680	A	0.482
<b>Valley Parkway</b> El Norte Parkway to Lake Wohlford Road	5-Lane Major <sup>f</sup>	43,500	29,700	C	0.683

**Footnotes:**

- a. Capacities based on the *City of Escondido Roadway Classification* (see Appendix C).
- b. Average Daily Traffic Volumes
- c. Level of Service
- d. Volume to Capacity
- e. County of San Diego “Light Collector w/Reduced Shoulder (2.2F)” capacity used.
- f. Capacity based on average of 4-Lane Major and 6-Lane Major

## 7.0 TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT

### 7.1 Trip Generation

Based on direct coordination with the client, LLG determined the following values and assumptions to be used in calculating Project trip generation.

There are expected to be 35 construction workers on site on a regular basis. A trip rate of 2.2 per employee was used to account for daily commuting to and from the Project site and occasional extra trips taken by employees during the workday. This rate also includes trips by other miscellaneous staff that may be on site on an intermittent basis, including surveyors, materials testing, inspection, or environmental monitoring. The AM and PM peak hour percentages were determined assuming an 8-hour workday from 7 AM to 4 PM. Thus, most employees will be making the inbound trip to the Project site prior to the AM peak hour. By the same logic, most employees are expected to make the outbound trip from the Project site during the PM peak hour.

The Project is expected to generate 70 round-trip truck trips per day. Thus a rate of 2.0 accounts for both inbound and outbound truck trips. A Passenger Car Equivalent (PCE) of 3.0 is applied to account for the differing speed, acceleration, and maneuverability of heavy trucks compared to typical passenger vehicles. The AM and PM peak hour percentages were determined by assuming 100% of truck trips take place within and are evenly dispersed over an 8-hour workday. This yields an hourly share of 12.5% of truck trips, which is rounded up to 13% in the calculation below.

*Table 7-1* shows a summary of the Project traffic generation. As tabulated the proposed Project is calculated to generate the equivalent of 497 daily trips with 59 trips (32 inbound/27 outbound) in AM peak hour and 86 trips (30 inbound/56 outbound) during PM peak hour.

**TABLE 7-1  
PROJECT TRIP GENERATION**

Type	Amount	Rate <sup>a</sup>	PCE <sup>b</sup>	ADT	AM Peak Hour				PM Peak Hour					
					% of ADT	In:Out		Volume		% of ADT	In:Out		Volume	
						Split	In	Out	Split		In	Out		
Employee	35	2.2	1.0	77	5%	9:1	4	0	40%	1:9	3	28		
Truck	70	2.0	3.0	420	13%	5:5	28	27	13%	5:5	27	28		
Total				497			32	27			30	56		

**Footnotes:**

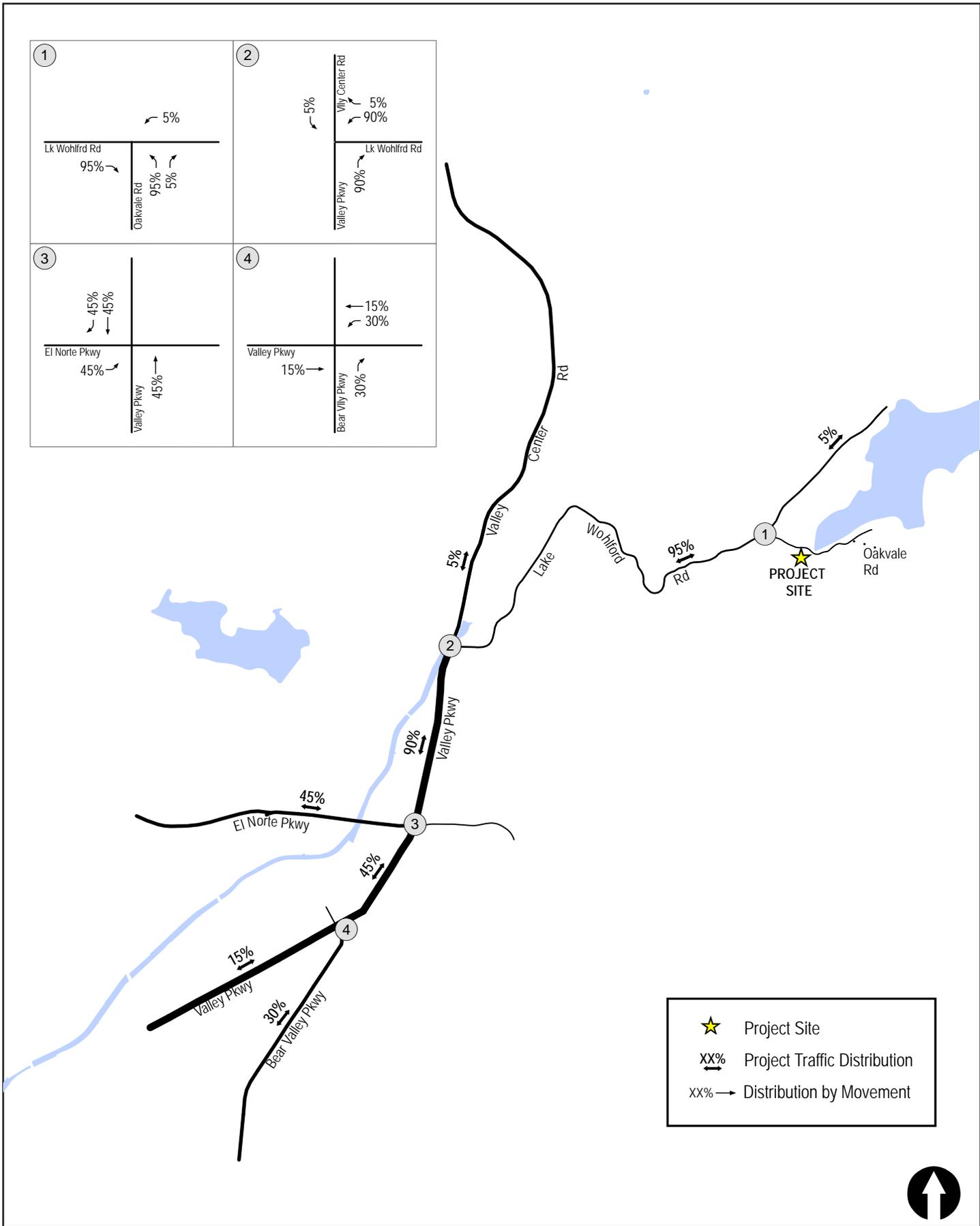
- a. Rate is based on site-specific trip generation factors.
- b. Passenger Car Equivalent

