

## 4.14 TRAFFIC AND CIRCULATION

This section describes the existing traffic/circulation setting of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Villa Storia residential development (proposed project). The following analysis is based upon the Traffic Impact Analysis - Villa Storia that was prepared for the proposed project by Linscott, Law & Greenspan, Engineers (LLG) in ~~February~~ May 2015. The Traffic Impact Analysis is included in Appendix J of this EIR.

### 4.14.1 Methodology

#### Project Description

The proposed project would establish a medium to high density, single and multi-family residential development to the San Luis Rey Historic Area on a 35.59-acre site up to a maximum of 420 residential units:

- 62 single family homes ( $\leq 6$  du/ac)
- 258 multi-family attached homes ( $\leq 20$  du/ac)
- 100 multi-family attached homes ( $\geq 20$  du/ac)

#### Study Area

The Traffic Impact Analysis includes roadways in the proposed project vicinity expected to be affected by project traffic. The traffic study area for the proposed project is based on identified criteria in the San Diego Traffic Engineering Council (SANTEC)/Institute of Traffic Engineers (ITE) Guidelines for Traffic Impact Studies in the San Diego Region, published on March 2, 2000, and collaboration with the City of Oceanside staff. The traffic study area must include “all local roadway segments, intersections, and mainline freeway locations where the Project will add 50 or more peak hour trips in either direction to the existing roadway traffic.” Based on such criteria, the resulting traffic study area analyzed in the Traffic Impact Analysis included 18 intersections and 15 roadway segments

#### *Intersections*

As stated above, the traffic study area includes 18 intersections in the vicinity of the proposed project site. These intersections are:

1. SR -76/Foussat Road (signalized)
2. Mission Avenue/Foussat Road (signalized)
3. Mission Avenue/El Camino Real (signalized)

4. Mission Avenue/Douglas Drive (signalized)
5. SR-76/Douglas Drive (signalized)
6. Mission Avenue/Rancho Del Oro Drive (signalized)
7. SR-76/Rancho Del Oro Drive (signalized)
8. Mesa Drive/Rancho Del Oro Drive (signalized)
9. Mission Avenue/Academy Road (unsignalized)
10. Mission Avenue/Mission Gate Drive (unsignalized)
11. Via Rancho Road/Mission Gate Drive (unsignalized)
12. Frazee Road/Old Grove Road (unsignalized)
13. SR-76/Old Grove Road (signalized)
14. Mission Avenue/Old Grove Road (signalized)
15. SR-76/Frazee Road (signalized)
16. Frazee Road/College Boulevard (signalized)
17. SR-76 / College Boulevard (signalized)
18. SR-76 / North Santa Fe Avenue (signalized)

### ***Roadway Segments***

In addition to the intersections, the Traffic Impact Analysis studied 15 roadway segments in the traffic study area. These segments are:

#### State Route 76 (SR-76)

1. Canyon Drive to Foussat Road
2. Foussat Road to El Camino Real
3. El Camino Real to Rancho Del Oro Drive
4. Rancho Del Oro Drive to Old Grove Road
5. Old Grove Road to College Boulevard

#### Mission Avenue

6. El Camino Real to Douglas Drive
7. Douglas Drive to Rancho Del Oro Drive

8. Rancho Del Oro Drive to Academy Road
9. Academy Road to Old Grove Road

#### Frazer Road

10. Academy Road to Old Grove Road
11. Old Grove Road to SR-76

#### El Camino Real

12. SR-76 to Mesa Drive

#### Rancho Del Oro Drive

13. SR-76 to Mesa Drive

#### Old Grove Road

14. Mission Avenue to Mesa Drive

#### College Boulevard

15. Frazer Road to Mesa Drive

#### ***Frazer Road Connection***

Frazer Road is currently paved from Academy Road to Old Grove Road. However, two existing barricades prevent access between the residential neighborhood to the northeast and Academy Road. Under the “Plus Project” analyses contained in this section and the Traffic Impact Analysis, the connection of Frazer Road between Academy Road and Old Grove Road was assumed to be open. As a result of this connection, it would be expected that existing on-the-ground traffic would use this new connection to reach Mission Avenue. Travel patterns affected by this connection would be those of residents living in the residential communities along Frazer Road near Old Grove Road north of SR-76. The primary reason trips would reroute from SR-76 to Mission Avenue would be to reach the shopping/commercial uses along Mission Avenue in the vicinity of Rancho Del Oro Drive and Douglas Drive.

Existing peak hour traffic patterns observed in the area indicate the majority of traffic is oriented to/from SR-76. This is due to SR-76 serving as the primary corridor for weekday home-to-work and work-to-home trips during the morning and evening hours. Trips specifically oriented to/from the Mission Avenue shopping corridor would be less likely during these weekday peak hour time frames; however there is the potential for stop-over trips along the home-to-work and

work-to-home commuter route. Thus, with the connection of Frazee Road to Academy Road, it was assumed that approximately 5% of existing traffic from Old Grove Road and 10% of existing traffic from Frazee Road would use Academy Road to ultimately reach the commercial uses along Mission Avenue. The same assumptions were assumed for the Buildout (Year 2030) volumes. Table 4.14-1 shows existing average daily traffic (ADT) volumes compared to Buildout (Year 2030) traffic volumes that would be rerouted with the proposed connection of Frazee Road to Academy Road.

**Table 4.14-1  
Rerouted Traffic Volumes**

Street Segment/Intersection	Existing	Buildout (Year 2030)
<i>Street Segment</i>	<i>ADT</i>	
<i>SR-76</i>		
El Camino Real to Rancho Del Oro Drive	(225)	(238)
Rancho Del Oro Drive to Old Grove Road	(45)	(475)
<i>Mission Avenue</i>		
El Camino Real to Douglas Drive	113	119
Douglas Drive to Rancho Del Oro Drive	225	238
Rancho Del Oro Drive to Academy Road	450	475
<i>Frazee Road</i>		
Academy Road to Old Grove Road	450	475
<i>Academy Road</i>		
Frazee Road to Mission Avenue	910	950
<i>Intersections</i>		
<i>AM+PM Volumes</i>		
Mission Avenue/Douglas Drive	28	37
SR-76/Douglas Drive	(29)	(35)
Mission Avenue/Rancho Del Oro Drive	29	35
SR-76/Rancho Del Oro Drive	(56)	(72)
Mission Avenue/Academy Road	56	72
Frazee Road/Old Grove Road	(5)	(7)
SR-76/Old Grove Road	(56)	(72)

**Note:** ADT = average daily traffic

**Source:** LLG 2015.

### ***Chapter Lane***

Chapter Lane, a private road which borders the northwestern portion of the site, currently provides access to the North County Alano Club located on the north side of the roadway, one private residence, and serves as a secondary access road for the Mission San Luis Rey Parish. Only portions of Chapter Lane are on proposed project property.

The project proposes to improve Chapter Lane to provide half width plus 12-foot improvements along the project site frontage including curb, gutter and sidewalk enhancements. In addition, a cul-de-sac is proposed at the terminus of Chapter Lane where it bends to the south and a gated access to the parish property would be provided that would be operated at the discretion of the parish. This would prohibit cut-through traffic from using Chapter Lane between Frazee Road and Mission Avenue. Sidewalk enhancements along the project site frontage would separate any pedestrians in the area from vehicular traffic which is an improvement over existing roadway conditions.

### **Study Scenarios**

The following scenarios were analyzed in the Traffic Impact Analysis for their effect on traffic conditions; each condition that analyzes the “Plus Project” scenario includes the proposed connection of Frazee Road to Academy Road:

- Existing
- Existing + Project (With Frazee Road Connection)
- Existing + Near-Term Cumulative Projects
- Existing + Near-Term Cumulative Projects + Project (With Frazee Road Connection)
- Buildout (Year 2030) With General Plan Land Use (GP LU)
- Buildout (Year 2030) With General Plan Amendment Land Use (GPA LU)

Note that Buildout (Year 2030) GP LU is a “Without Project” buildout scenario and Buildout (Year 2030) GPA LU is a “Plus Project” buildout scenario, as labeled in the Traffic Impact Analysis. To remain consistent with the traffic report, this EIR will use the same labeling of scenarios.

In addition to the above scenarios, the Traffic Impact Analysis included analysis of proposed project traffic without the proposed connection of Frazee Road to Academy Road (existing roadway conditions). Thus, baseline volumes were not rerouted under these “No Frazee Road Connection” scenarios:

- Existing + No Frazee Road Connection
- Existing + Near-Term Cumulative Projects + No Frazee Road Connection
- Buildout (Year 2030) No Frazee Road Connection

## Analysis Methodologies

The above roadway segments and intersections were analyzed for their Level of Service (LOS) with designations ranging from A, representing optimal operating conditions, to F, representing the worst operating conditions.

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 16 of the 2000 Highway Capacity Manual (HCM), with the assistance of the Synchro (version 7) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. Unsignalized intersections were 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 17 of the 2000 Highway Capacity Manual (HCM), with the assistance of the Synchro (version 7) computer software. Average vehicle delay values for both signalized and unsignalized intersections were then matched with corresponding LOS designations. These LOS designations for signalized and unsignalized intersections are shown in Table 4.14-2 and Table 4.14-3, respectively, below. Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Oceanside'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. This information can be found in Table 4.14-4 below.

**Table 4.14-2  
HCM Level of Service for Signalized Intersection**

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication.	≤ 10
B	Minimal delays: an occasion approach phase is fully utilized. Drivers begin to feel restricted.	> 10 - 20
C	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 20 - 35
D	Tolerable delays: drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35 - 55
E	Significant delays: volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues form upstream	> 55 - 80
F	Excessive delays: represents condition at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

Source: City of Oceanside 2012.

**Table 4.14-3**  
**HCM Level of Service Description for Unsignalized Intersections**

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	No delay for stop-controlled approaches.	≤ 10
B	Operations with minor delay.	> 10 - 15
C	Operations with moderate delays.	> 15 - 25
D	Operations with some delays.	> 25 - 35
E	Operations with high delays and long queues.	> 35 - 50
F	Operations with extreme congestions, with very high delays and long queues unacceptable to most drivers.	> 50

Source: City of Oceanside 2012.

**Table 4.14-4**  
**Oceanside Circulation Element Roadway Classification LOS and Capacity**

Class	Lanes	Level of Service				
		A	B	C	D	E
Expressway	6	30,000	42,000	60,000	70,000	80,000
Expressway	4	25,000	35,000	50,000	55,000	60,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
6-Lane Major Arterial	6	20,000	28,000	40,000	45,000	50,000
5-Lane Major Arterial	5	17,500	24,500	35,000	40,000	45,000
4-Lane Major Arterial	4	15,000	21,000	30,000	35,000	40,000
Secondary Collector (4 lanes with 2-way left-turn lane)	4	10,000	14,000	20,000	25,000	30,000
Secondary Collector (4 lanes without 2 way left-turn lane, with left turn pockets)	4	9,000	13,000	18,000	22,000	30,000
Collector (commercial fronting, 2-lanes with 2-way left-turn lane)	2	5,000	7,000	10,000	13,000	15,000
Collector (residential streets or industrial fronting)	2	4,000	5,500	7,500	9,000	10,000
Local Street	2	--	--	2,200	---	---

Source: City of Oceanside 2012.

### *Significance Criteria*

The City of Oceanside uses the published SANTEC/ITE guidelines for the determination of the significance of impacts. A project is considered to have a significant impact if the new project traffic has decreased the operations of surrounding roadways by a defined threshold. The defined thresholds are shown in Table 4.14-5 below for roadway segments and intersections.

If a project exceeds the thresholds in Table 4.14-5, then the project may be considered to have a significant project impact. A feasible mitigation measure will need to be identified to return the impact within the thresholds (pre-project + allowable increase) or the impact will be considered significant and unmitigated.

Two types of traffic-related impacts were identified: direct traffic impacts and cumulative traffic impacts. Direct impacts were calculated where project-added traffic resulted in a degradation in LOS from acceptable LOS D or better operations to below LOS D conditions. Cumulative impacts were calculated where project-added traffic resulted in significant increase in intersection delay or street segment volume-to-capacity ratios over the allowable thresholds shown in Table 4.14-5 at locations with pre-existing LOS deficiencies (LOS E or F).

**Table 4.14-5  
Traffic Impact Significant Thresholds**

Level of Service with Project <sup>(1)</sup>	Allowable Increase Due to Project Impacts <sup>(2)</sup>		
	Roadway Segments		Intersections
	V/C	Speed (mph)	Delay (sec)
E and F	0.02	1	2

<sup>(1)</sup> All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis. The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions).

<sup>(2)</sup> If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are deemed to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigations (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note above) the project applicant shall be responsible for mitigating significant impact changes.

V/C = Volume to Capacity Ratio.

Speed = Arterial speed measure in miles per hour.

Delay = Average stopped delay per vehicle measure in seconds

Source: LLG 2015.

## 4.14.2 Relevant Plans, Policies, and Ordinances

### City of Oceanside General Plan Circulation Element

As required by State of California Law, the City of Oceanside has included and adopted a Circulation Element as part of their General Plan. In tandem with the other elements of the General Plan, the Circulation Element creates and addresses goals and policies as they related to the City's transportation system. The Master Transportation Roadway Plan, a subsection of the Circulation Element, focuses on maintaining and improving the City's roadways that comprise the transportation network by providing service standards, objectives, and policies.

### SANDAG 2050 Regional Transportation Plan

The 2050 Regional Transportation Plan (RTP) acts as a blueprint for regional plan for maintaining and improving the transportation systems. The Plan focuses on building a transportation system that encompasses sustainability, land use patterns, and social equity. The RTP also outlines plans for maintaining, improving, and developing regional modes of transit, including rail systems, bus rapid transit, and roadways.

### 4.14.3 Existing Conditions

The following describes the existing conditions of roadways, street systems, transit, and bicycle access of the traffic study area. A map of the study area with existing intersection and roadway segment details is shown in Figure 4.14-1. Roadway classifications are determined by the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan.

#### Existing Roadway Circulation System

##### *State Route 76 (SR-76)*

SR-76 is classified on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan as a Six-Lane Expressway from Interstate 5 to Melrose Drive. It is generally an east-west facility and is currently built as a four-lane divided expressway in the Project study area. The posted speed limit is 55 mph. Class II bicycle lanes are provided on both sides of the roadway and on-street parking is prohibited.

##### *Mission Avenue*

Mission Avenue is classified on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan as a Four-Lane Major Arterial from Foussat Road to Rancho Del Oro Drive and as a Secondary Collector from Rancho Del Oro Drive to Frazee Road, within the study area. It is currently built as a four-lane divided roadway between Horne Street to just west of Rancho Del Oro Drive. Mission Avenue drops one lane in the eastbound direction to become a three-lane road up to the Rancho Del Oro Drive intersection. From there, it narrows to a two-lane road divided by a striped median from just west of Rancho Del Oro Drive to just west of Old Grove Road. Mission Avenue is a four-lane divided roadway from west of Old Grove Road to Frazee Road, where it terminates. However, a section on this stretch from Old Grove Road to Valley Heights Road is only two lanes. Class II bicycle lanes are provided on both sides of the roadway from I-5 to Frazee Road. The posted speed limit is 45 mph and on-street parking is not permitted.

##### *Frazee Road*

Frazee Road is classified on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan as a Local Collector from just west of Old Grove Road to Old Grove Road. From Old Grove Road to College Boulevard, it is classified as a Four-Lane Major Arterial and as a Collector Road east of College Boulevard, within the study area. Frazee Road is currently constructed as a two-lane undivided roadway east of Academy Road to Old Grove Road. It widens to a four-lane divided roadway between Old Grove Road and College Boulevard and then narrows to a two-lane divided roadway east of College Boulevard. The

posted speed limit is 45 mph north of SR-76 to Old Grove Road and 35 mph south of SR-76. Class II bicycle lanes are provided along the majority of both sides of the roadway and on-street parking is not permitted.

Frazee Road is currently paved from Academy Road to Old Grove Road. However, two existing barricades prevent access between the residential neighborhood to the northeast and Academy Road.

Under the “Plus Project” analyses provided in this EIR, the connection of Frazee Road between Mission Avenue and Old Grove Road was assumed to be open. Section 4.14.1.1 provides further detail on the Frazee Road connection. A separate analysis of the “No Frazee Road Connection” condition assumes the continued closure between Frazee Road and Academy Road. Section 4.14.5 provides an analysis of the proposed project without the connection of Frazee Road to Academy Road.

### ***Academy Road***

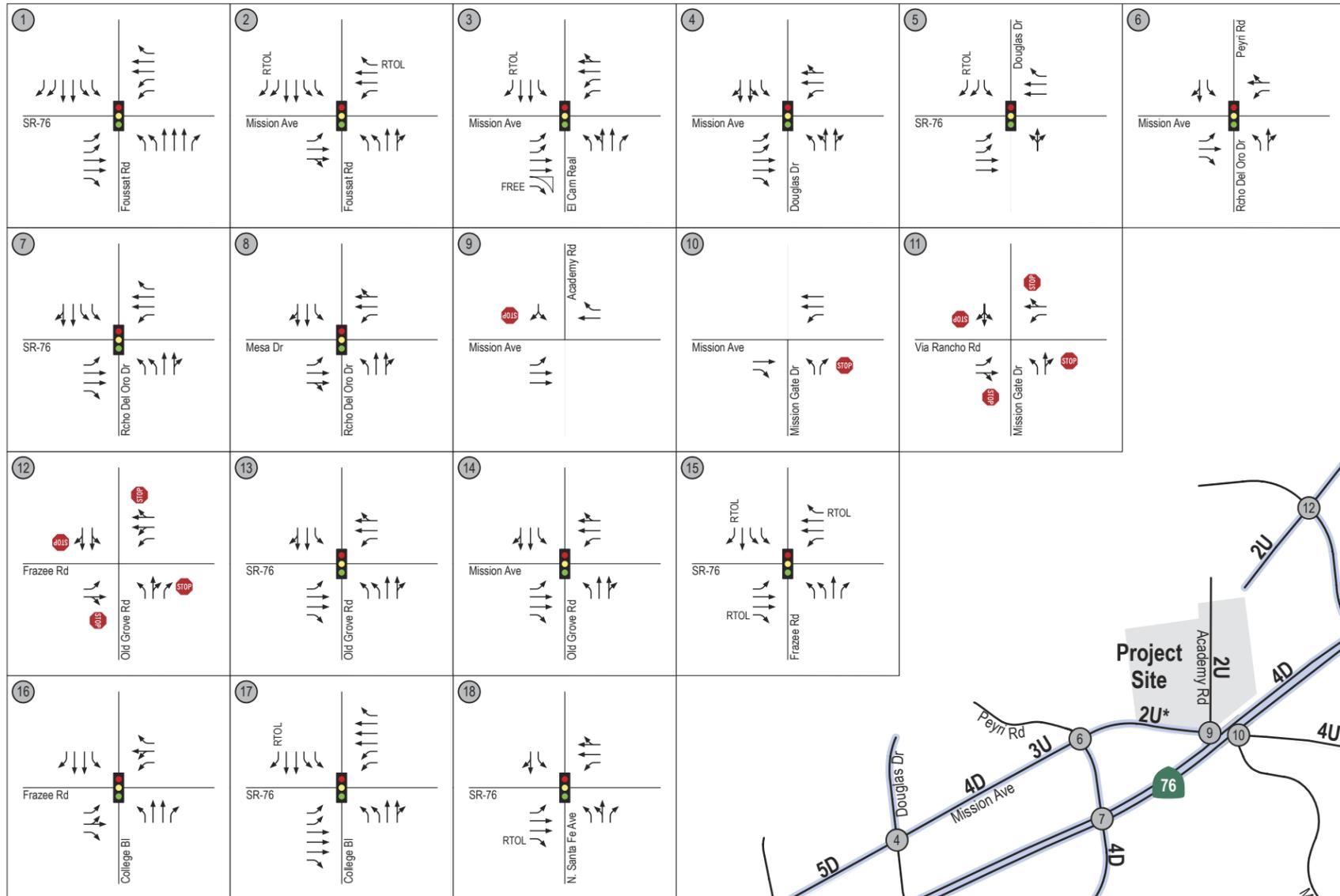
Academy Road is an unclassified roadway on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan and currently built as a two-lane undivided roadway within the study area. Academy Road provides one of two access locations to the San Luis Rey Homes, Inc. manufactured homes retirement community and also provides secondary access to the Mission San Luis Rey Parish via its connection to Chapter Lane. There is no posted speed limit present. Bicycle lanes are not provided and on-street parking is not permitted.

### ***El Camino Real***

El Camino Real is classified on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan and currently built as a Four-Lane Major Arterial between Mission Avenue and Mesa Drive, within the study area. The posted speed limit is 45 mph. Class II bicycle lanes are provided south of Mission Avenue and on-street parking is not permitted.

### ***Rancho Del Oro Drive***

Rancho Del Oro Drive is classified on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan as a Four-Lane Major Arterial, within the study area. Rancho Del Oro Drive is currently built to its classification as a four-lane divided roadway to just north of San Ramon Drive where a short segment narrows to a four-lane undivided roadway. South of San Ramon Drive to Via Rancho Road, it is a four-lane roadway with a two-way left-turn lane (TWLTL). Rancho Del Oro Drive widens back to a four-lane divided roadway south of Via Rancho Road to Mesa Drive. There are Class II bicycle lanes on both sides of the roadway and on-street parking is not permitted. The posted speed limit is between 45 and 50 mph within the study area.



↗ ↘ ↙ ↚ Turn Lane Configurations  
 Intersection Control  
 # Number of Travel Lanes  
 D / U Divided / Undivided Roadway  
 Two-Way Left Turn Lane  
 Bike Lanes  
 RTOL Right Turn Overlap  
 FREE Free Flow

\*Roadway contains a striped median with Left-turn pockets.



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**FIGURE 4.14-1  
Existing Roadway Network**

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***Old Grove Road***

Old Grove Road is classified on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan as a Four-Lane Major Arterial between Frazee Road and College Boulevard, and as a Collector Road between College Boulevard and Pine Ridge Road, within the study area. It is currently built as a two-lane undivided roadway north of Frazee Road, a four-lane divided roadway between Frazee Road and College Boulevard, and a two-lane divided roadway south of College Boulevard to Pine Ridge Road. The posted speed limit is 40 mph. Class II bicycle lanes are provided and on-street parking is prohibited.

***College Boulevard***

College Boulevard is classified on the City of Oceanside Circulation Element 2030 Master Transportation Roadway Plan and currently built as a Six-Lane Major Arterial north of SR-76 and as a Four-Lane Major Arterial south of SR-76, within the study area. Class II bicycle lanes are provided on both sides of the roadway. On-street parking is not permitted on any portion of College Boulevard within the study area. The posted speed limit is 40 mph.

**Existing Traffic Volumes**

Existing AM (7:00 AM - 9:00 AM) and PM (4:00 PM - 6:00 PM) peak hour ADT volumes were collected in December 2012 while schools were in session. Table 4.14-6 below shows existing roadway segments ADTs. Figure 4.14.-2 shows existing ADTs and intersection AM/PM peak hour turning movements.

**Table 4.14-6  
Existing Roadway Segment Traffic Volumes**

<b>Roadway Segment</b>	<b>ADT <sup>(1)</sup></b>
<i>State Route 76</i>	
1. Canyon Drive to Foussat Road	54,000
2. Foussat Road to El Camino Real	51,000
3. El Camino Real to Rancho Del Oro Drive	45,500
4. Rancho Del Oro Drive to Old Grove Road	44,000
5. Old Grove Road to College Boulevard	44,000
<i>Mission Avenue</i>	
6. El Camino Real to Douglas Drive	17,490
7. Douglas Drive to Rancho Del Oro Drive	16,270
8. Rancho Del Oro Drive to Academy Road	16,200
9. Academy Road to Old Grove Road	9,900
<i>Frazee Road</i>	
10. Academy Road to Old Grove Road	1,630
11. Old Grove Road to SR-76	4,200

**Table 4.14-6  
Existing Roadway Segment Traffic Volumes**

Roadway Segment	ADT <sup>(1)</sup>
<i>El Camino Real</i>	
12. SR- 76 to Mesa Drive	21,600
<i>Rancho Del Oro Drive</i>	
13. SR- 76 to Mesa Drive	14,060
<i>Old Grove Road</i>	
14. Mission Avenue to Mesa Drive	11,690
<i>College Boulevard</i>	
15. Frazee Road to Mesa Drive	24,680

<sup>(1)</sup> Average Daily Traffic Volume.

Source: LLG 2015.

### Existing Transit

Transit service in the study area is provided by the North County Transit District (NCTD). Based on information provided in the City of Oceanside Circulation Element, the following transit conditions are noted.

Current local bus transit service is provided in the study area via Routes 303, 309, 313, and 333.

Route 303 travels from the Oceanside Transit Center to the Vista Transit Center and travels along Mission Avenue and Douglas Drive within the study area. This route provides 15 minute headways during weekday hours.

Route 309 travels from College Boulevard Town Center North to Encinitas Station and travels along El Camino Real and Douglas Drive within the study area. This route provides 30 minute headways during weekday hours.

Route 313 travels from the Oceanside Transit Center to College Boulevard Town Center North and travels along Mission Avenue and Rancho Del Oro Road within the study area. This route provides hourly service during weekdays.

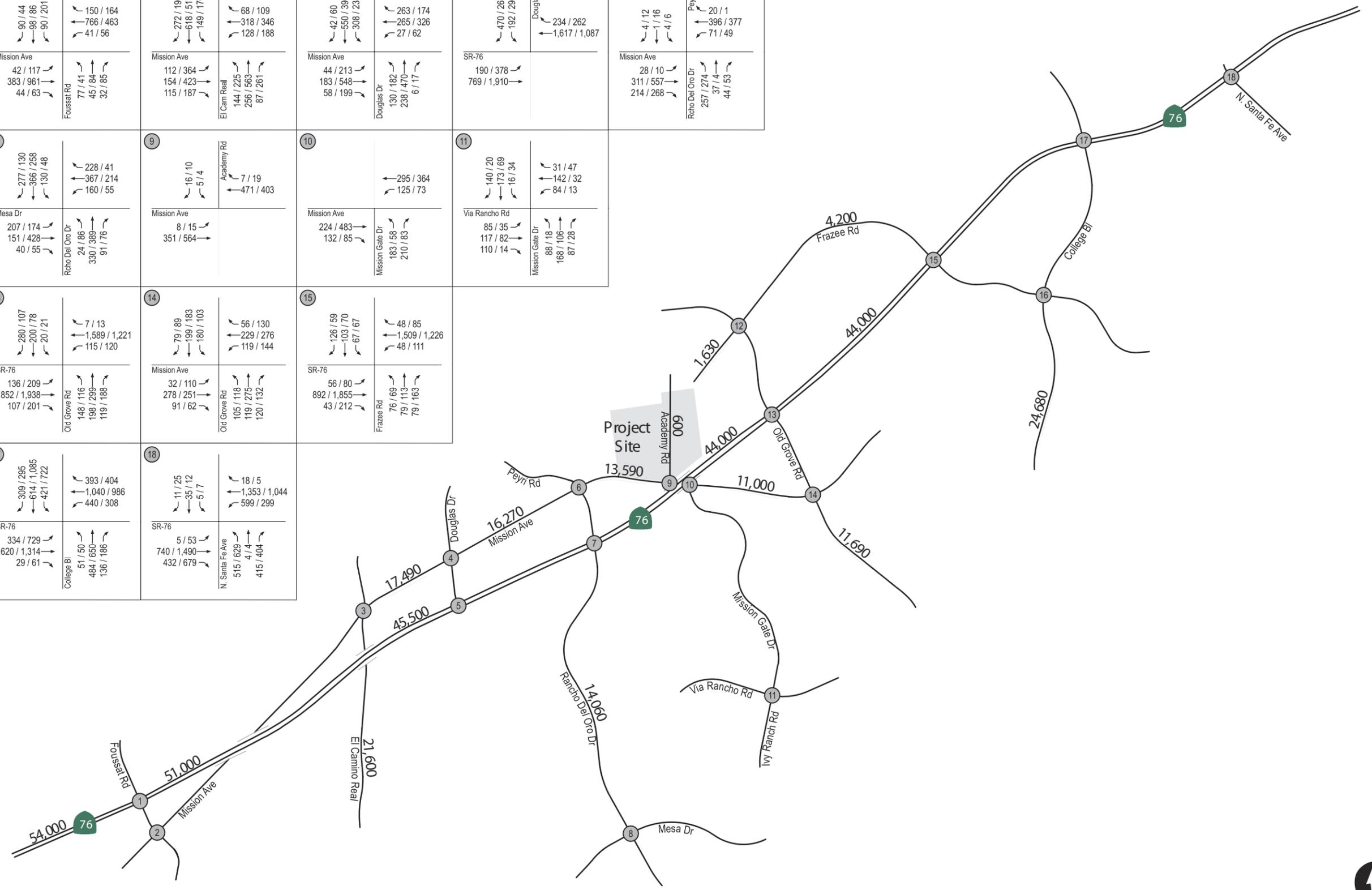
Route 333 travels from College Boulevard Town Center North to the Vista Transit Center and travels along Frazee Road and Old Grove Road within the study area. This route provides hourly service during the weekdays.

<p>1</p> <p>SR-76 Fousat Rd</p>	<p>2</p> <p>Mission Ave Fousat Rd</p>	<p>3</p> <p>Mission Ave El Camino Real</p>	<p>4</p> <p>Mission Ave Douglas Dr</p>	<p>5</p> <p>SR-76 Douglas Dr</p>	<p>6</p> <p>Mission Ave Rcho Del Oro Dr</p>
<p>7</p> <p>SR-76 Rcho Del Oro Dr</p>	<p>8</p> <p>Mesa Dr Rcho Del Oro Dr</p>	<p>9</p> <p>Mission Ave Academy Rd</p>	<p>10</p> <p>Mission Ave Mission Gate Dr</p>	<p>11</p> <p>Via Rancho Rd Mission Gate Dr</p>	
<p>12</p> <p>Frazee Rd Old Grove Rd</p>	<p>13</p> <p>SR-76 Old Grove Rd</p>	<p>14</p> <p>Mission Ave Old Grove Rd</p>	<p>15</p> <p>SR-76 Frazee Rd</p>		
<p>16</p> <p>Frazee Rd College Bl</p>	<p>17</p> <p>SR-76 College Bl</p>	<p>18</p> <p>SR-76 N. Santa Fe Ave</p>			

# Study Intersections

AM / PM AM / PM Intersection Peak Hour Volumes

X X X X Average Daily Trips



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### Existing Bicycle Access

Based on information in the City of Oceanside Circulation Element and field observations by LLG, there are Class II bike lanes provided along the major street segments within the study area described above, with the following exceptions:

- The portion of Mission Avenue between Academy Road and Old Grove Road provides a Class III bike route.
- The portion of Frazee Road classified as a Collector, east of College Boulevard, does not provide bicycle facilities. In addition, the portion of Frazee Road between Academy Road and Rawhide Way does not provide bicycle facilities. According to the City’s Planned Bicycle Facilities Map contain in the Circulation Element, a Class II bike lane is recommended on this portion of Frazee Road.
- El Camino Real north of Mission Avenue does not provide bicycle facilities.

### Analysis of Existing Conditions

Table 4.14-7 below summarizes existing peak hour intersection LOS conditions. 14 out of 18 of the studied intersections operate at a LOS D or better, while the remaining 6 operate at a LOS of E or F.

- Intersection #1. SR-76 / Foussat Road - LOS E during the PM peak hour
- Intersection #5. SR-76 / Douglas Drive - LOS F during the PM peak hour
- Intersection #7. SR-76 / Rancho Del Oro Drive – LOS F during the PM peak hour
- Intersection #13. SR-76 / Old Grove Road – LOS E during the PM peak hour
- Intersection #17. SR-76 / College Boulevard – LOS F during the PM peak hour
- Intersection #18. SR-76 / North Santa Fe Avenue – LOS E/F during the AM/PM peak hours

**Table 4.14-7  
Existing Intersection Operations**

Intersection	Control Type	Peak Hour	Existing	
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>
1. SR-76/Foussat Road	Signal	AM	46.2	D
		PM	58.4	E
2. Mission Avenue/Foussat Road	Signal	AM	27.3	C
		PM	28.7	C
3. Mission Avenue/El Camino Real	Signal	AM	25.2	C
		PM	37.0	C

**Table 4.14-7  
Existing Intersection Operations**

Intersection	Control Type	Peak Hour	Existing	
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>
4. Mission Avenue/Douglas Drive	Signal	AM	29.7	C
		PM	31.8	C
5. SR-76/Douglas Drive	Signal	AM	35.5	D
		PM	88.7	F
6. Mission Avenue/Rancho Del Oro Drive	Signal	AM	29.0	C
		PM	17.4	B
7. SR-76/Rancho Del Oro Drive	Signal	AM	57.0	E
		PM	60.7	E
8. Rancho Del Oro Drive/Mesa Drive	Signal	AM	26.7	C
		PM	20.7	C
9. Mission Avenue/Academy Road	MSSC <sup>(3)</sup>	AM	13.2	B
		PM	12.9	B
10. Mission Avenue/Mission Gate Drive	MSSC	AM	19.9	C
		PM	17.6	C
11. Mission Gate Drive/Via Rancho Road	AWSC <sup>(4)</sup>	AM	17.6	C
		PM	8.4	A
12. Frazee Road/Old Grove Road	AWSC	AM	12.3	B
		PM	8.7	A
13. SR-76/Old Grove Road	Signal	AM	45.4	D
		PM	71.0	E
14. Mission Avenue/Old Grove Road	Signal	AM	29.3	C
		PM	28.3	C
15. SR-76/Frazee Road	Signal	AM	27.9	C
		PM	38.7	D
16. Frazee Road/College Boulevard	Signal	AM	16.6	B
		PM	22.0	C
17. SR-76/College Boulevard	Signal	AM	53.0	D
		PM	87.0	F
18. SR-76/North Santa Fe Avenue	Signal	AM	59.4	E
		PM	195.3	F

<sup>(1)</sup> Average delay expressed in seconds per vehicle.

<sup>(2)</sup> Level of Service.

<sup>(3)</sup> MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.

<sup>(4)</sup> AWSC = All Way Stop-Controlled intersection. Average delay reported.

**Source:** LLG 2015.

Table 4.14-8 below summarizes existing LOS operations for roadway segments. All segments operate at a LOS D or better except for Mission Avenue between Rancho Del Oro Drive and Academy Road which operates at a LOS F.

**Table 4.14-8  
Existing Roadway Segment Traffic Volumes**

Roadway Segment	Currently Built As	Capacity (LOS E) <sup>(1)</sup>	ADT <sup>(2)</sup>	LOS <sup>(3)</sup>	V/C <sup>(4)</sup>
<i>State Route 76</i>					
1. Canyon Drive to Foussat Road	4 -lane Expressway	60,000	54,000	D	0.900
2. Foussat Road to El Camino Real	4-lane Expressway	60,000	51,000	D	0.850
3. El Camino Real to Rancho Del Oro Drive	4-lane Expressway	60,000	45,500	C	0.758
4. Rancho Del Oro Drive to Old Grove Road	4-lane Expressway	60,000	44,000	C	0.733
5. Old Grove Road to College Boulevard	4-lane Expressway	60,000	44,000	C	0.733
<i>Mission Avenue</i>					
6. El Camino Real to Douglas Drive	5-lane Major Arterial <sup>(5)</sup>	40,000	17,490	B	0.437
7. Douglas Drive to Rancho Del Oro Drive	4-lane Major Arterial	40,000	16,270	B	0.407
8. Rancho Del Oro Drive to Academy Road	2-lane Collector w/TWLTL <sup>(6)</sup>	15,000	13,590	E	0.906
9. Academy Road to Old Grove Road	4-lane Secondary Collector	25,000	11,100	B	0.440
<i>Frazer Road</i>					
10. Academy Road to Old Grove Road	2-lane Collector	10,000	1,630	A	0.163
11. Old Grove Road to SR-76	4-lane Major Arterial	40,000	4,200	A	0.105
<i>El Camino Real</i>					
12. SR- 76 to Mesa Drive	4-lane Major Arterial	40,000	21,600	C	0.540
<i>Rancho Del Oro Drive</i>					
13. SR- 76 to Mesa Drive	4-lane Secondary Arterial w/TWLTL <sup>(7)</sup>	30,000	14,060	C	0.469
<i>Old Grove Road</i>					
14. Mission Avenue to Mesa Drive	4-lane Major Arterial	40,000	11,690	A	0.292
<i>College Boulevard</i>					
15. Frazer Road to Mesa Drive	4-lane Major Arterial	40,000	24,680	C	0.617

TWLTL = Two way left turn lane.

<sup>(1)</sup> Capacities based on City of Oceanside Roadway Classification Table, 2012.

<sup>(2)</sup> Average Daily Traffic Volumes.