### 7.2 Trip Distribution & Assignment

Project trips were distributed regionally based on potential destinations for material hauling from construction activity. A small number of trips were distributed via Lake Wohlford Road and Valley Center Road to possible local destinations in Valley Center. The rest of the trips are distributed to regional destinations via the City of Escondido's identified truck routes, ultimately reaching I-15 for

regional access. Trips were split among these existing truck routes based on orientation to northbound or southbound destinations and roadway characteristics including size of the roadway, existing congestion patterns, surrounding land uses, and spacing of signalized intersections.

**Figure 7-1** shows the Project trip distribution percentages. **Figure 7-2** shows the AM/PM peak hour Project traffic volumes. **Figure 7-3** shows Existing + Project traffic volumes. **Figure 7-4** shows truck routes within the City of Escondido as identified in the City's *Mobility and Infrastructure Element*.



★ Project Site  
 XX% → Project Traffic Distribution  
 XX% → Distribution by Movement



Figure 7-1

Project Trip Distribution

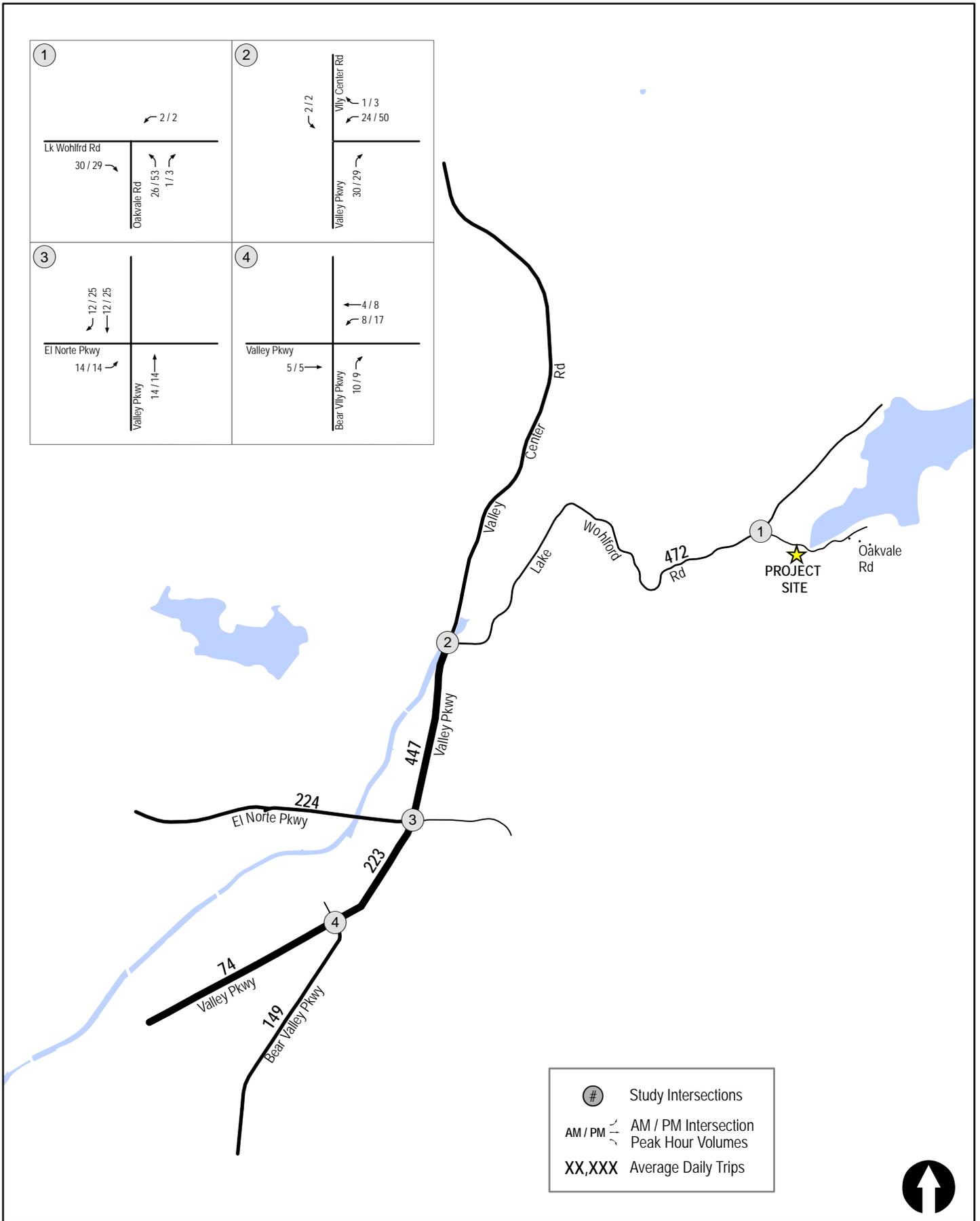
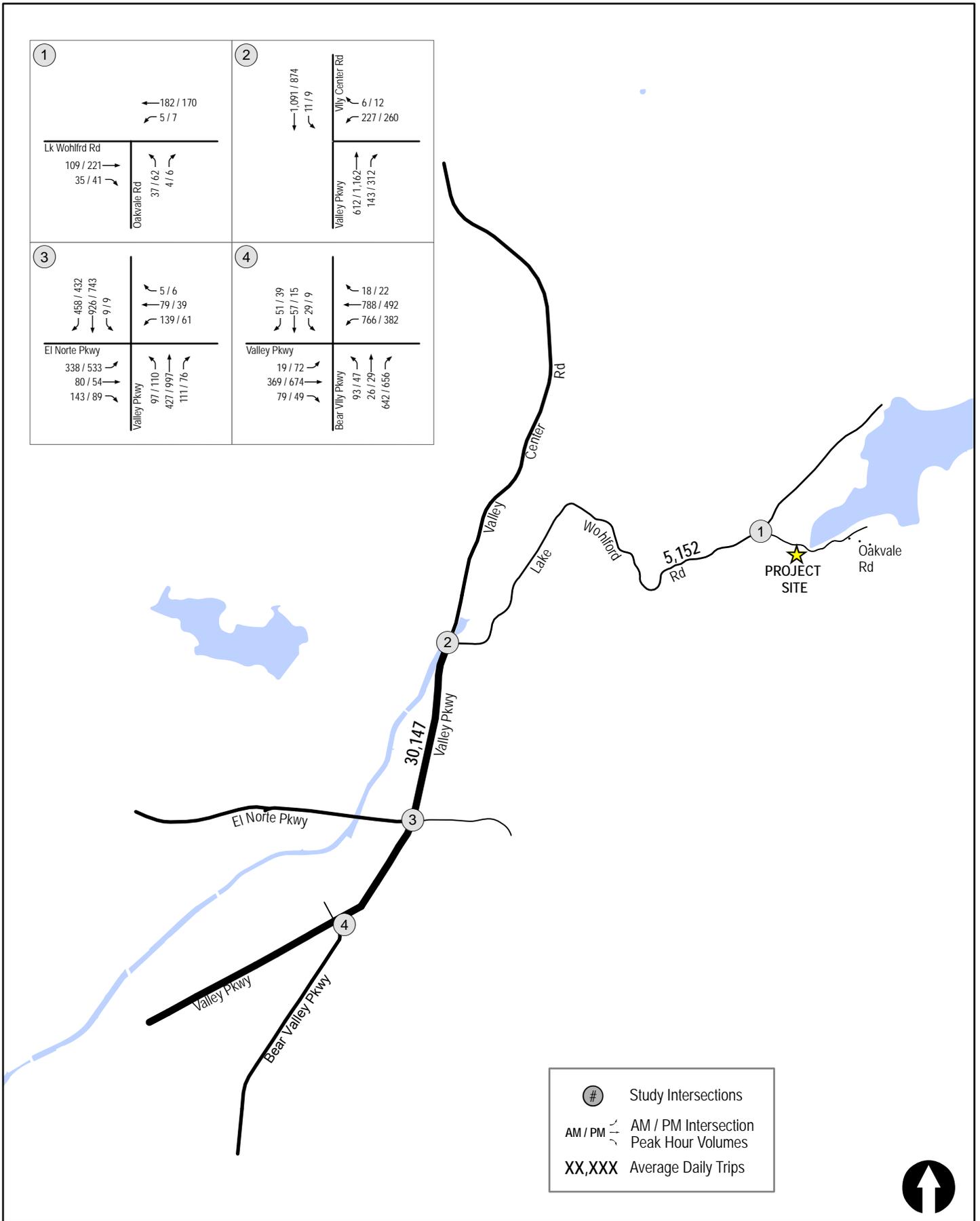