<sup>(3)</sup> Level of Service.

<sup>(4)</sup> Volume to Capacity.

<sup>(5)</sup> Roadway is built with three lanes eastbound and two lanes westbound.

<sup>(6)</sup> 940 feet east of Douglas Drive, Mission Avenue narrows to a 2-3 lanes roadway up to Academy Road. For purposes of being conservative, the two-lane Collector capacity of 15,000 ADT was used.

<sup>(7)</sup> Rancho Del Oro Drive varies between a four-lane divided and undivided roadway (also with a TWLTL portion) south of ST-76 to Mesa Drive. To be conservative, the four-lane Secondary Arterial capacity of 30,000 ADT was used.

**Source:** LLG 2015.

#### 4.14.4 Thresholds of Significance

The significance criteria used to evaluate the project impacts to traffic and circulation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to traffic and circulation would occur if the project would:

- A. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance or the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- B. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- C. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- D. Substantially increase hazards due to a design feature (e.g., sharp curves, or dangerous intersections) or incompatible uses (e.g., farm equipment).
- E. Result in inadequate emergency access.
- F. Conflict with adopted policies, plans, or programs regarding public transit, bicycles, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

#### 4.14.5 Impacts Analysis

- A. ***Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance or the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?***

It should also be noted that the connection of Frazee Road to Academy Road was assumed to be open under the “Plus Project” conditions. As a result of this connection, it would be expected that existing on-the-ground traffic, as well as project generated traffic would utilize this new connection to travel between Old Grove Road and Mission Avenue. A separate analysis also assesses the traffic generated by the proposed project with the assumption that the closure between Frazee Road and Academy Road would remain.

### Project Trip Generation, Distribution, and Assignment

Proposed project trip generations using the SANDAG (Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002. Three resident trip rates based on the proposed project dwelling unit densities were used to calculate total Project trip generation. As outlined in Table 4.14-9 below, the project would generate 289 AM peak hour trips and 353 PM peak hour trips with a total 3,640 ADT volume.

**Table 4.14-9  
Project Trip Generation**

Land Use	Size <sup>(3)</sup>	Daily Trip Ends (ADTs) <sup>(1)</sup>		AM Peak Hour					PM Peak Hour				
		Rate <sup>(2)</sup>	Volume	% of ADT <sup>(2)</sup>	In:Out	Volume			% of ADT <sup>(2)</sup>	In:Out	Volume		
					Split <sup>(2)</sup>	In	Out	Total		Split <sup>(2)</sup>	In	Out	Total
Single Family Detached Residential Units (≤ 6 du/ac)	62 du	10/du	620	8%	3:7	15	35	50	10%	7:3	43	19	62
Multi-Family Attached Residential Units (≤ 20 du/ac)	258 du	8/du	2,064	8%	2:8	33	132	165	10%	7:3	144	62	206
Multi-Family Attached Residential Units (≥ 20 du/ac)	100 du	6/du	600	8%	2:8	10	38	48	9%	7:3	38	16	54
<b>Total Trip Generation</b>			<b>3,284</b>	--	--	<b>58</b>	<b>205</b>	<b>263</b>	--	--	<b>225</b>	<b>97</b>	<b>322</b>

du/ac = dwelling units per acre.

<sup>(1)</sup> Average daily traffic volumes rounded to the nearest tenth.

<sup>(2)</sup> Rates taken from SANDAG (Not So) Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region, May 2003.

Source: LLG 2015.

The project-generated traffic was distributed to the street system based on site access parameters, roadway system characteristics, a SANDAG Select Zone Assignment (SZA) Traffic Model, and input from City of Oceanside staff.

The SANDAG model included the connection of Frazee Road between Mission Avenue and Old Grove Road. The traffic model distributed 25% of project traffic to the Frazee Road / Old Grove Road intersection and 75% of project traffic to the Academy Road / Mission Avenue intersection. Approximately 23% of the trips were regionally distributed on SR-76 and Mission Avenue to the west, 10% on SR-76 to the east, 39% oriented to the south and 9% to the north.

The remaining 19% were distributed to the local network as “local capture”. Local capture trips are trips that travel on the off-site street system but generally stay within the immediate area. These trips are typically attributed to grocery trips, school trips, and/or shopping trips.

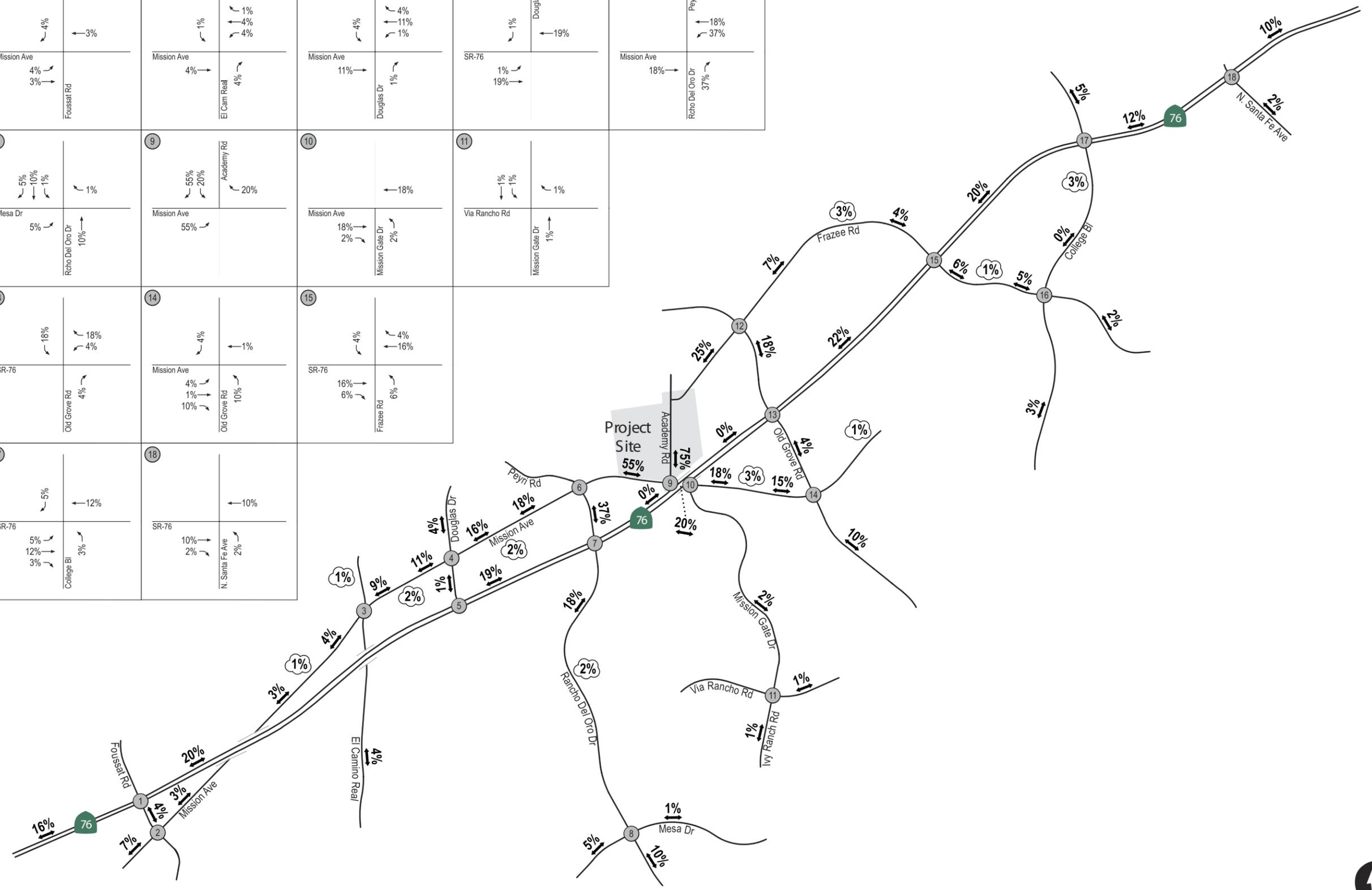
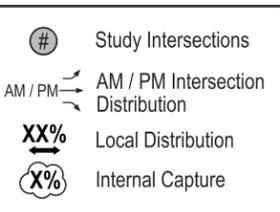
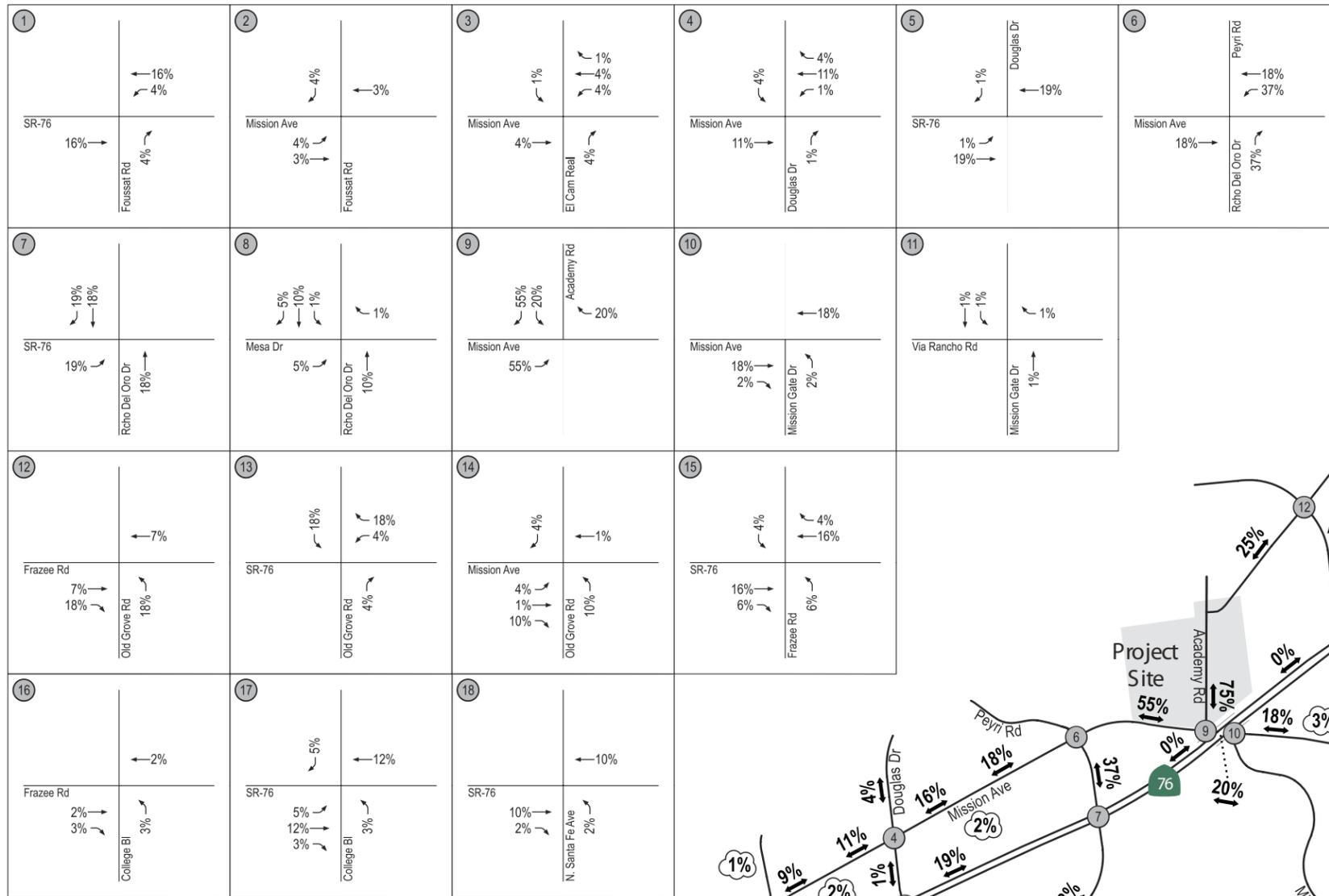
Once the traffic distribution was established, the project-generated traffic was assigned to the adjacent street system.

Figure 4.14-3 shows the regional and local distribution of project generated trips. Figure 4.14-4 depicts the project generated traffic assignment with the proposed connection of Frazee Road to Academy Road.

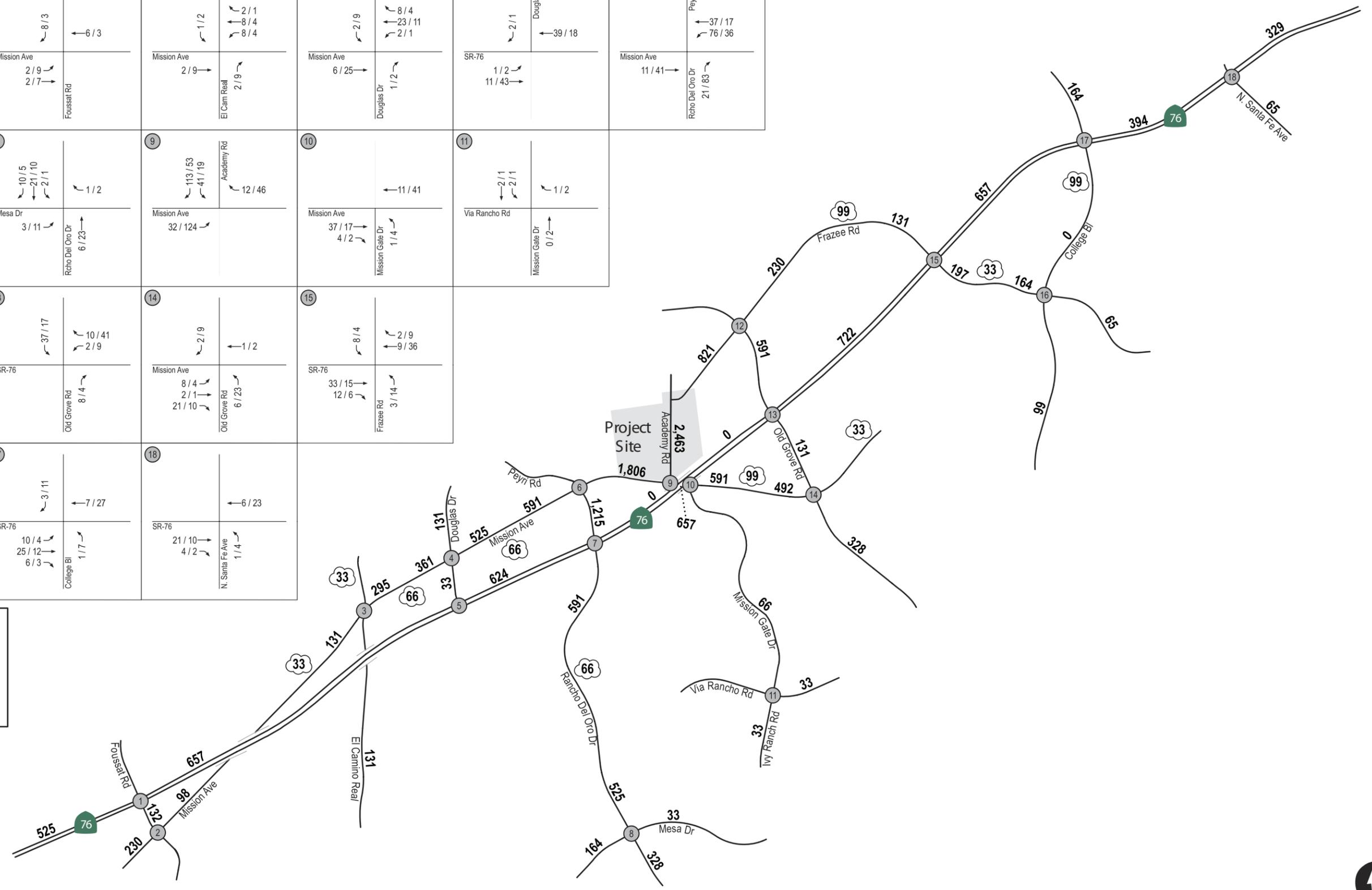
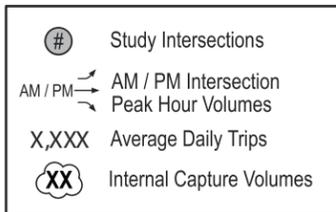
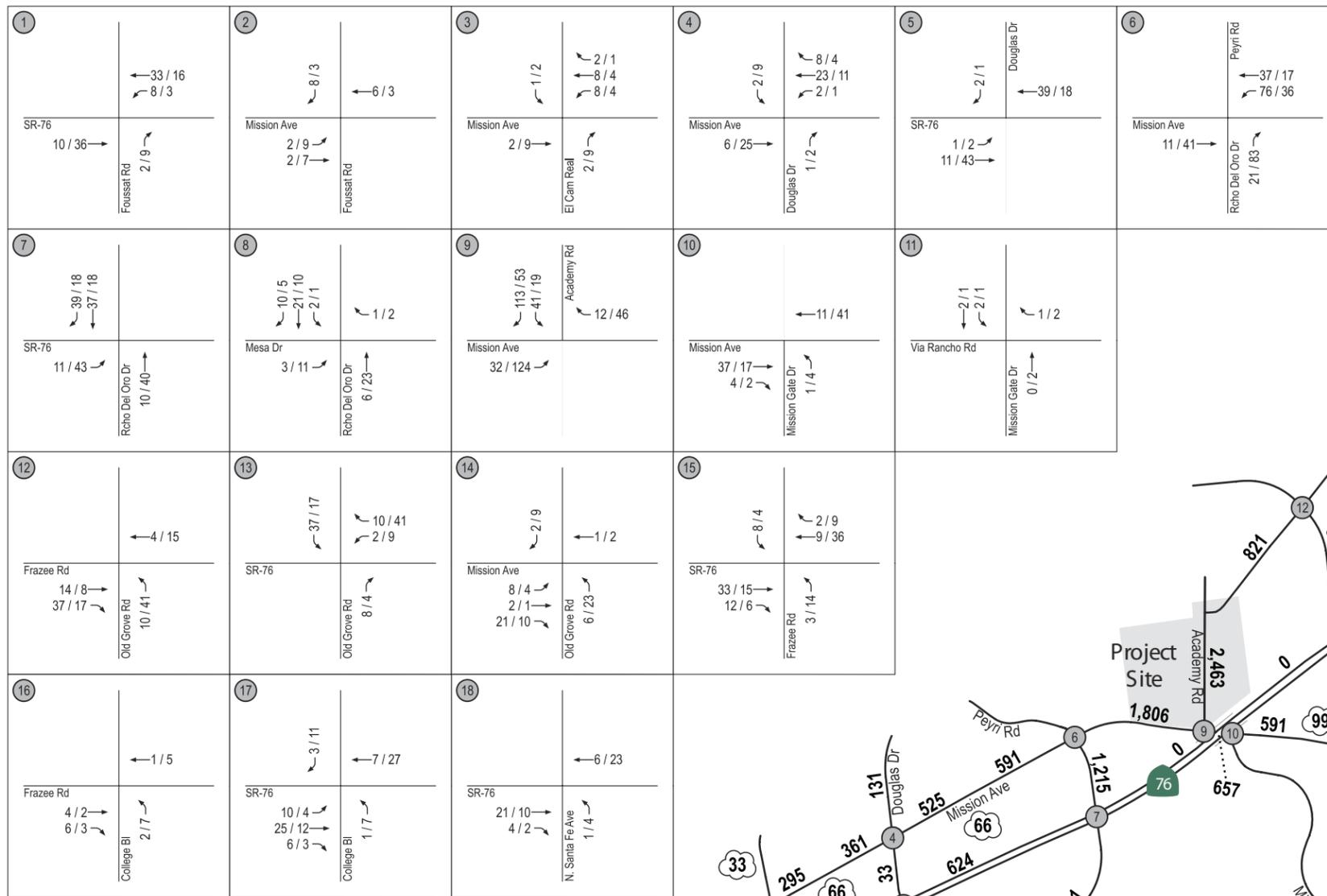
### **Existing + Project (With Proposed Frazee Road Connection)**

This section provides an analysis of existing traffic conditions with the addition of project trips from buildout of the proposed project. As discussed previously, this scenario includes the proposed connection of Frazee Road to Academy Road. This scenario is regarded as hypothetical when used in connection with a long-range development project such as the proposed project, which is not anticipated to reach full buildout until approximately 2030. The scenario is hypothetical because it assumes that the proposed project would be fully built out immediately and the corresponding full buildout traffic volumes added to existing roadway volumes and infrastructure. Thus, the existing plus project analysis presumes that the existing environment (existing traffic volumes, existing roadway infrastructure, and existing land uses) will not change over the long-term buildout of the project.