Figure 7-2

# Project Traffic Volumes

OAKVALE ROAD REALIGNMENT

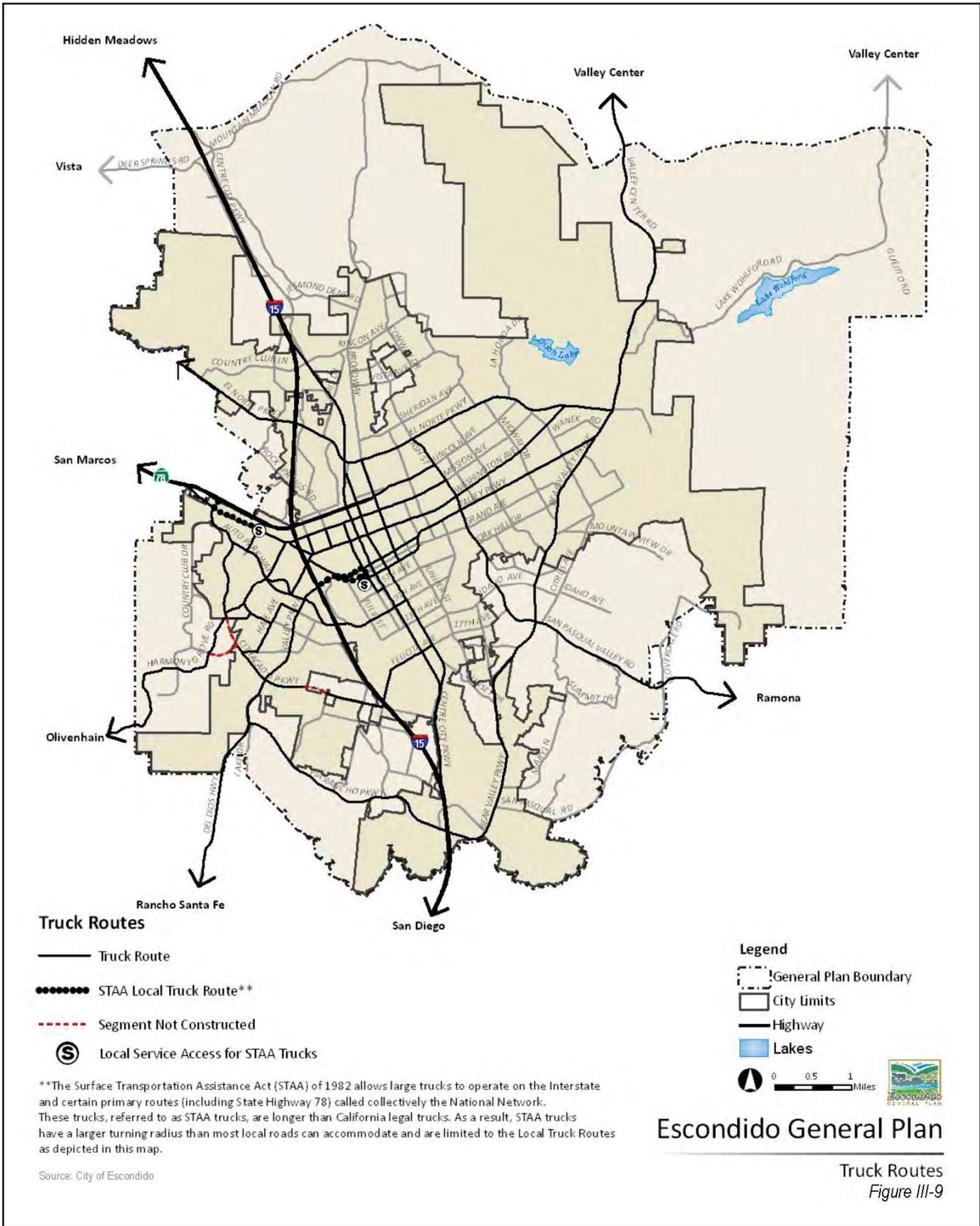


<p><b>1</b></p> <p>← 182 / 170 ↘ 5 / 7</p> <p>Lk Wohlfird Rd 109 / 221 → 35 / 41 ↘</p> <p>Oakvale Rd 37 / 62 ↘ 4 / 6 ↘</p>	<p><b>2</b></p> <p>↓ 1,091 / 874 ↘ 11 / 9</p> <p>Valley Center Rd 6 / 12 227 / 260</p> <p>Valley Pkwy 612 / 1,162 143 / 312</p>
<p><b>3</b></p> <p>↘ 458 / 432 ↓ 926 / 743 ↙ 9 / 9</p> <p>↘ 5 / 6 ← 79 / 39 ↙ 139 / 61</p> <p>El Norte Pkwy 338 / 533 ↘ 80 / 54 → 143 / 89 ↘</p> <p>Valley Pkwy 97 / 110 ↘ 427 / 997 ↘ 111 / 76 ↘</p>	<p><b>4</b></p> <p>↘ 51 / 39 ↓ 57 / 15 ↙ 29 / 9</p> <p>↘ 18 / 22 ← 788 / 492 ↙ 766 / 382</p> <p>Valley Pkwy 19 / 72 ↘ 369 / 674 → 79 / 49 ↘</p> <p>Bear Valley Pkwy 93 / 47 ↘ 26 / 29 ↘ 642 / 656 ↘</p>