As a result of this presumption, future increases in traffic volumes attributable to other development projects (i.e., cumulative traffic volumes) are not accounted for in the analysis. This results in the analysis potentially understating project impacts because capacity that otherwise would be utilized by future development that precedes the proposed project buildout is now available to the project. On the other hand, because the scenario does not account for future planned roadway network improvements that would increase roadway capacities, the analysis potentially results in overstating project impacts. Furthermore, because the analysis does not take into account future development and related changing land uses, the analysis does not account for the corresponding change in trip distribution patterns that accompany changing land uses, which could result in either understating or overstating impacts.



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For these reasons, the analysis of the project’s potential impacts as measured against the existing conditions baseline that follows, as well as proposed mitigation measures, is presented for information purposes only. The identification of the project’s significant impacts, with recommended mitigation, will be based on the future year analyses that take into account cumulative traffic growth, as well as the changing roadway network and land uses that accompany a long-range development project such as this.

Table 4.14-10 and Table 4.14-11 below outline the Existing + Project (With Frazee Road Connection) LOS scenarios compared to existing LOS for intersections and roadway segments. Under Existing + Project scenarios, all intersections would continue to operate at acceptable condition, LOS D or better, except:

- Intersection #1: SR-76 / Foussat Road = LOS E during the PM peak hour
- Intersection #5: SR-76 / Douglas Drive = LOS F during the PM peak hour
- Intersection #7: SR-76 / Rancho Del Oro Drive – LOS E/E during the AM/PM peak hours
- Intersection #9: Mission Avenue / Academy Road – LOS E during the PM peak hours
- Intersection #13: SR-76 / Old Grove Road – LOS E during the PM peak hour
- Intersection #17: SR-76 / College Boulevard – LOS F during the PM peak hour
- Intersection #18: SR-76 / North Santa Fe Avenue – LOS E/F during the AM/PM peak hours

**Table 4.14-10  
Existing + Project (With Frazee Road Connection) Intersection Operations**

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Delay Δ <sup>(3)</sup>	Significant?
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>	Delay	LOS		
1. SR-76/Foussat Road	Signal	AM	46.2	D	52.0	D	5.8	No
		PM	58.4	E	59.0	E	0.6	
2. Mission Avenue/Foussat Road	Signal	AM	27.3	C	27.3	B	0.0	No
		PM	28.7	C	28.9	C	0.2	
3. Mission Avenue/El Camino Real	Signal	AM	25.2	C	25.2	C	0.0	No
		PM	37.0	D	37.0	C	0.0	
4. Mission Avenue/Douglas Drive	Signal	AM	29.7	C	30.0	C	0.3	No
		PM	31.8	C	31.8	C	0.0	
5. SR-76/Douglas Drive	Signal	AM	35.5	D	34.7	C	-0.8	No
		PM	88.7	F	88.7	F	0.0	
6. Mission Avenue/ Rancho Del Oro Drive	Signal	AM	29.0	C	29.1	C	0.1	No
		PM	17.4	B	19.5	B	2.1	
7. SR-76/Rancho Del Oro Drive	Signal	AM	57.0	E	<b>63.5</b>	<b>E</b>	<b>&gt;2.0</b>	<b>Yes</b>
		PM	60.7	E	<b>63.1</b>	<b>E</b>	<b>&gt;2.0</b>	

**Table 4.14-10**  
**Existing + Project (With Frazee Road Connection) Intersection Operations**

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Delay $\Delta$ <sup>(3)</sup>	Significant?
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>	Delay	LOS		
8. Rancho Del Oro Drive/Mesa Drive	Signal	AM	26.7	C	26.9	C	0.2	No
		PM	20.7	C	21.1	C	0.4	
9. Mission Avenue/ Academy Road	MSSC <sup>(4)</sup>	AM	13.2	B	34.0	D	20.8	<b>Yes</b>
		PM	12.9	B	<b>41.1</b>	<b>E</b>	<b>&gt;2.0</b>	
10. Mission Avenue/Mission Gate Drive	MSSC	AM	19.9	C	22.3	C	2.4	No
		PM	17.6	C	18.8	C	1.2	
11. Mission Gate Drive/Via Rancho Road	AWSC <sup>(5)</sup>	AM	17.6	C	17.9	C	0.3	No
		PM	8.4	A	8.5	A	0.1	
12. Frazee Road/Old Grove Road	AWSC	AM	12.3	B	12.7	B	0.4	No
		PM	8.7	A	9.1	A	0.4	
13. SR-76/Old Grove Road	Signal	AM	45.4	D	47.3	D	1.9	No
		PM	71.0	E	71.9	E	0.9	
14. Mission Avenue/Old Grove Road	Signal	AM	29.3	C	29.4	C	0.1	No
		PM	28.3	C	28.7	C	0.4	
15. SR-76/Frazee Road	Signal	AM	27.9	C	27.9	C	0.0	No
		PM	38.7	D	35.8	D	-2.9	
16. Frazee Road/College Boulevard	Signal	AM	16.6	B	16.7	B	0.1	No
		PM	22.0	C	22.4	C	0.4	
17. SR-76/College Boulevard	Signal	AM	53.0	D	53.3	D	0.3	No
		PM	87.0	F	87.8	F	0.8	
18. SR-76/North Santa Fe Avenue	Signal	AM	59.4	E	59.4	E	0.0	No
		PM	195.3	F	197.2	F	1.9	

(1) Average delay expressed in seconds per vehicle.

(2) Level of Service.

(3)  $\Delta$  denotes the increase in delay due to proposed project.

(4) MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.

(5) AWSC = All Way Stop-Controlled intersection. Average delay reported.

**Bold** typeface denotes a significant direct impact.

The "Plus Project" condition assumes the connection of Frazee Road to Academy Road and the expected rerouting of existing traffic volumes that would occur with this connection.

**Source:** LLG 2015.

**Table 4.14-11**  
**Existing + Project (With Frazee Road Connection) Roadway Segment Traffic Volumes**

Roadway Segment	Existing Capacity (LOS E) <sup>(1)</sup>	Existing			Rerouted Existing Volumes	Project-Added Volumes	Existing + Project			Δ <sup>(5)</sup>	Significant?
		ADT <sup>(2)</sup>	LOS <sup>(3)</sup>	V/C <sup>(4)</sup>			ADT	LOS	V/C		
<i>SR-76</i>											
1. Canyon Drive to Foussat Road	60,000	54,000	D	0.900	--	525	54,525	D	0.909	0.009	No
2. Foussat Road to El Camino Real	60,000	51,000	D	0.850	--	657	51,657	D	0.861	0.011	No
3. El Camino Real to Rancho Del Oro Drive	60,000	45,500	C	0.758	(225)	657	45,932	C	0.766	0.008	No
4. Rancho Del Oro Drive to Old Grove Road	60,000	44,000	C	0.733	(450)	0	43,550	C	0.726	(0.007) <sup>(9)</sup>	No
5. Old Grove Road to College Boulevard	60,000	44,000	C	0.733	--	722	44,722	C	0.745	0.012	No
<i>Mission Avenue</i>											
6. El Camino Real to Douglas Drive	40,000	17,490	B	0.437	113	361	17,964	B	0.449	0.012	No
7. Douglas Drive to Rancho Del Oro Drive	40,000	16,270	B	0.407	225	591	17,086	B	0.427	0.020	No
8. Rancho Del Oro Drive to Academy Road	15,000 <sup>(6)</sup>	13,590	E	0.906	450	1,806	<b>15,846</b>	<b>F</b>	<b>1.056</b>	<b>0.150</b>	<b>Yes</b>
9. Academy Road to Old Grove Road	25,000	11,100	B	0.440	--	657	11,657	B	0.466	0.026	No
<i>Frazee Road</i>											
10. Academy Road to Old Grove Road	10,000	1,630	A	0.163	450	821	2,901	A	0.290	0.127	No
11. Old Grove Road to SR-76	40,000	4,200	A	0.105	--	230	4,430	A	0.111	0.006	No

**Table 4.14-11**  
**Existing + Project (With Frazee Road Connection) Roadway Segment Traffic Volumes**

Roadway Segment	Existing Capacity (LOS E) <sup>(1)</sup>	Existing			Rerouted Existing Volumes	Project-Added Volumes	Existing + Project			Δ <sup>(5)</sup>	Significant?
		ADT <sup>(2)</sup>	LOS <sup>(3)</sup>	V/C <sup>(4)</sup>			ADT	LOS	V/C		
<i>El Camino Real</i>											
12. SR- 76 to Mesa Drive	40,000	21,600	C	0.540	--	131	21,731	C	0.543	0.003	No
<i>Rancho Del Oro Drive</i>											
13. SR- 76 to Mesa Drive	30,000 <sup>(6)</sup>	14,060	C	0.469	--	591	14,651	C	0.488	0.019	No
<i>Old Grove Road</i>											
14. Mission Avenue to Mesa Drive	40,000	11,690	A	0.292	--	328	12,018	A	0.300	0.008	No
<i>College Boulevard</i>											
15. Frazee Road to Mesa Drive	40,000	24,680	C	0.617	--	99	24,779	C	0.619	0.002	No

(1) Capacities based on City of Oceanside Roadway Classification Table, 2012.

(2) Average Daily Traffic Volumes.

(3) Level of Service.

(4) Volume to Capacity.

(5) Δ denotes project induced increase in the V/C ratio.

(6) Roadway is built with three lanes eastbound and two lanes westbound.

(7) 940 feet east of Douglas Drive, Mission Avenue narrows to a 2-3 lanes roadway up to Academy Road. For purposes of being conservative, the two-lane Collector capacity of 15,000 ADT was used.

(8) Rancho Del oro Drive varies between a four-lane divided and undivided roadway (also with a TWLTL portion) south of ST-76 to Mesa Drive. To be conservative, the four-lane Secondary Arterial capacity of 30,000 ADT was used.

(9) Decrease in volume due to rerouting of existing traffic with the connection of Frazee Road to Academy Road.

**Bold** typeface indicates a significant impact.

The “Plus Project” condition assumes the connection of Frazee Road to Academy Road and the expected rerouting of existing traffic volumes that would occur with this connection.

**Source:** LLG 2015.

Based on the aforementioned significance criteria, Intersection #7 and Intersection #9 were determined to have significant impacts generated by the addition of proposed project traffic due to a change in delay greater than 2.0 seconds from existing conditions and mitigation is required. While Intersections #13, #17, and #18 were calculated to operate at deficient LOS standards, project generated traffic would not increase the anticipated delay by more than the acceptable threshold of 2.0 seconds. Therefore, the proposed project would not be anticipated to cause significant impact to Intersections #13, #17, and #18 and mitigation is not required.

All roadway segments were estimated to continue operating at LOS D or better except for Segment #8, Mission Avenue between Rancho Del Oro Drive and Academy Road. Consistent with existing conditions, Segment #8 would operate under LOS F conditions. However the Vehicle to Capacity (V/C) ratio would increase by 0.194 which is beyond the specified criteria threshold of 0.020 for already deficiently operating roadway segments. Therefore, Segment #8 would be significantly impacted by project generated traffic under Existing + Project conditions and mitigation is required.

### Existing + Near-Term Cumulative Projects Conditions

City staff identified nine pending cumulative projects within the proposed project vicinity that could generate traffic. Table 4.14-12 below outlines the nine projects. Traffic generated by these projects was added to the existing traffic volumes to develop the Existing + Near-Term Cumulative Projects conditions. Project traffic was added to the near-term traffic volumes (with the rerouting of baseline Existing + Near-Term Cumulative Projects traffic) to arrive at the Existing + Near-Term Cumulative Projects + Project (With Frazee Road Connection) condition.

**Table 4.14-12**  
**Near-Term Cumulative Projects Summary**

Name	Project	ADT	AM		PM	
			In	Out	In	Out
Hi hope Ranch	93 single family units	930	22	65	72	28
Mission Cove Mixed-Use	150 apartments, 138 senior housing units, 5 KSF specialty retails, 2.75 KSF office, 2.75 KSF medical office, 60 adults senior day care, 50 children day care	2,080	58	102	104	75
Pacific Coast Business Park	1,100 KSF industrial, 518 KSF general office, 80.5 medical office	21,597	2,213	273	575	2,080
Rancho Guajome	6 single family units	60	1	4	4	2
Rancho Del Oro Village XII	303 residential multi-family units	2,424	39	154	169	73
Oceanside Pavilion	950 KSF commercial retail (retail, restaurant, movie theater, health club)	32,175	862	376	1,485	1,388

**Table 4.14-12**  
**Near-Term Cumulative Projects Summary**

Name	Project	ADT	AM		PM	
			In	Out	In	Out
Oceanpointe Development	200 multi-family units	1,600	26	102	112	48
Seagate Corporate Center (95% occupied)	384.5 KSF Business Park	372	30	5	12	32
El Corazon (Phases 1 and 2 Only)	Mixed-Use Master Plan	13,275	234	169	687	662
<b>Total Cumulative Projects</b>		<b>74,513</b>	<b>3,485</b>	<b>1,250</b>	<b>3,220</b>	<b>4,388</b>

ADT = Average Daily Traffic.

Source: LLG 2015.

As outlined in Table 4.14-13 below, the following intersections were calculated to operate at deficient LOS under Existing + Near-Term Cumulative + Project (With Frazee Road Connection) conditions:

- Intersection #1: SR-76 / Foussat Road – LOS E/F during the AM/PM peak hours
- Intersection #7: SR-76 / Rancho Del Oro Road – LOS F/F during the AM/PM peak hours
- Intersection #9: Mission Avenue / Academy Road – LOS E/F during the AM/PM peak hours
- Intersection #13: SR-76 / Old Grove Road – LOS E during the PM peak hour
- Intersection #17: SR-76 / College Boulevard – LOS E/F during the AM/PM peak hours
- Intersection #18: SR-76 / North Santa Fe Avenue – LOS E/F during the AM/PM peak hours

**Table 4.14-13**  
**Near-Term Cumulative Intersection Operations**

Intersection	Control Type	Peak Hour	Existing + Near-Term Cumulative Projects		Existing + Near-Term Cumulative Projects + Project (With Frazee Road Connection)		Delay $\Delta$ <sup>(3)</sup>	Significant?
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>	Delay	LOS		
1. SR-76/Foussat Road	Signal	AM	75.7	E	75.7	E	0.0	No
		PM	107.3	F	107.3	F	1.8	
2. Mission Avenue/Foussat Road	Signal	AM	26.2	C	26.3	C	0.1	No
		PM	42.0	D	42.4	D	0.4	
3. Mission Avenue/El Camino Real	Signal	AM	26.4	C	26.4	C	0.0	No
		PM	39.7	D	39.7	D	0.0	

**Table 4.14-13  
Near-Term Cumulative Intersection Operations**

Intersection	Control Type	Peak Hour	Existing + Near-Term Cumulative Projects		Existing + Near-Term Cumulative Projects + Project (With Frazee Road Connection)		Delay $\Delta$ <sup>(3)</sup>	Significant?
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>	Delay	LOS		
4. Mission Avenue/Douglas Drive	Signal	AM	28.3	C	30.0	C	1.7	No
		PM	40.0	D	40.2	D	0.2	
5. SR-76/Douglas Drive	Signal	AM	28.1	C	28.1	C	0.0	No
		PM	46.3	D	47.6	D	1.3	
6. Mission Avenue/Rancho Del Oro Drive	Signal	AM	33.4	C	33.5	C	0.1	No
		PM	22.4	C	22.5	C	0.1	
7. SR-76/Rancho Del Oro Drive	Signal	AM	78.0	E	<b>84.0</b>	<b>F</b>	<b>&gt;2.0</b>	<b>Yes</b>
		PM	87.1	F	<b>96.6</b>	<b>F</b>	<b>&gt;2.0</b>	
8. Rancho Del Oro Drive/Mesa Drive	Signal	AM	28.5	C	28.7	C	0.2	No
		PM	23.2	C	23.8	C	0.6	
9. Mission Avenue/Academy Road	MSSC <sup>(4)</sup>	AM	13.8	B	<b>38.0</b>	<b>E</b>	<b>&gt;2.0</b>	<b>Yes</b>
		PM	13.6	B	<b>51.0</b>	<b>F</b>	<b>&gt;2.0</b>	
10. Mission Avenue/Mission Gate Drive	MSSC	AM	21.3	C	24.2	C	2.9	No
		PM	19.5	C	21.0	C	1.5	
11. Mission Gate Drive/Via Rancho Road	AWSC <sup>(5)</sup>	AM	17.6	C	17.9	C	0.3	No
		PM	8.4	A	8.5	A	0.1	
12. Frazee Road/Old Grove Road	AWSC	AM	12.4	B	12.9	B	0.5	No
		PM	8.9	A	9.2	A	0.3	
13. SR-76/Old Grove Road	Signal	AM	46.8	D	48.6	D	1.8	No
		PM	73.9	E	74.3	E	0.4	
14. Mission Avenue/Old Grove Road	Signal	AM	28.4	C	28.5	C	0.1	No
		PM	36.5	D	36.6	D	0.1	
15. SR-76/Frazee Road	Signal	AM	30.1	C	30.1	C	0.0	No
		PM	40.7	D	41.4	D	0.7	
16. Frazee Road/College Boulevard	Signal	AM	15.8	B	16.0	B	0.2	No
		PM	23.5	C	23.9	C	0.4	
17. SR-76/College Boulevard	Signal	AM	55.1	E	<b>55.2</b>	<b>E</b>	<b>0.1</b>	<b>Yes</b>
		PM	95.0	F	<b>97.3</b>	<b>F</b>	<b>&gt;2.0</b>	
18. SR-76/North Santa Fe Avenue	Signal	AM	71.7	E	71.7	E	0.0	No
		PM	89.6	F	90.8	F	1.2	

(1) Average delay expressed in seconds per vehicle.

(2) Level of Service.

(3)  $\Delta$  denotes the increase in delay due to proposed project.

(4) MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.

(5) AWSC = All Way Stop-Controlled intersection. Average delay reported.

**Bold** typeface denotes a significant direct impact.

**Source:** LLG 2015.

As shown in the Table 4.14-14 below, the following roadway segments were calculated to operate at deficient LOS under Existing + Near-Term Cumulative + Project (With Frazee Road Connection) conditions:

- Segment #1: SR-76 between Canyon Drive and Foussat Road – LOS E
- Segment #2: SR-76 between Foussat Road and El Camino Real – LOS E
- Segment #8: Mission Avenue between Rancho Del Oro Drive and Academy Road – LOS F

**Table 4.14-14  
Near-Term Cumulative Roadway Segment Operations**

Roadway Segment	Existing Capacity (LOS E) <sup>(1)</sup>	Existing + Near-Term Cumulative Projects			Rerouted Existing + Near-Term Cumulative Projects Volumes	Project-Added Volumes	Existing + Near-Term Cumulative Projects + Project (With Frazee Road Connection)			Δ <sup>(5)</sup>	Significant?
		ADT <sup>(2)</sup>	LOS <sup>(3)</sup>	V/C <sup>(4)</sup>			ADT	LOS	V/C		
<i>SR-76</i>											
1. Canyon Drive to Foussat Road	60,000	59,131	E	0.986	--	525	59,656	E	0.994	0.008	No
2. Foussat Road to El Camino Real	60,000	58,076	E	0.968	--	657	58,733	E	0.979	0.011	No
3. El Camino Real to Rancho Del Oro Drive	60,000	50,535	D	0.842	(225)	657	50,967	D	0.849	0.007	No
4. Rancho Del Oro Drive to Old Grove Road	60,000	48,238	C	0.804	(450)	0	47,788	C	0.796	(0.008) <sup>(9)</sup>	No
5. Old Grove Road to College Boulevard	60,000	46,614	C	0.777	--	722	47,336	C	0.789	0.012	No
<i>Mission Avenue</i>											
6. El Camino Real to Douglas Drive	40,000	21,612	C	0.540	113	361	22,086	C	0.552	0.012	No
7. Douglas Drive to Rancho Del Oro Drive	40,000	18,664	B	0.467	225	591	19,480	B	0.487	0.020	No
8. Rancho Del Oro Drive to Academy Road	15,000 <sup>(6)</sup>	14,225	E	0.950	450	1,806	16,511	F	1.101	0.151	<b>Yes</b>
9. Academy Road to Old Grove Road	25,000	10,544	B	0.422	--	657	12,301	B	0.492	0.026	No
<i>Frazee Road</i>											
10. Academy Road to Old Grove Road	10,000	1,630	A	0.163	450	821	2,901	A	0.290	0.127	No

**Table 4.14-14  
Near-Term Cumulative Roadway Segment Operations**

Roadway Segment	Existing Capacity (LOS E) <sup>(1)</sup>	Existing + Near-Term Cumulative Projects			Rerouted Existing + Near-Term Cumulative Projects Volumes	Project-Added Volumes	Existing + Near-Term Cumulative Projects + Project (With Frazee Road Connection)			$\Delta$ <sup>(5)</sup>	Significant?
		ADT <sup>(2)</sup>	LOS <sup>(3)</sup>	V/C <sup>(4)</sup>			ADT	LOS	V/C		
11. Old Grove Road to SR-76	40,000	4,235	A	0.106	--	230	4,465	A	0.112	0.006	No
<i>El Camino Real</i>											
12. SR-76 to Mesa Drive	40,000	24,243	C	0.606	--	131	24,374	C	0.610	0.004	No
<i>Rancho Del Oro Drive</i>											
13. SR-76 to Mesa Drive	30,000 <sup>(8)</sup>	17,572	C	0.586	--	591	18,163	C	0.605	0.020	No
<i>Old Grove Road</i>											
14. Mission Avenue to Mesa Drive	40,000	13,118	A	0.328	--	328	13,446	A	0.336	0.008	No
<i>College Boulevard</i>											
15. Frazee Road to Mesa Drive	40,000	26,390	C	0.660	--	99	26,489	C	0.662	0.002	No

(1) Capacities based on City of Oceanside Roadway Classification Table, 2012.

(2) Average Daily Traffic Volumes.

(3) Level of Service.

(4) Volume to Capacity.

(5)  $\Delta$  denotes project induced increase in the V/C ratio.

(6) Roadway is built with three lanes eastbound and two lanes westbound.

(7) 940 feet east of Douglas Drive, Mission Avenue narrows to a 2-3 lanes roadway up to Academy Road. For purposes of being conservative, the two-lane Collector capacity of 15,000 ADT was used.

(8) Rancho Del oro Drive varies between a four-lane divided and undivided roadway (also with a TWLTL portion) south of ST-76 to Mesa Drive. To be conservative, the four-lane Secondary Arterial capacity of 30,000 ADT was used.

(9) Decrease in volume due to rerouting of existing traffic with the connection of Frazee Road to Academy Road.

**Bold** typeface indicates a significant impact.

The "Plus Project" condition assumes the connection of Frazee Road to Academy Road and the expected rerouting of Existing + Near-Term Cumulative Projects traffic volumes that would occur with this connection.

**Source:** LLG 2015.

When compared with project conditions to the Existing + Near-Term Cumulative conditions, Intersections #7s #9, and #17 show an increase in delay greater than 2.0 seconds. Because this change is beyond the acceptable threshold defined by the City of Oceanside and SANTEC/ITE, the proposed project would have significant direct impact on Intersection #7 and significant cumulative impacts on Intersections #9 and #17 under Existing + Near-Term Cumulative + Project (With Frazee Road Connection) conditions and mitigation is required. With the implementation of mitigation measures MM-TRA-1, MM-TRA-2, and MM-TRA-4 found in Section 4.14.6, the impacts to Intersections #7, #9, and #17 would fall to a less than significant level.

While Intersections #1, #13, and #18 were calculated to operate at deficient LOS under the Existing + Near-Term Cumulative + Project (With Frazee Road Connection) conditions, the change in delay when compared to Existing + Near-Term Cumulative conditions does not surpass the threshold of significance of 2.0 seconds. Therefore, the proposed project would less than significant impacts on Intersections #1, #13, and #18 under Existing + Near-Term Cumulative + Project conditions, and no mitigation is required.

Segment #8 is considered to be significantly impacted under Existing + Near-Term Cumulative + Project (With Frazee Road Connection) conditions when compared to without the proposed project. While this roadway segments' LOS F is consistent with Existing + Near-Term Cumulative conditions, the change in V/C ratio of 0.164 surpasses the acceptable significance threshold of a change of 0.02. Therefore, the proposed project generated traffic under Existing + Near-Term Cumulative + Project (With Frazee Road Connection) conditions would have a significant cumulative impact on Intersection #8 and mitigation is required. With the implementation of mitigation measure MM-TRA-5, found in Section 4.14.6, the impacts to Segment #8 would fall to a less than significant level.

While Segments #1 and #2 continue to operate at deficient LOS, project generated traffic is calculated not to increase the V/C ratios greater than 0.02 under Existing + Near-Term Cumulative + Project (With Frazee Road Connection) conditions, therefore the impacts to these two intersections would be less than significant and no mitigation is required.

### **Buildout (Year 2030) With and Without Project**

The Buildout (Year 2030) network was developed as part of the 2030 Master Transportation Roadway Plan outlined in the Oceanside Circulation Element. This plan consists of planned future network changes which were inputted into the SANDAG Series 11 Sub-Area North County traffic model. The network changes described in the Master Transportation Roadway Plan provided in the Oceanside Circulation Element are included in the buildout analysis found in the Traffic Impact Analysis and this EIR. There are several pieces of the transportation

network that have changed from existing conditions to the 2030 Master Transportation Roadway Plan. The major changes to the circulation network included in the 2030 Master Transportation Plan are the following:

- SR-76 is six-lanes
- Rancho Del Oro Road at State Route 78 is an interchange
- College Boulevard is six-lanes between Old Grove Road and Vista Way
- Melrose Drive is connected between North River Road and SR-76
- Melrose Drive is connected between Spur Avenue and N. Santa Fe Avenue
- Pala Road is connected between Los Arbolitos Boulevard and Foussat Road
- Removal of the Frazee Road connection between Mission Avenue via Academy Road and Old Grove Road and the reclassification of Frazee Road west of Old Grove Road to its current terminus with Academy Road as a Collector

For purposes of this analysis, however, the connection of Frazee Road was included in the “Plus Project” scenarios. A separate analysis without the connection of Frazee Road to Academy is included further below.

In addition to the major network changes listed above, there are several other network improvements included in the 2030 Master Transportation Roadway Plan. These changes were included in the SANDAG traffic model.

According to the Oceanside Land Use Plan as part of the City’s General Plan, the section of the proposed project site east of Mission San Luis Rey and west of Academy Road is planned for church-related uses, while the section east of Academy Road is planned for single family homes. In order to determine the Buildout (Year 2030) GPA LU<sup>1</sup> (With Frazee Road Connection) conditions, the Traffic Impact Analysis report created a scenario that would call for an amendment to the General Plan to include the land uses of proposed project. The SANDAG traffic model used in the 2030 Master Transportation Roadway Plan for the City of Oceanside, which is the basis of the Buildout (Year 2030) GP LU conditions, only accounted for the portion of the project site zoned for single family residential. The traffic model already accounts for approximately 90 single family residential units on the project site, which would generate approximately 900 ADT. Table 4.14-15 outlines the net increase in trips due to the proposed project in Buildout (Year 2030) (With Frazee Road Connection) as compared to development of

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<sup>1</sup> Note that in the Traffic Impact Analysis, Buildout (Year 2030) Without Project was labeled as Buildout (Year 2030) With General Plan Land Use (GP LU) and Buildout (Year 2030) With Project was labeled as Buildout (Year 2030) With General Plan Amendment Land Use (GPA LU). To remain consistent with the traffic report, this EIR will use the same labeling of scenarios.

the project site with its existing land use designation. The total site with the proposed project would generate approximately 3,284 ADT. In order to avoid double counting the 900 ADT already included in the traffic model for the site (from the assumed 90 single family residential units), the 900 ADT was subtracted from the buildout traffic volumes, yielding 2,384 ADT.

The 2,740-384 net ADT generated by the proposed project land use was added to the Buildout (Year 2030) baseline traffic volumes to represent the Buildout (Year 2030) GPA LU (With Frazee Road Connection) scenario.

As with the Existing + Project and Existing + Near-Term Cumulative Project + Project scenarios, the rerouting of Buildout (Year 2030) baseline traffic in the area would be expected with the connection of Frazee Road to Academy Road.

**Table 4.14-15  
Buildout (Year 2030) Project Trip Generation**

Land Use	Size	Daily Trip Ends (ADTs) <sup>(1)</sup>		AM Peak Hour					PM Peak Hour				
		Rate <sup>(2)</sup>	Volume	% of ADT <sup>(2)</sup>	In:Out	Volume			% of ADT <sup>(2)</sup>	In:Out	Volume		
					Split <sup>(2)</sup>	In	Out	Total		Split <sup>(2)</sup>	In	Out	Total
<i>General Plan Land Use Included in the SANDAG Model</i>													
Single Family Residential	90 du	10/du	900	8%	3:7	19	53	72	10%	7:3	61	26	87
<i>General Plan Amendment Land Use Added to the SANDAG Model (Proposed Project)</i>													
Single-Family Detached Residential Units (≤ 6 du/ac)	<del>62</del> du	<del>10</del> /du	<del>620</del>	<del>8</del> %	<del>3:7</del>	<del>15</del>	<del>35</del>	<del>50</del>	<del>10</del> %	<del>7:3</del>	<del>43</del>	<del>19</del>	<del>62</del>
Single Family Residential													
Multi-Family Attached Residential Units (≤ 20 du/ac)	223 du	8/du	1,784	8%	2:8	293	144	165	10%	7:3	126	144	556
Condominiums			2064										206
Multi-Family Attached Residential Units (≥ 20 du/ac)	100 du	6/du	280	8%	3:7	10	38	48	10%	7:3	38	16	54
Townhomes <sup>(3)</sup>			600										
Net Increase with General Plan Amendment Land Use			2,384	--	--	39	152	191	--	--	164	71	235
<b>Total Trip Generation</b>			<b>3,284<sup>(3)</sup></b>	<b>--</b>	<b>--</b>	<b>58</b>	<b>205</b>	<b>263</b>	<b>--</b>	<b>--</b>	<b>225</b>	<b>97</b>	<b>322</b>

du/ac = dwelling units per acre.

(1) Average daily traffic volumes rounded to the nearest tenth.

(2) Rates taken from SANDAG (Not So) Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region, May 2003.

(3) The total project ADT of 3,284 was included for the site in the buildout analysis. To avoid double counting, the 900 ADT already included in the SANDAG traffic model for the site was subtracted from the buildout volumes.

The model accounted for 90 single family units, 28 more than the proposed project. Therefore, of the 2,064 ADT generated by the 258 condominium units proposed, approximately 280 ADT were already included in the traffic model.  
Source: LLG 2015.

The Oceanside Circulation Element provides Buildout (Year 2030) peak hour intersection volumes at a select number of intersections within the study area. For locations where peak hour volumes were not available, the Traffic Impact Analysis forecasted the intersection volumes from future ADT volumes using the relationship between existing peak hour turning movements and the existing ADT volumes. This same relationship can be assumed to generally continue in the future.

As outlined in Table 4.14-16, the following intersections were calculated to operate at deficient LOS under Buildout (Year 2030) With GPA LU:

- Intersection #5: SR-76 / Douglas Drive – LOS E during the PM peak hour
- Intersection #7: SR-76 / Rancho Del Oro Road – LOS E during the AM peak hour
- Intersection #9: Mission Avenue / Academy Road – LOS F/F during the AM/PM peak hours
- Intersection #10: Mission Avenue / Mission Gate Drive – LOS F/F during the AM/PM peak hours
- Intersection #17: SR-76 / College Boulevard – LOS E/F during the AM/PM peak hours
- Intersection #18: SR-76 / North Santa Fe Avenue – LOS F/E during the AM/PM peak hours

**Table 4.14-16**  
**Buildout (Year 2030) Intersection Operations (With Frazee Road Connection)**

Intersection	Control Type	Peak Hour	Buildout (Year 2030) with GP LU		Buildout (Year 2030) with GPA LU		Delay $\Delta$ <sup>(3)</sup>	Significant?
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>	Delay	LOS		
1. SR-76/Foussat Road	Signal	AM	48.4	D	48.4	D	0.0	No
		PM	52.2	D	53.0	D	0.8	
2. Mission Avenue/ Foussat Road	Signal	AM	25.7	C	25.7	C	0.0	No
		PM	46.0	D	46.6	D	0.6	
3. Mission Avenue/ El Camino Real	Signal	AM	28.5	C	28.7	C	0.2	No
		PM	45.4	D	45.8	D	0.4	
4. Mission Avenue/ Douglas Drive	Signal	AM	36.9	D	38.2	D	1.3	No
		PM	44.9	D	46.3	D	1.4	
5. SR-76/Douglas Drive	Signal	AM	31.8	C	32.5	C	0.7	No
		PM	57.2	E	57.4	E	0.2	
6. Mission Avenue/ Rancho Del Oro Drive	Signal	AM	26.3	C	35.0	C	8.7	No
		PM	28.9	C	37.1	D	8.2	

**Table 4.14-16**  
**Buildout (Year 2030) Intersection Operations (With Frazee Road Connection)**

Intersection	Control Type	Peak Hour	Buildout (Year 2030) with GP LU		Buildout (Year 2030) with GPA LU		Delay $\Delta$ <sup>(3)</sup>	Significant?
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>	Delay	LOS		
7. SR-76/Rancho Del Oro Drive	Signal	AM	74.9	E	75.5	E	0.6	No
		PM	48.9	D	51.9	D	3.0	
8. Rancho Del Oro Drive/Mesa Drive	Signal	AM	52.3	D	52.4	D	0.1	No
		PM	30.7	C	31.1	C	0.4	
9. Mission Avenue/Academy Road	MSSC <sup>(4)</sup>	AM	18.3	C	<b>77.4</b>	<b>F</b>	<b>&gt;2.0</b>	<b>Yes</b>
		PM	20.8	C	<b>113.0</b>	<b>F</b>	<b>&gt;2.0</b>	
10. Mission Avenue/Mission Gate Drive	MSSC	AM	90.5	F	<b>105.6</b>	<b>F</b>	<b>&gt;2.0</b>	<b>Yes</b>
		PM	43.5	E	<b>49.3</b>	<b>E</b>	<b>&gt;2.0</b>	
11. Mission Gate Drive/ Via Rancho Road	AWSC <sup>(5)</sup>	AM	30.0	D	30.6	D	0.6	No
		PM	8.9	A	9.0	A	0.1	
12. Frazee Road/ Old Grove Road	AWSC	AM	16.1	C	16.5	C	0.4	No
		PM	9.4	A	9.7	A	0.3	
13. SR-76/ Old Grove Road	Signal	AM	36.4	D	36.8	D	0.4	No
		PM	36.6	D	36.6	D	0.0	
14. Mission Avenue/ Old Grove Road	Signal	AM	28.5	C	28.6	C	0.1	No
		PM	35.3	D	36.4	D	1.1	
15. SR-76/ Frazee Road	Signal	AM	24.3	C	24.8	C	0.5	No
		PM	25.4	C	25.6	C	0.2	
16. Frazee Road/College Boulevard	Signal	AM	19.8	B	19.8	B	0.0	No
		PM	31.8	C	32.0	C	0.2	
17. SR-76/College Boulevard	Signal	AM	56.2	E	56.3	E	0.1	No
		PM	100.4	F	101.2	F	0.8	
18. SR-76/North Santa Fe Avenue	Signal	AM	94.0	F	95.6	F	1.6	No
		PM	75.9	F	76.5	E	0.6	

(1) Average delay expressed in seconds per vehicle.