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**Figure 7-3**

**Existing + Project Traffic Volumes**

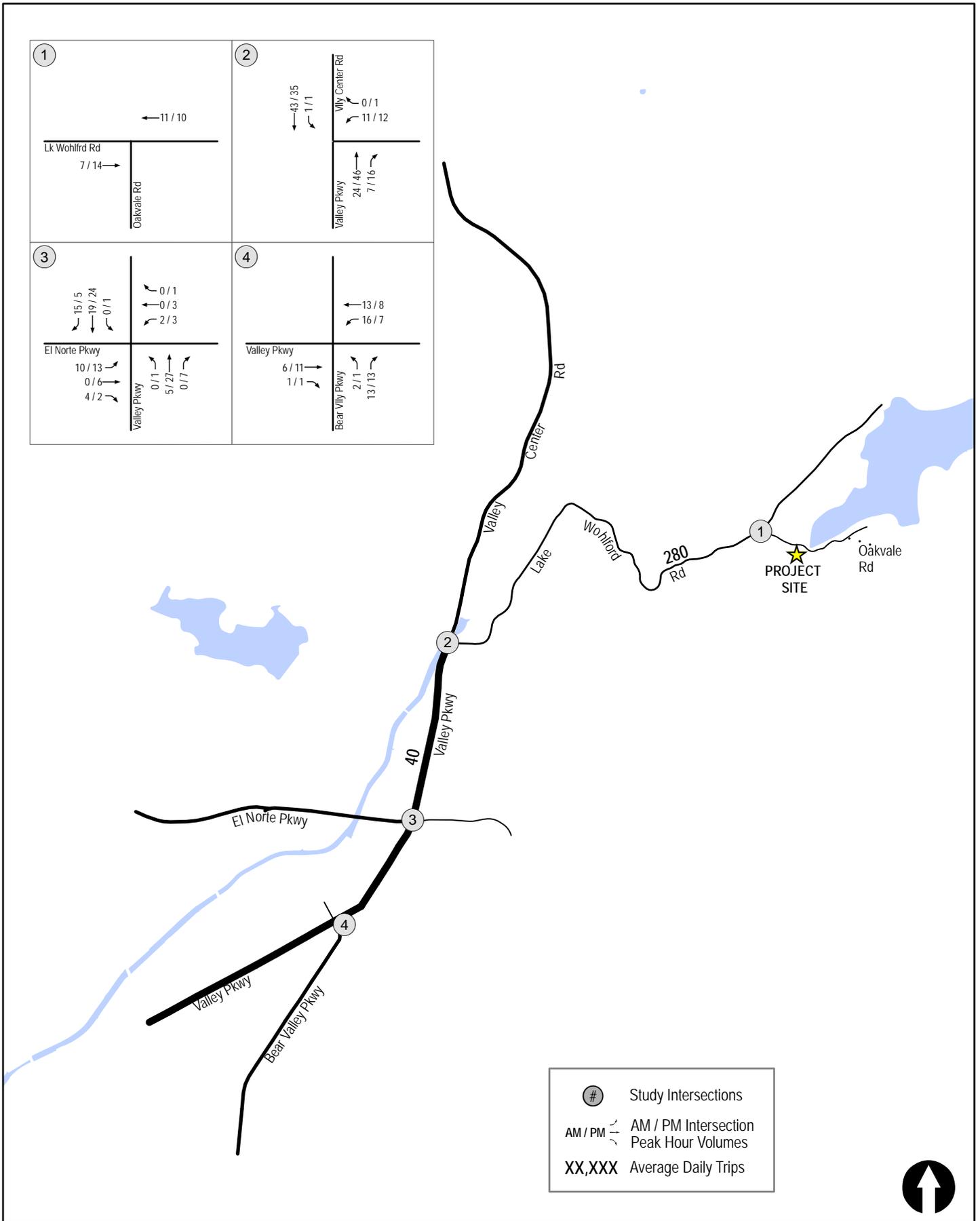


## 8.0 CUMULATIVE GROWTH TRAFFIC VOLUMES

Cumulative projects are other projects in the study area that will add traffic to the local circulation system in the near future. LLG coordinated directly with City of Escondido and County of San Diego staff to determine and obtain cumulative projects' traffic volume information to be included for analysis.

LLG has recently completed traffic studies for two projects in the vicinity which may add traffic to the roadway system analyzed. However, due to uncertain completion dates of these projects a cumulative growth approach was used. In order to forecast near-term cumulative traffic conditions LLG used interpolated growth between Year 2035 and existing Year 2014 traffic counts. Typical annual growth ranged between 2-5% at study area intersections and segments. Location-specific growth factors were applied to each study area location for a period of one (1) year to arrive at near-term baseline conditions which are analyzed in this report as "+ Cumulative Growth" scenarios.

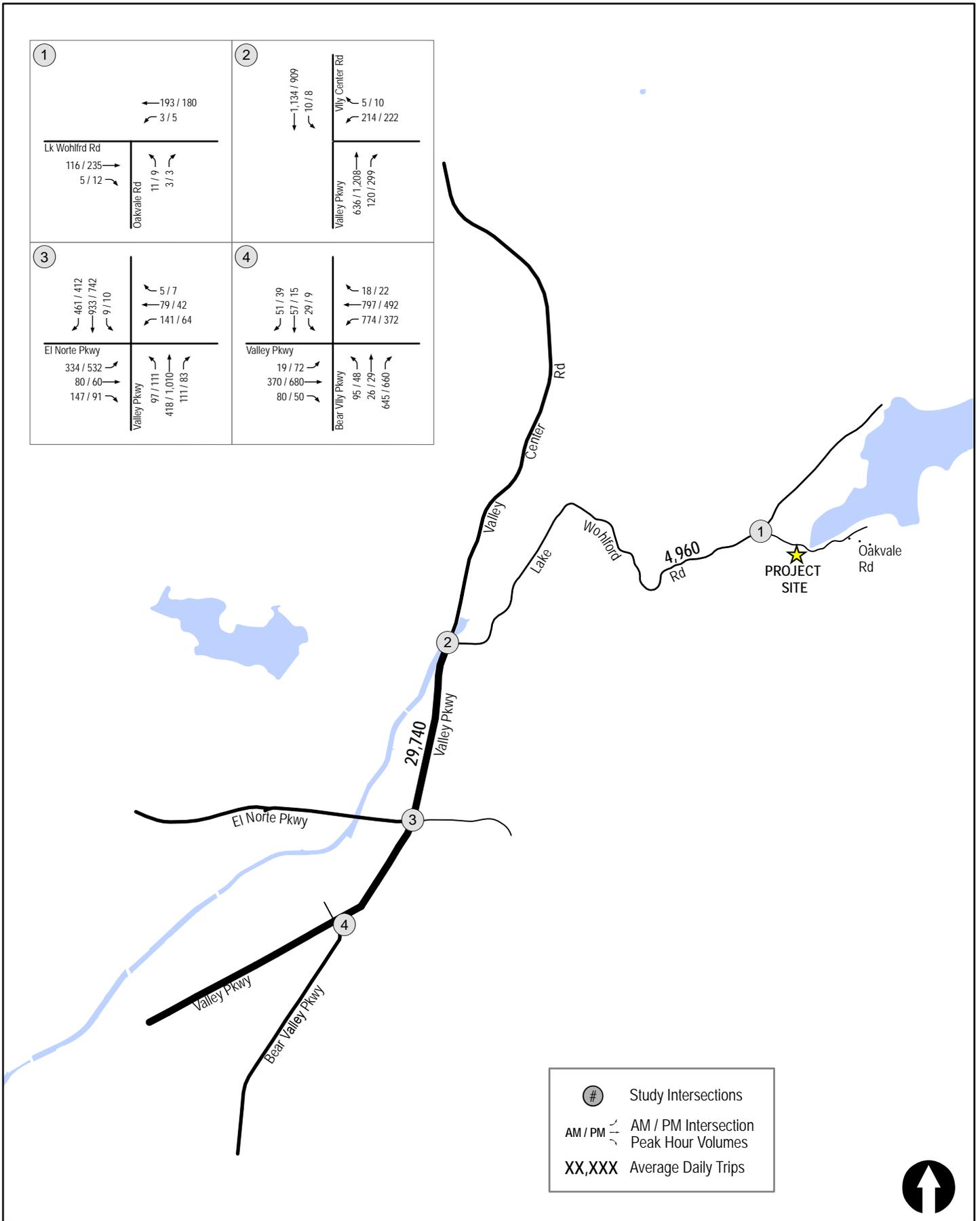
*Figure 8-1* shows the total cumulative growth traffic volumes. *Figure 8-2* shows the existing + cumulative growth traffic volumes. *Figure 8-3* shows the existing + project + cumulative growth traffic volumes.