(2) Level of Service.

(3)  $\Delta$  denotes the increase in delay due to proposed project.

(4) MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.

(5) AWSC = All Way Stop-Controlled intersection. Average delay reported.

(6) GP LU = General Plan Land Use; GPA LU = General Plan Amendment Land Use

**Bold** typeface denotes a significant direct impact.

The GPA LU condition assumes the connection of Frazee Road to Academy Road and the expected rerouting of Buildout (Year 2030) traffic volumes that would occur with this connection.

**Source:** LLG 2015.

As outlined in Table 4.14-17 the following roadway segment was calculated to operate at a deficient LOS under both Buildout (Year 2030) scenarios:

- Segment #15: College Boulevard between Frazee Road and Mesa Drive – LOS E

**Table 4.14-17  
Buildout (Year 2030) Roadway Segment Operations (With Frazee Road Connection)**

Roadway Segment	Existing Capacity (LOS E) <sup>(1)</sup>	Buildout (Year 2030) with GP LU			Rerouted Buildout (Year 2030) Volumes	Project-Added Volumes	Buildout (Year 2030) with GPA LU			Δ <sup>(5)</sup>	Significant?
		ADT <sup>(2)</sup>	LOS <sup>(3)</sup>	V/C <sup>(4)</sup>			ADT	LOS	V/C		
<i>SR-76</i>											
1. Canyon Drive to Foussat Road	80,000	65,900	D	0.824	--	381	66,281	D	0.829	0.005	No
2. Foussat Road to El Camino Real	80,000	59,800	C	0.748	--	477	60,277	D	0.753	0.007	No
3. El Camino Real to Rancho Del Oro Drive	80,000	54,100	C	0.676	(238)	477	54,339	C	0.679	0.003	No
4. Rancho Del Oro Drive to Old Grove Road	80,000	54,100	C	0.676	(475)	0	53,625	C	0.670	(0.006) <sup>(6)</sup>	No
5. Old Grove Road to College Boulevard	80,000	58,200	C	0.728	--	524	58,724	C	0.734	0.006	No
<i>Mission Avenue</i>											
6. El Camino Real to Douglas Drive	40,000	21,900	C	0.548	119	262	22,281	C	0.557	0.011	No
7. Douglas Drive to Rancho Del Oro Drive	40,000	25,700	C	0.643	238	429	26,367	C	0.659	0.016	No
8. Rancho Del Oro Drive to Academy Road	25,000	19,400	D	0.776	475	1,311	21,186	D	0.847	0.071	No
9. Academy Road to Old Grove Road	25,000	12,900	B	0.516	--	477	13,377	C	0.535	0.019	No
<i>Frazee Road</i>											
10. Academy Road to Old Grove Road	10,000	3,700	A	0.370	475	596	4,771	B	0.477	0.107	No
11. Old Grove Road to SR-76	40,000	5,700	A	0.143	--	167	5,867	A	0.147	0.004	No

**Table 4.14-17**  
**Buildout (Year 2030) Roadway Segment Operations (With Frazee Road Connection)**

Roadway Segment	Existing Capacity (LOS E) <sup>(1)</sup>	Buildout (Year 2030) with GP LU			Rerouted Buildout (Year 2030) Volumes	Project-Added Volumes	Buildout (Year 2030) with GPA LU			Δ <sup>(5)</sup>	Significant?
		ADT <sup>(2)</sup>	LOS <sup>(3)</sup>	V/C <sup>(4)</sup>			ADT	LOS	V/C		
<i>El Camino Real</i>											
12. SR- 76 to Mesa Drive	40,000	25,500	C	0.638	--	95	25,595	C	0.640	0.002	No
<i>Rancho Del Oro Drive</i>											
13. SR- 76 to Mesa Drive	40,000	24,200	C	0.605	--	429	24,629	C	0.616	0.011	No
<i>Old Grove Road</i>											
14. Mission Avenue to Mesa Drive	40,000	17,700	B	0.443	--	238	17,938	B	0.448	0.006	No
<i>College Boulevard</i>											
15. Frazee Road to Mesa Drive	40,000	36,900	E	0.923	--	72	36,972	E	0.924	0.002	No

<sup>(1)</sup> Capacities based on City of Oceanside Roadway Classification Table, 2012.

<sup>(2)</sup> Average Daily Traffic Volumes.

<sup>(3)</sup> Level of Service.

<sup>(4)</sup> Volume to Capacity.

<sup>(5)</sup> Δ denotes project induced increase in the V/C ratio.

<sup>(6)</sup> Decrease in volume due to rerouting of existing traffic with the connection of Frazee Road to Academy Road.

GP LU = General Plan Land Use; GPA LU = General Plan Amendment Land Use.

**Bold** typeface indicates a significant impact.

The GPA LU condition assumes the connection of Frazee Road to Academy Road and the expected rerouting of Buildout (Year 2030) traffic volumes that would occur with this connection.

**Source:** LLG 2015.

In both tables, the Buildout (Year 2030) GPA LU (With Frazee Road Connection) accounts for the proposed project's net increase of traffic generation from the amended planned land use of the project site.

Intersections #5, #7, # 17, and #18 would operate at deficient LOS in the Buildout (Year 2030) GPA LU (With Frazee Road Connection) scenario. However, it was found that the increase of traffic generated by the project would not increase the delay at each intersection by greater than 2.0 seconds. Since this is below the specified significance threshold, project generated traffic would have less than significant impacts to these intersections and mitigation is not required.

Intersections #9 and #10 both saw increases in delay due to project generated traffic. The increased delays at both intersections are forecasted to be greater than 2.0 seconds in both AM and PM peak hours. This increase is beyond the acceptable significance threshold, therefore the project would cause significant direct impact to Intersection #9 and a significant cumulative impact to Intersection #10 under the Buildout (Year 2030) GPA LU (With Frazee Road Connection) scenario and mitigation is required. It should be noted that even without project generated traffic, a signal is warranted at Intersection #10 (as discussed in Section 15.2.3 of the Traffic Impact Analysis, see Appendix J). While the proposed project is therefore not the primary factor for impacts at this intersection, mitigation measure MM-TRA-3 is provided requiring payment of a fair share contribution to signalization of Intersection #10. With implementation of mitigation measures MM-TRA-1 and MM-TRA-3, found in Section 4.14.6, would impacts would fall to a less than significant level.

Roadway Segment #15 was calculated to operate at deficient LOS in Buildout (Year 2030) GPA LU (With Frazee Road Connection) scenario. While the segment is at deficient LOS, the addition of project generated traffic did not affect the V/C ratio beyond the acceptable significance criteria of 0.02. Therefore, the project would have less than significant impacts to Segment #15 under the Buildout (Year 2030) GPA LU (With Frazee Road connection) conditions and no mitigation is required.

### **No Frazee Road Connection Analysis**

As mentioned previously, the 2030 Master Transportation Roadway Plan outlined in the Oceanside Circulation Element does not provide for the Frazee Road beyond its current terminus at Academy Road. The previous circulation Element proposed the connection of Frazee Road between Mission Avenue and (west of) Academy Road. Existing barricades located at the terminus of Frazee Road west of Old Grove Road would remain in place under the current Circulation Element. In order to determine the effects on the study area street system should the Frazee Road connection remain closed, thus preventing Project traffic as well as cut-through traffic from using this route, this section provides an LOS analysis evaluating the potential

changes in traffic impacts without the proposed connection. It should be noted that all the “Without Project” traffic volumes and LOS analysis results for Existing, Existing + Near-Term cumulative Projects, and Buildout (Year 2030) GP LU baseline conditions are the same as shown in the above discussion since the Frazee Road connection to Academy Road was no included in these scenarios.

With the continued closure of the Frazee Road connection, all project generated trips would be oriented to/from Mission Avenue with 69% oriented to/from the west and 31% oriented to/from the east. The regional distribution discussed above remains the same. The local locations affected by this change in distribution are the Mission Avenue, Rancho Del Oro Drive, SR-76, Frazee Road, and Old Grove Road corridors.

Project generated traffic was then assigned to the street without the connection of Frazee Road to Academy Road. The near-term cumulative and Buildout (Year 2030) baseline conditions are the same as in analysis provided above. However, under the “Plus Project” conditions, baseline traffic volumes were no longer rerouted due to the remaining closure of the Frazee Road connection.

As shown in Tables 14-1 through 14-6 of Traffic Impact Analysis found in Appendix J, the No Frazee Road Connection scenario presents no changes in in LOS and no changes in the significance of impacts identified in the analysis presented above.

### **Academy Road/Frazee Road/Chapter Lane Intersection**

The Academy Road/ Frazee Road/Chapter Lane intersection is located at the northern boundary of the project site. Chapter Lane, a private roadway accessing the Mission San Luis Rey Parish, serves as the west leg of the intersection. The north leg of the intersection provides private access (gated access) to the San Luis Rey Homes. Academy Road serves as the south leg of the intersection and Frazee Road is the east leg. As previously mentioned, access to Frazee Road east of Academy Road is currently prohibited via barricades.

With the addition of project generated traffic to this intersection, a quantitative assessment was conducted to determine the appropriate traffic control measures for the Academy Road/Frazee Road/Chapter Lane intersection and its effect on gated operations for San Luis Rey Homes. As part of the assessment, traffic volume projections, LOS calculations, and a queuing analysis were conducted. Assuming 25% of project generated traffic would utilize the Academy Road/Frazee Road/Chapter Lane intersection based on the project distribution with the connection of Frazee Road, a total of 76 AM peak hour (16 inbound/60 outbound) and 89 PM peak hour (61 inbound/28 outbound) project generated trips were assigned to this intersection. Inbound trips were oriented in the westerly direction turning left onto southbound Academy Road. Outbound trips were oriented in the northbound direction turning right onto eastbound Frazee Road.

Existing traffic counts were collected at the intersection of Academy Road at Frazee Road/Chapter Lane. The peak hour intersection analysis of this intersection was conducted for the weekday 7:00AM-9:00AM and 4:00PM-6:00PM peak periods when project generated traffic would be at its highest levels. The manual traffic counts can be found in the Traffic Impact Analysis in Appendix J.

With the connection of Frazee Road to Academy Road, as proposed by the project, the rerouted traffic volumes assumed to use this connection were included in the intersection LOS and queuing analysis.

A two-way stop controlled configuration was assumed for this intersection. North/south movements on Academy Road (in/out movements at San Luis Rey Homes driveway) would not be controlled and would be free to complete all maneuvers. East/west movements from Chapter Lane and Frazee Road would be stop-sign controlled. Table 4.14-8 below shows the results of the LOS and queuing analysis. The Traffix 8.0 software was used to analyze the delay, LOS and 95th percentile queues.

**Table 4.14-18**  
**Academy Road/Frazee Road/Chapter Land Intersection and Queuing Operations**

Intersection	Control Type	Approach/ Movement <sup>(1)</sup>	Peak Hour	Buildout (Year 2030) with GPA LU				
				Intersection Delay/ LOS Operations		95 <sup>th</sup> Percentile Queuing Operations <sup>(3)</sup>		
				Delay (s)	LOS	Proposed or Existing Storage (ft)/(# of vehicles) <sup>(2)</sup>	Queue (ft)	Queue (# of vehicles)
Academy Road/Frazee Road/Chapter Lane	Stop sign	WB Shared L/T/R	AM	9.1	A	N/A	4.4	0.2
			PM	9.2	A		6.6	0.3
	Stop sign	EB Shared L/T/R	AM	8.7	A	N/A	2.2	0.1
			PM	8.6	A		0	0
	Uncontrolled	NB Shared L/T	AM	7.2	A	100 / 4.5	0	0
			PM	7.2	A		0	0
	Uncontrolled	SB Shared L/T/R	AM	7.4	A	100 / 4.5	0	0
			PM	7.3	A		0	0

GPA LU = General Plan Amendment Land Use

WB = westbound, EB = eastbound, SB = southbound, NB = northbound

L/T/R = left/thru/right

Ft = feet

N/A = not applicable

One vehicle length = approximately 22 feet

(1) The left-turn movements are identified as the critical movements of the intersection. For intersection approaches where one shared left/thru/right is provided, the total approach delay is report.

(2) Proposed storage shown in both feet and number of vehicles. SB approach shows storage from Frazee Road north to location of gated entry/exit.

(3) 95th percentile queue is defined as the queue length that has only a 5% probability of being exceeded. Queue length shown in both feet and number of vehicles.

**Source:** LLG 2015.

As shown in Table 4.14-18 above, LOS A intersection operations are calculated for each movement and the queuing analysis conducted shows that no queuing issues would be anticipated with this stop-control configuration at the Academy Road/Frazee Road/Chapter Lane intersection. Therefore, impacts would be less than significant.

### **Mission Avenue/Academy Road Queuing Analysis**

In order to determine the required storage length for the southbound approach at the proposed Mission Avenue/Academy Road signalized intersection, a queuing analysis using Synchro 7 software was completed. The highest peak for outbound traffic traveling southbound on Academy Road occurs during the AM peak hour. According to the analysis results, under Buildout (Year 2030) With GPA LU AM peak hour conditions, the southbound left-turn 95th percentile queue was calculated to be 31 feet and the right-turn 95th percentile queue was calculated to be 32 feet.

It is therefore recommended that the project provide 150-foot storage lanes for both the dedicated left-turn and right-turn lanes at the southbound approach on Academy Road, as provided in MM-TRA-6. It can be concluded from the analysis performed that excessive queues would not be expected with the addition of project generated traffic and the provision of 150-foot storage lanes.

In order to accommodate the turn lanes on southbound Academy Road, the roadway would need to be widened to a width of at least 34 feet to provide a 10-foot southbound right-turn lane, a 10-foot left-turn lane for approximately 150 feet plus an additional 60 feet for the bay taper in addition to a 14-foot northbound receiving lane. The project proposes to widen Academy Road at the approach to Mission Avenue to 44 feet which would provide for the lane recommendations mentioned above, as well as two (2) five-foot bike lanes.

The existing eastbound left-turn lane on Mission Avenue which provides 150 feet of storage adequately accommodates the 114 PM peak hour project trips entering the site (the highest peak for inbound project generated traffic). According to the queuing analysis performed for this intersection, the Buildout (Year 2030) With GPA LU 95th percentile queue was calculated to be 774 feet.

Table 4.14-19 below summarizes the results of the queuing analysis for the proposed Mission Avenue/ Academy Road signalized intersection.

**Table 4.14-19**  
**Signalized Intersection Queuing Operations**

Intersection	Critical Movement	Recommended Storage (ft)	Buildout (Year 2030) with GPA LU			
			50 <sup>th</sup> Percentile Queue (ft) <sup>(1)</sup>		95 <sup>th</sup> Percentile Queue (ft) <sup>(2)</sup>	
			AM	PM	AM	PM
9. Mission Avenue/Academy Road	SBL	100	17	16	31	23
	SBR	100	18	0	32	2
	EBL	150	22	77	41	74

GPA LU = General Plan Amendment Land Use

SBL = southbound left turn, SBR = southbound right turn, EBL = eastbound left turn

Ft = feet

One vehicle length = approximately 22 feet

<sup>(1)</sup> 50<sup>th</sup> percentile queue is defined as the average queue length that has 50% probability of being exceeded.

<sup>(2)</sup> 95<sup>th</sup> percentile queue is defined as the queue length that has only a 5% probability of being exceeded.

Source: LLG 2015.

Reflective of the adequate queuing operations calculated at the Mission Avenue/ Academy Road signalized intersection, LOS B/B operations during the AM/PM peak hours were calculated with the installation of a traffic signal under all “With Project” scenarios (existing, near-term and buildout). The signalized intersection operations of the Mission Avenue/ Academy Road intersection is provided as mitigation measure MM-TRA-1. With the incorporation of mitigation measures MM-TRA-1 and MM-TRA-6, impacts would be less than significant.

***B. Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?***

Refer to response (a) above. As required by the City of Oceanside, the Traffic Impact Analysis prepared for the proposed project was prepared in accordance with the City’s 2012 Circulation Element and the SANDAG Congestion Management Program (CMP) traffic impact study guidelines. The City of Oceanside threshold for the need for traffic studies is 500 daily trips for non-conforming land uses and 1,000 daily trips for projects consistent with the City’s General Plan land use. All identified impacts to intersections and roadway segments would be mitigated to a level below significance, as discussed in response (a) above. Therefore, impacts would be less than significant.

***C. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?***

The Oceanside Municipal Airport is approximately 2.4 miles to the east/southeast of the project site. As discussed in Section 4.7, Hazards and Hazardous Materials, according to the Oceanside Municipal Airport Land Use Compatibility Plan, the project site lies within “Review Area 2” and is therefore subject to airspace protection, notification of overflight, and limits to height of

structures; however the project site is not within specific safety zones subject to precise compatible development guidelines, including those that apply to traffic patterns. Further, the proposed project, as a low elevation residential development, would not, in any manner, result in a change in air traffic pattern. Therefore, the project would not affect traffic patterns at the Oceanside Municipal Airport and impacts would be less than significant.

**D. *Would the project substantially increase hazards due to a design feature (e.g., sharp curves, or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

### **Roadway Improvement Designs**

The proposed project would not substantially increase hazards through a design feature as all improvements would be designed to the applicable City roadway and circulation standards. The primary traffic design features will be centered on Academy Road and the Mission Avenue/Academy Road intersection. The project proposes to shift the Mission Avenue/Academy Road intersection approximately 100 feet to the west to form a 90 degree angle as well as to install a traffic signal. A “spine” road is proposed cutting through the site perpendicularly with Academy Road approximately 800 feet north of Mission Avenue. This spine road will also consist of private feeder roads providing access to separate planning areas within the proposed project site.