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Figure 8-1

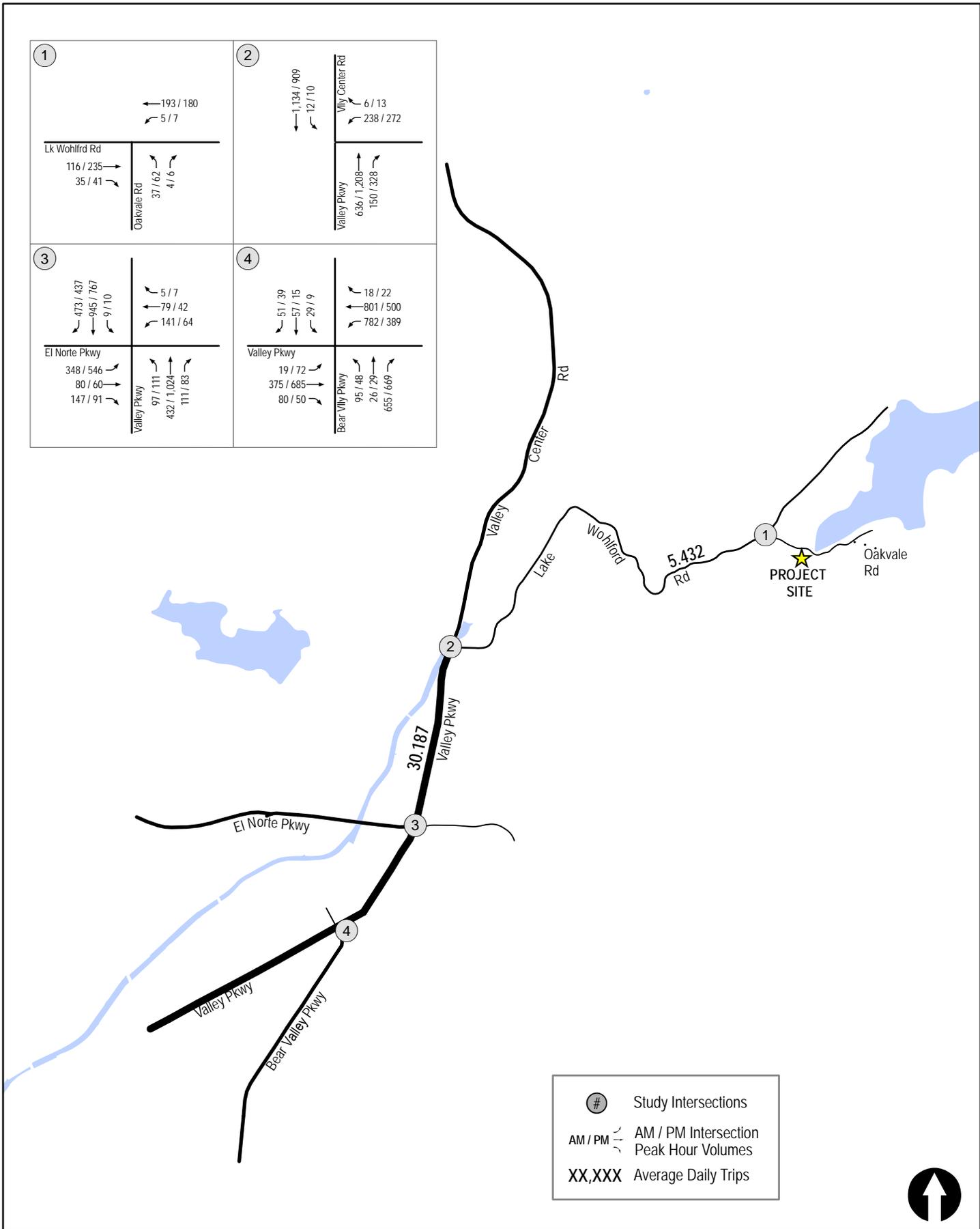
# Cumulative Growth Traffic Volumes



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**Existing + Cumulative Growth Traffic Volumes**

**Figure 8-2**



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Figure 8-3

### Existing + Project + Cumulative Growth Traffic Volumes

## 9.0 ANALYSIS OF NEAR-TERM SCENARIOS

The following is a summary of the operational analyses for the various street-system components for the near-term traffic scenarios. Potentially significant impacts are **bolded** and underlined.

### 9.1 Existing + Project

#### 9.1.1 Intersection Analysis

*Table 9-1* summarizes the peak hour intersection operations with the addition of Project traffic. *Table 9-1* shows that all the study area intersections are calculated to continue to operate at LOS C or better with the addition of Project traffic.

#### 9.1.2 Segment Operations

*Table 9-2* summarizes the roadway segment operations with the addition of Project traffic. As seen in *Table 9-2*, study area segments are calculated to continue to operate at LOS C or better.

### 9.2 Existing + Cumulative Growth

#### 9.2.1 Intersection Analysis

*Table 9-1* summarizes the peak hour intersection operations with the addition of cumulative growth traffic. *Table 9-1* shows that the study area intersections are calculated to operate at LOS C or better.

#### 9.2.2 Segment Operations

*Table 9-2* summarizes the roadway segment operations with the addition of cumulative growth traffic. As seen in *Table 9-2*, all study area segments are calculated to continue to operate at LOS C or better.

### 9.3 Existing + Project + Cumulative Growth

#### 9.3.1 Intersection Analysis

*Table 9-1* summarizes the peak hour intersection operations for Existing + Cumulative Growth + Project conditions. *Table 9-1* shows that all study area intersections are calculated to operate at LOS C or better with the addition of Project traffic.

#### 9.3.2 Segment Operations

*Table 9-2* summarizes the roadway segment operations for the Existing + Cumulative Growth + Project conditions. As seen in *Table 9-2*, all study area segments are calculated to continue to operate at LOS C or better.

**TABLE 9-1  
NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing		Existing + Project			Existing + Cumulative Growth		Existing + Cumulative Growth + Project			Significant Impact?
			Delay <sup>a</sup>	LOS <sup>b</sup>	Delay	LOS	Δ <sup>c</sup>	Delay	LOS	Delay	LOS	Δ <sup>c</sup>	
1. Lake Wohlford Rd / Oakvale Rd	MSSC <sup>d</sup>	AM	10.4	B	11.1	B	0.7	10.5	B	11.3	B	0.8	No
		PM	11.5	B	12.9	B	1.4	11.7	B	13.3	B	1.6	No
2. Lake Wohlford Rd / Valley Center Rd	Signal	AM	15.5	B	17.5	B	2.0	18.3	B	20.8	C	2.5	No
		PM	10.7	B	13.6	B	2.9	11.5	B	14.6	B	3.1	No
3. Valley Parkway / El Norte Parkway	Signal	AM	22.8	C	23.1	C	0.3	23.1	C	23.4	C	0.3	No
		PM	26.6	C	27.9	C	1.3	28.3	C	29.6	C	1.3	No
4. Valley Parkway / Bear Valley Parkway	Signal	AM	24.9	C	25.1	C	0.2	25.2	C	25.4	C	0.2	No
		PM	20.3	C	20.4	C	0.1	20.4	C	20.6	C	0.2	No

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Δ denotes an increase in delay due to project.
- d. Minor Street Stop Controlled intersection. Minor street left turn 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 9-2  
NEAR-TERM STREET SEGMENT OPERATIONS**

Street Segment	Capacity (LOS E) <sup>a</sup>	Existing			Existing + Project				Existing + Cumulative Projects			Existing + Cumulative Projects + Project				Sig Impact?
		ADT <sup>b</sup>	LOS <sup>c</sup>	V/C <sup>d</sup>	ADT	LOS	V/C	Δ <sup>e</sup>	ADT	LOS	V/C	ADT	LOS	V/C	Δ <sup>e</sup>	
<b>Lake Wohlford Road</b> Valley Center Rd to Oakvale Rd	9,700	4,680	A	0.482	5,152	A	0.531	0.049	4,960	A	0.511	5,432	A	0.560	0.049	No
<b>Valley Parkway</b> El Norte Pkwy to Lake Wohlford Rd	43,500	29,700	C	0.683	30,147	C	0.693	0.010	29,740	C	0.684	30,187	C	0.694	0.010	No

**Footnotes:**

- a. Capacities based on the *City of Escondido Roadway Classification* (See Appendix C).
- b. Average Daily Traffic
- c. Level of Service
- d. Volume to Capacity ratio
- e. Δ denotes a Project-induced increase in the Volume to Capacity (V/C) ratio.
- f. County of San Diego “Light Collector w/Reduced Shoulder (2.2F)” capacity used.

## **10.0 SIGNIFICANCE OF IMPACTS AND MITIGATION MEASURES**

### **10.1 Significance of Impacts**

The traffic impacts of the proposed 497-ADT Oakvale Road Realignment Project do not exceed the significance thresholds published by the City of Escondido. *No significant impacts are calculated.*

### **10.2 Mitigation Measures**

The Project does not result in any significant impacts according to City of Escondido criteria. *No mitigation measures are required.*

*End of Report*