#### ***Academy Road***

With the connection of Academy Road to Frazee Road, existing traffic would use this new connection to reach Mission Avenue from communities to the east. As discussed previously, baseline traffic volumes were rerouted through the project site along Academy Road to account for the anticipated cut-through traffic that would occur with the connection. Under the buildout condition, accounting for general growth in the area, cut-through traffic, and project traffic, 4,280 ADT are forecasted to use Academy Road.

In order to accommodate the additional traffic forecasted for this roadway, the project proposes a design speed of 35 mph and the widening of Academy Road between Frazee Road and Mission Avenue to 38 to 44 feet for its entirety with a 10-foot raised median provided intermittently for a carrying capacity of 7,500 ADT. On-street parking would be prohibited on Academy Road which effectively reduces friction along the roadway. These capacity-related enhancements would improve traffic flow along Academy Road.

While capacity-enhancing improvements are proposed to Academy Road, measures to reduce the amount of cut-through traffic from Frazee Road are also proposed. According to the City of Oceanside’s Complete Streets Checklist—Appendix C of the Circulation Element, “the consideration of traffic calming measures (narrower travel lanes, roundabouts, raised medians, speed tables, planting strips, etc.)” is recommended for City streets, roads and highways. The

improvements to Academy Road proposed by the project are also consistent with these goals. In addition, the City's Neighborhood Traffic Calming Program encourages the implementation of traffic calming features to mitigate potential issues such as excessive vehicular speeding, and/or pedestrian conflicts.

The project proposes to improve Academy Road along its entirety to provide two (2) travel lanes that include Class II bike lanes, median enhancements, non-contiguous sidewalks with a landscaped buffer, and a traffic-calming roundabout at the main Academy Road/Spine Road intersection. A traffic signal would be constructed at the Mission Avenue/Academy Road intersection with two (2) southbound approach lanes, and stop signs would be installed for the movements from Frazee Road and Chapter Lane to provide a two-way east/west stop sign-controlled intersection. Traffic exiting San Luis Rey Homes from the north would remain an uncontrolled movement.

The provision of a roundabout at the Academy Road/Spine Road would allow for continued flow through the intersection (see calculations in the Traffic Impact Analysis found in Appendix J). One 13-foot travel lane of traffic would be accommodated in each direction with a 45-foot wide raised center median. Bike lanes would terminate at the entrances to the roundabout and merge with the flow of vehicular traffic until exiting the roundabout. Pedestrian crosswalks would be painted within the roundabout. With the development of the proposed project, Frazee Road would connect to Academy road, where no traffic control mechanism currently exists. A two-way stop controlled configuration, with the north/southbound movements along Academy Road not controlled by a stop sign.

### ***Chapter Lane***

The portions of Chapter Lane under project ownership would be improved for pedestrian safety with the provision of half width plus 12 foot improvements and a five foot pedestrian sidewalk.

### ***Mission Avenue***

The Mission Avenue frontage would be improved to include a five foot pedestrian sidewalk and ten foot landscaped parkway in order to implement Pedestrian Priority Project #19 as identified in the Pedestrian Master Plan of the City's Circulation Element.

All internal roadway segments, intersections, and improvements to existing facilities would be required to comply with the Oceanside Traffic Code to ensure proper design and safety. Therefore, impacts would be less than significant.

## Semi-Trailer Maneuverability

### *Mission Avenue/Academy Road Intersection*

The intersection of Mission Avenue/Academy Road provides access for residents of the San Luis Rey Homes. Since the community consists of manufactured/mobile units, occasionally trucks take access via this intersection to either deliver or remove manufactured homes from the site. It is estimated that an average of three (3) manufactured home removals/deliveries occur each year. The majority of home sales do not involve the transferring of units. The typical size of a delivered manufactured home measures at a width of 14 feet with a maximum width of 15.5 feet. A variance permit issued by Caltrans is required for the delivery of a manufactured home exceeding 15 feet in width. To provide for a conservative assessment, a 15.5 foot wide manufacture home was used in this analysis.

Semi-trailers delivering and/or removing units currently access the site using the Mission Avenue/Academy Road intersection with no major circulation issues. Trucks traveling eastbound on Mission Avenue complete a left-turn maneuver onto northbound Academy Road and continue north into San Luis Rey Homes. Given that Academy Road is currently constructed as a 28-foot wide undivided two-way residential roadway, trucks generally tend to turn from eastbound Mission Avenue into both the northbound (ingress) and southbound (egress) lanes on Academy Road and vice versa when exiting Academy Road. Due to the width of the 15.5-foot wide manufactured homes loaded on the trailer, there is an overlap from the 12-foot eastbound left-turn lane on Mission Avenue into the adjacent eastbound thru lane when turning onto Academy Road and vice versa when exiting Academy Road.

With the proposed project, Academy Road is planned to be widened by 16 feet to 44 feet curb-to-curb at the Mission Avenue intersection with two (2) 10-foot southbound approach lanes and one (1) 14-foot lane in the northbound direction with two (2) five-foot bike lanes. Academy Road is also planned to be realigned to complete a 90 degree angle with Mission Avenue which would improve the turning radius to/from Academy Road. The raised median would be constructed starting approximately 150 feet north of the stop bar. ~~Mission Avenue is planned to be widened along the project site frontage by eight (8) feet to include a westbound acceleration lane.~~

A truck turning analysis conducted using the Auto-Turn software confirmed that semi-trailers would continue to cross into both the southbound approach lanes and northbound entering lanes on Academy Road entering and exiting the roadway and the trailer would continue to extend into the eastbound thru lane on Mission Avenue when exiting Academy Road with the proposed improvements given the oversized load these semi-trailers carry. Should semi-trailer deliveries/removals occur during peak hours, traffic control measures such as flaggers would be necessary to avoid vehicular conflicts between semi-trailers and private vehicles. Flaggers would be situated at both the westbound and eastbound approaches of Mission Avenue prior to Academy Road to temporarily stop traffic while the truck makes its turning maneuvers.

Therefore, the proposed project would not introduce or increase any truck turning hazard beyond existing conditions.

Figure 4.14-5 shows the semi-trailer truck turning movement analysis at the Mission Avenue/Academy Road intersection. Although the Auto-Turn analysis shows the both widest and narrowest footprint for the truck turning radii, the driver of the semi-trailer would attempt to navigate within this conservative footprint in order to avoid conflicting with other lanes of traffic. Therefore, impacts would be less than significant for semi-trailer maneuverability at this intersection.

### ***Academy Road***

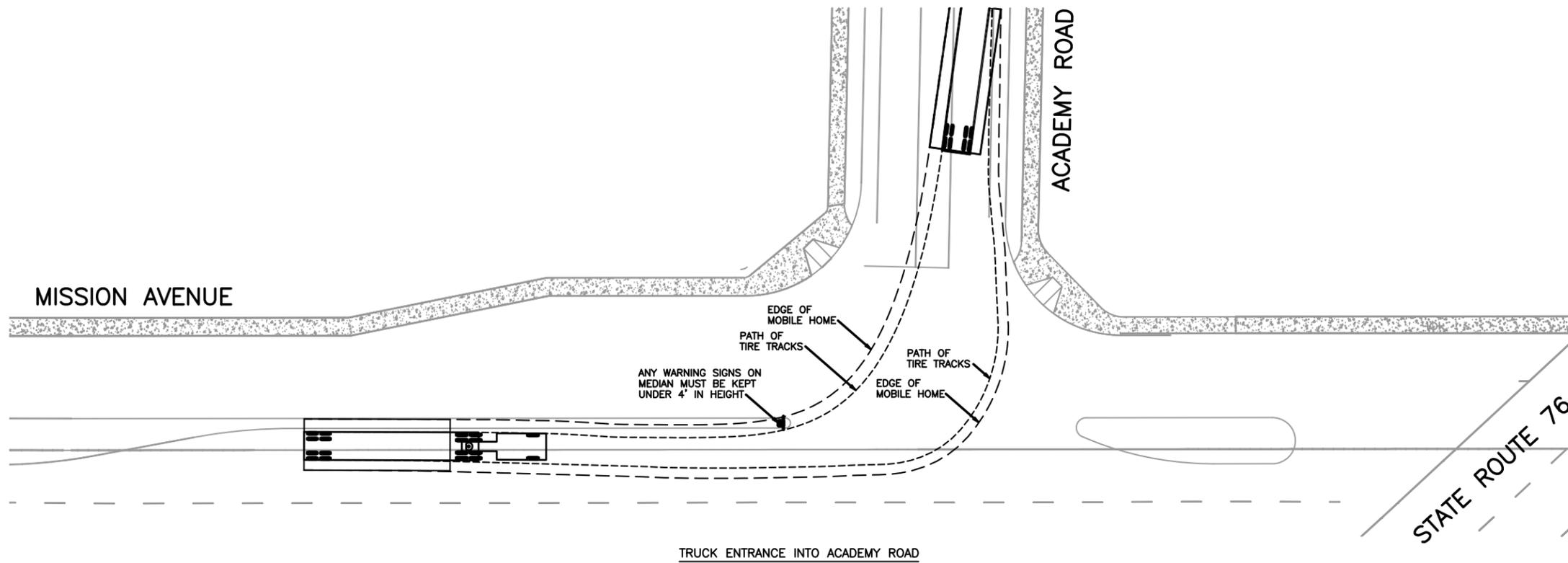
The majority of Academy Road would be improved to a paved width of 44 feet with an intermittently 10-foot raised median to where it narrows to 38 feet curb-to-curb for a brief section approximately 260 feet south of Frazee Road (19-foot lanes with no raised median). The wheel base of an 18-wheel tractor/trailer that would be needed to transport a manufactured home is approximately 8.5 feet. The trailer tires are elevated at four (4) feet above the pavement. The maximum dimensions for a manufactured home which could be delivered to or removed from the site is 15.5 feet in width at the base and 80 feet in length (potentially divided into sections for ease of transport).

Using the Auto-Turn truck turning analysis software, it was observed that the portion of Academy Road where 17-foot paved travel lanes and a 10-foot raised median are proposed, the width of a 15.5-foot manufactured home would fit within the paved 17-foot curb-to-curb width. A plan view and rear profile view are shown on Figure 4.14-6 for the semi-trailer on Academy Road. Based on the Auto-Turn analysis for the undivided 38-foot curb-to-curb portions of Academy Road, it was also concluded that 15.5-foot wide trailers would sufficiently maneuver within this 260-foot long segment of the roadway.

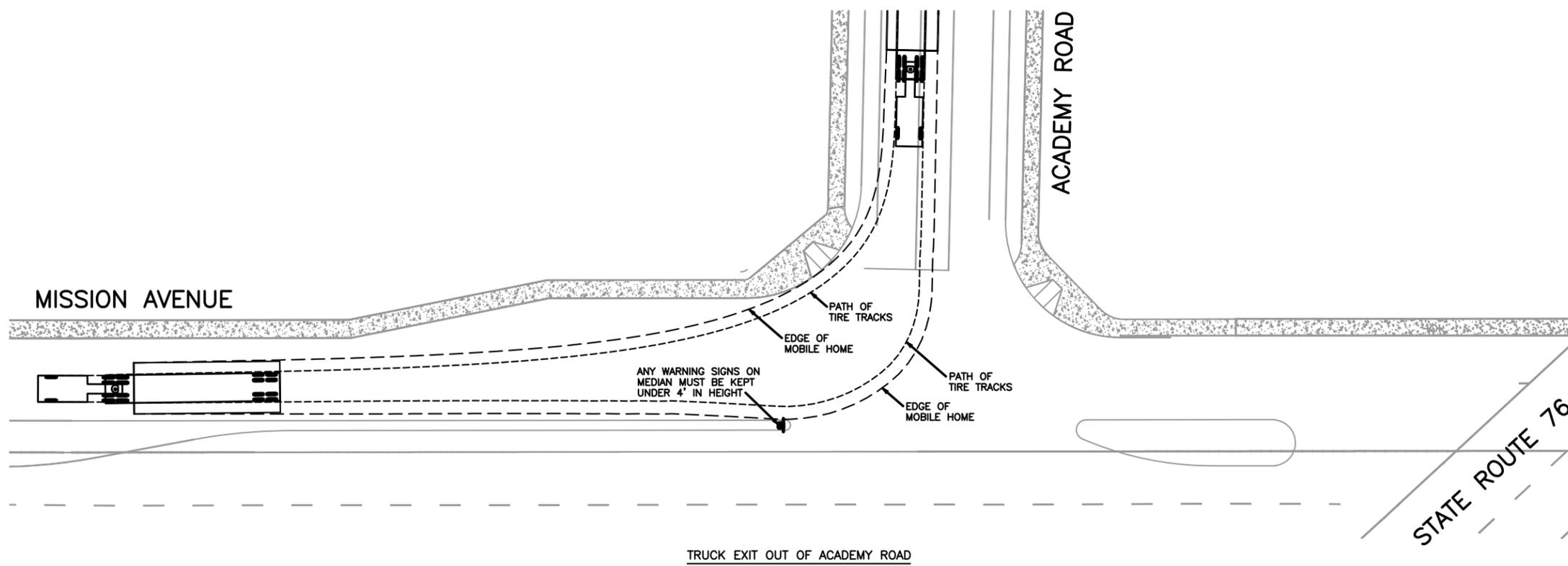
As previously stated, Figure 4.14-6 shows the width of the 18-wheel semi-trailer trucks transposed on the sections of Academy Road where 17-foot lanes and 19-foot lanes are proposed. As shown on the figures depicting the results of the Auto-Turn analysis, no fixed physical obstructions would occur with the proposed roadway improvements to Academy Road and impacts would be less than significant along Academy Road.

### ***Academy Road/Spine Road Roundabout***

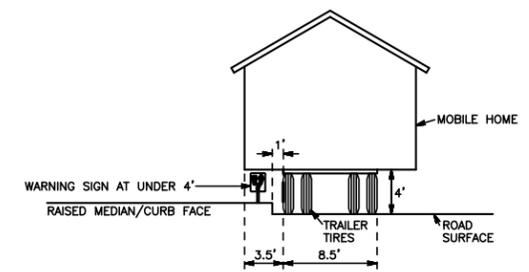
An assessment of the truck movements through the proposed roundabout at the Academy Road/Spine Road intersection was also completed. Figure 4.14-7 shows the turning movement analysis for a semi-trailer delivering manufactured homes. Trucks would be traveling in the north/south direction only so they would not be completing any 90 degree turns onto Spine Road or feeder roads. The roundabout median has been designed to provide a 10-foot concrete buffer from the travel lane with a 25-foot landscaped median. The figure shows the wheels of the semi-trailer traveling over the 10-foot concrete buffer, as the semi-trailer would need to maneuver slightly outside the designated travel lane.



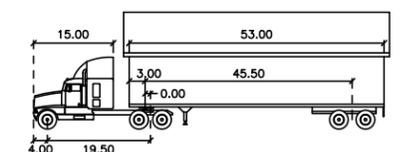
TRUCK ENTRANCE INTO ACADEMY ROAD



TRUCK EXIT OUT OF ACADEMY ROAD



TYPICAL CROSS SECTION AT RAISED MEDIAN OR CURB FACE  
NOT TO SCALE



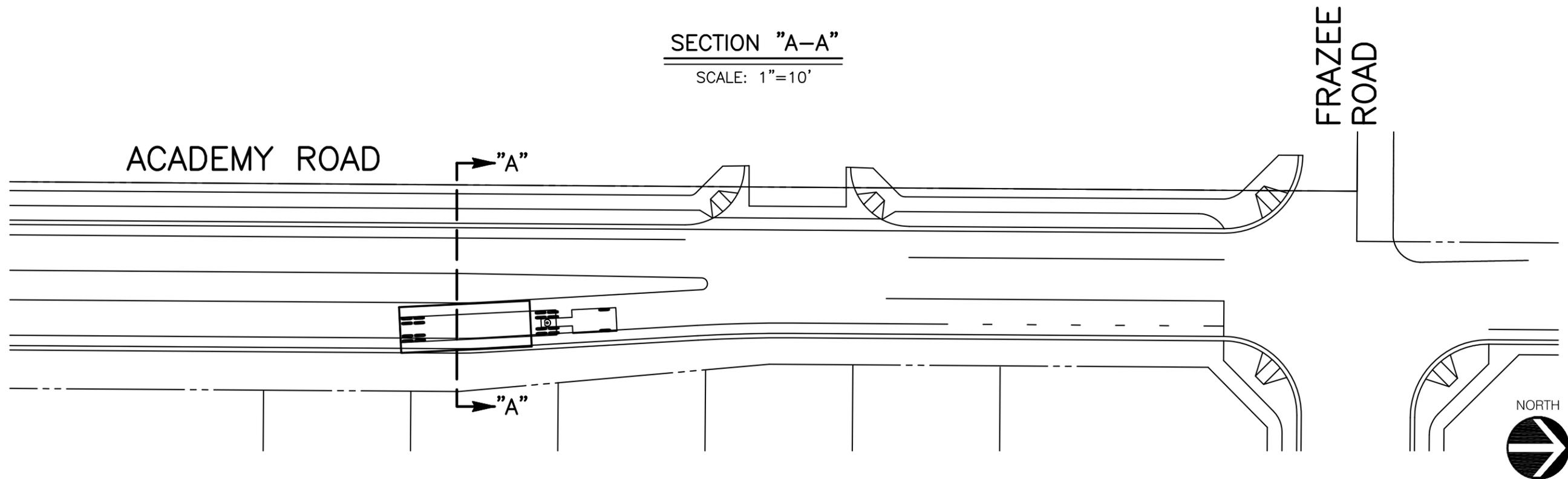
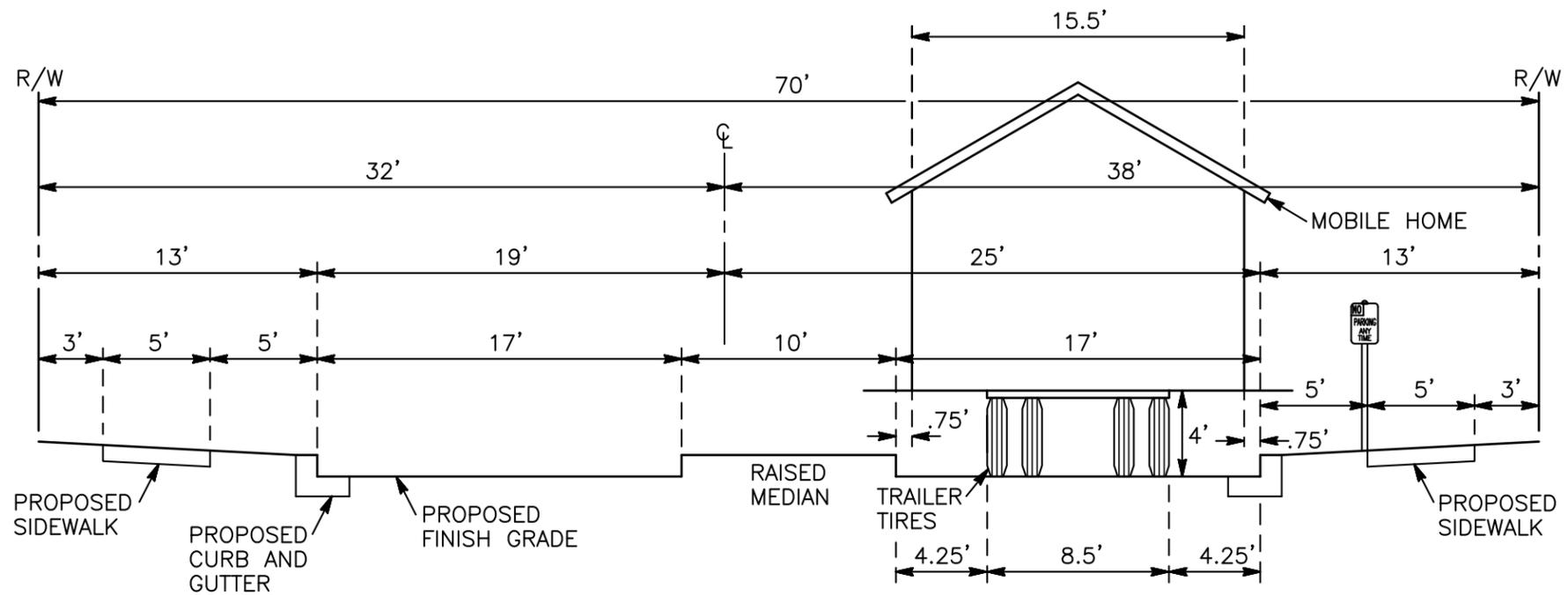
WB-67		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		



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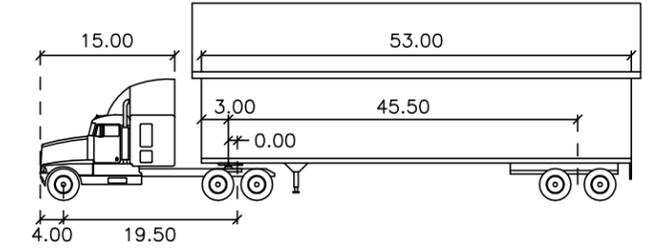
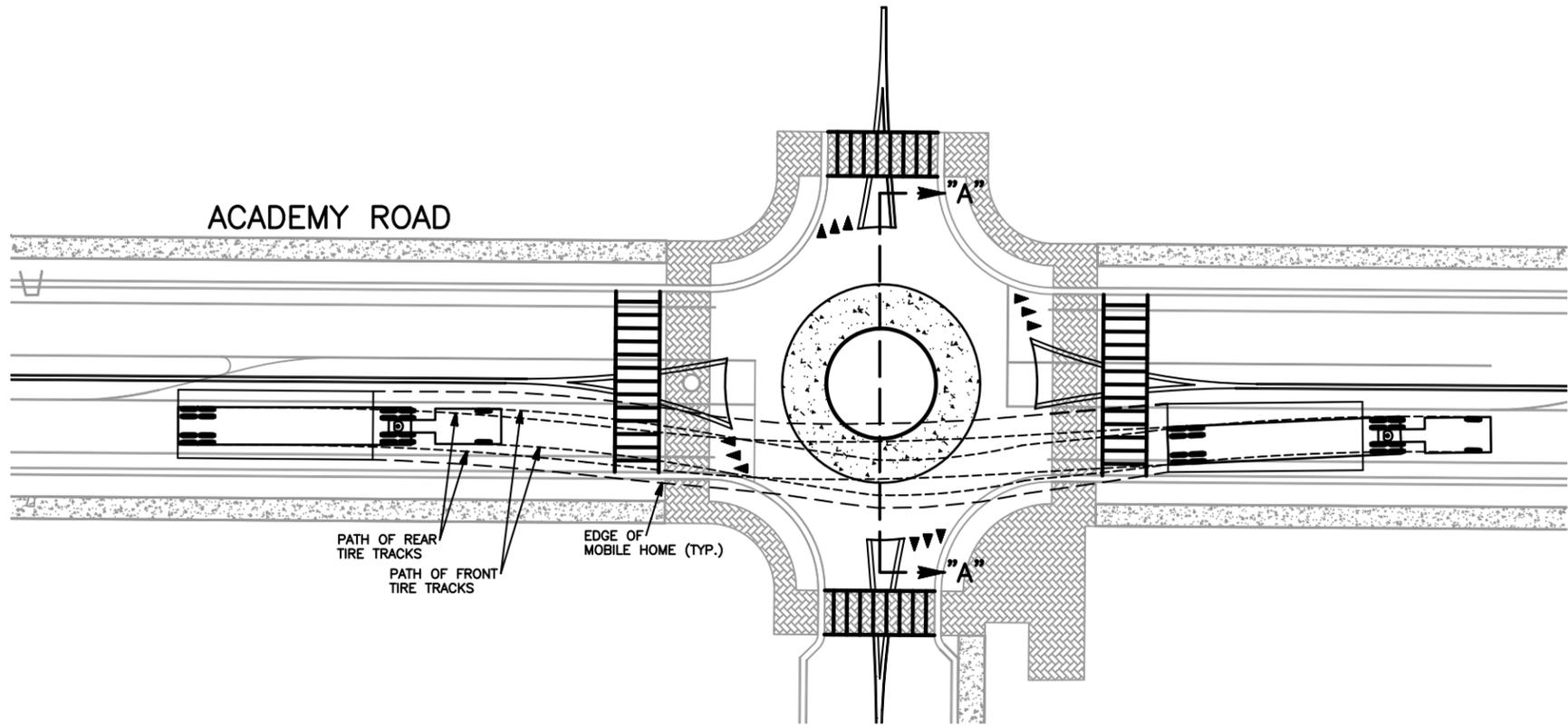
**FIGURE 4.14-5**  
**Semi-Trailer Turning Movement Analysis – Mission Avenue/Academy Road Intersection**

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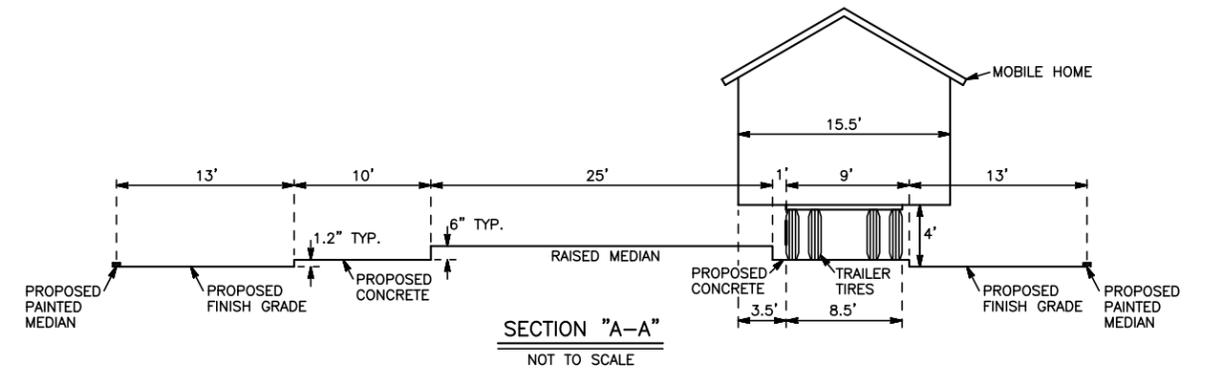
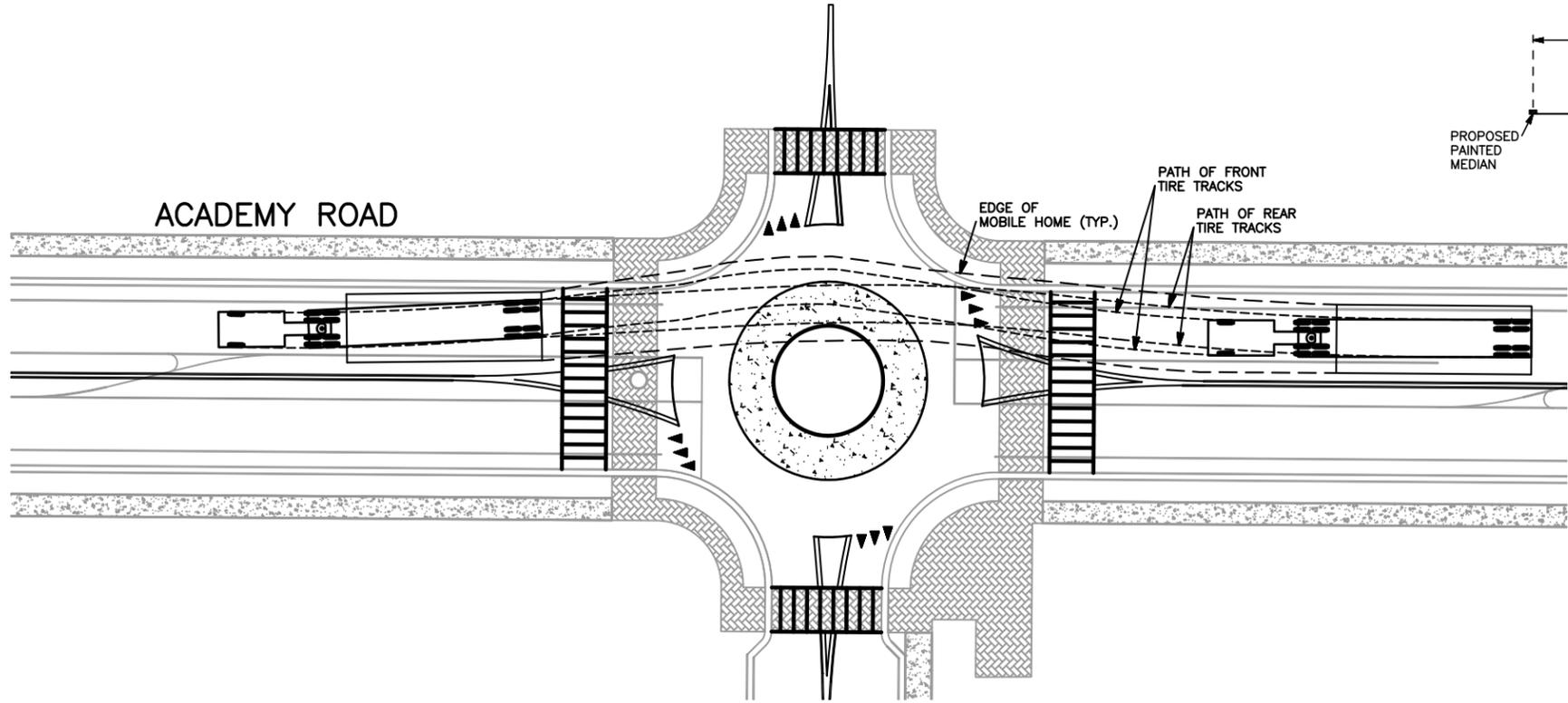


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WB-67		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		



**FIGURE 4.14-7**  
**Semi-Trailer Movement Analysis – Roundabout**

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The assumed four foot trailer tire elevation would provide for sufficient clearance above the raised median. The provision of a roundabout at this location would continue to allow for tractor/trailer access to the manufactured home community. Therefore, as analyzed in the Traffic Impact Analysis, impacts would be less than significant.

***E. Would the project result in inadequate emergency access.***

Academy Road is the proposed primary access to the project site and is currently an unclassified public roadway. Academy Road also currently serves as the primary access point for San Luis Rey Homes to the north of the project site.

**Construction**

Construction workers would utilize Academy Road as a primary access to the project site during the construction phase. A portion of the construction phase includes improvements to roadways and intersections. Construction of these improvements would require temporary interference with Academy Road, Mission Avenue, Frazee Road, Chapter Lane, and current and planned intersections. Temporary interference could include partial road closures, construction vehicles entering and exiting the project site, and pedestrian or bicycle lane closures. While any partial road closure would not occur along all project roadways or intersections at the same time, construction along these roadways may potentially result in impacts to general access to surrounding land uses, including emergency access. In order to ensure adequate access to the project site and surrounding land uses during construction, a Traffic Control Plan will be developed to the approval of the City. Mitigation measure MM-TRA-7 below outlines the requirements of the Traffic Control Plan. With incorporation of mitigation measure MM-TRA-7, impacts to emergency access during construction would be less than significant.

**Operation**

As discussed above, the majority of Academy Road would be improved to a paved width of 44 feet with an intermittently 10-foot raised median to where it narrows to 38 feet curb-to-curb for a brief section approximately 260 feet south of Frazee Road (19-foot lanes with no raised median). The Academy Road/Spine Road intersection would consist of a roundabout provide one 13-foot travel lane in each direction through the roundabout with a 45-foot landscaped median centered in the middle. These improvements to Academy Road would allow police, fire, and medical services to access both the project site and San Luis Rey Homes. As shown in the discussion provided in responses (a) and (d) above, required mitigation would ensure that roadways and intersections affected by the proposed project would operate at an acceptable LOS level, thereby ensure proper traffic flow that would not impede emergency services. Additionally, roadway design improvements in concert with required mitigation would reduce queuing at project intersections; the proposed roundabout would allow for a continuous flow of traffic and the

uncontrolled stop at the northbound/southbound portion of the Academy Road/Fraze Road/Chapter Lane intersection would ensure minimal queuing and interference to potential emergency vehicles attempting access to San Luis Rey Homes.

Generally, the Frazee Road connection would improve emergency access to the site and surrounding areas. The internal “spine” road that would provide primary internal access to private roads within the proposed project would be designed to Oceanside Traffic Code standards to ensure adequate emergency access. The proposed improvements to the circulation network in and around the project site would ensure that emergency services have adequate access to the project site and to San Luis Rey Homes. Therefore, the proposed project would not result in inadequate emergency access during operation and impacts would be less than significant.

***F. Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycles, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.***

As discussed in the existing conditions section above, pedestrian, bicycle, and transit modes of transportation are accessible to the project area. Academy Road is planned to serve as the primary access point to the proposed development. There is currently no sidewalk or bicycle lane along Academy Road. Five foot pedestrian sidewalks are included within the proposed improvements to Academy Road, Mission Avenue, Frazee Road, and portions of Chapter Lane. The project proposes to widen Academy Road at the approach to Mission Avenue to 44 feet which would provide for the lane recommendations mentioned above, as well as two (2) five-foot bike lanes. Bike lanes would terminate at the entrances to the roundabout and merge with the flow of vehicular traffic until exiting the roundabout. Pedestrian crosswalks would be painted within the roundabout. Therefore, the proposed project would improve pedestrian and bicycle facilities and impacts would be less than significant.

The North County Transit District (NCTD) provides public transit services to the project area’s vicinity. The project site is within walking or biking distance to bus stops served by NCTD Routes 303, 309, 313, and 333 with many overlapping stops to allow for transfers between routes. The closest transit center is College Boulevard Transit Center North, served by Routes 303, 309, 313, 333, and Riverside Transit Agency’s (RTA) Route 202. A future San Luis Rey Transit Center is also planned near the intersection of College Boulevard and Vandegrift Boulevard. Additionally, the proposed project would include a bus stop on the Mission Avenue frontage near the Community Park at the southwestern corner of the project site. The proposed project would not conflict with any existing transit stop locations or transit routes. Therefore, impacts would be less than significant.

### 4.14.6 Mitigation Measures

Mitigation measures have been provided for the intersections and roadway segments found to operate at deficient LOS and fail to meet the acceptable threshold criteria as defined by the City of Oceanside and SANTEC/ITE.

#### Direct Impact Mitigation Measures

**MM-TRA-1 Intersection #9. Mission Avenue / Academy Drive Road** – Prior to the issuance of the first building permit, the project applicant shall include the installation of a traffic signal with a Closed Circuit Television Camera (CCTV) camera at this intersection and provide one southbound dedicated left-turn lane and a southbound dedicated right-turn lane with an overlap phase within the conceptual circulation plan for the project to the satisfaction of the City of Oceanside.

#### Cumulative Impact Mitigation Measures

**MM-TRA-2 Intersection #7. SR-76 / Rancho Del Oro Drive** – SR-76 is proposed to be widened to six-lanes through this intersection in the future. ~~However, funding for these improvements is currently not available.~~ The project applicant shall pay a fair share contribution toward the planned widening of this intersection to provide additional eastbound and westbound through lanes along SR-76. The payment of a fair share contribution will be based on the trips associated with the actual approved residential units for an amount not to exceed \$230,000, and this fair share contribution would mitigate the cumulative impact at this location to below a level of significance since the impact is cumulative in nature and there is a planned improvement at this intersection to contribute towards. The payment of a fair share contribution shall occur prior to the issuances of the first building permits and to the satisfaction of the City of Oceanside.

**MM-TRA-3 Intersection #10. Mission Avenue / Mission Gate Drive** – The project applicant shall install a traffic signal, a 3-inch conduit with copper wiring to interconnect the existing signal at Old Grove Marketplace, and provide of a CCTV camera at this intersection. Since the impact is cumulative, the project should be reimbursed by the City the cost of the traffic signal less the project's fair share contribution. The fair share contribution shall be calculated based on the associated trips for actual approved residential units. The payment of a fair share contribution shall occur prior to the issuance of the first building permit and -to the satisfaction of the City of Oceanside.

**MM-TRA-4 Intersection #17. SR-76 / College Boulevard** – The SR-76/ College Boulevard intersection is to be improved per the City Circulation Element. ~~However, funding~~

~~for these improvements is currently not available.~~ The project applicant shall provide the City of Oceanside: a final construction design and construction costs for the build out of the intersection based on the recommendations in the Circulation Element. The construction estimate will be used in the future collection of fair share contributions for this intersection's planned improvements. This creative mitigation measure would mitigate the cumulative impact for this intersection to below a level of significance.

The project applicant shall conduct a traffic signal coordination optimization study at the 8 signalized intersections along SR-76 corridor between Foussat Road and N. Santa Fe Avenue. The purpose of this study is to update intersection signal timings in order to maximize intersection capacity, reduce driver delays, queues, and vehicle emissions, and improve the overall efficiency of traffic operations for the motoring public. The optimization study will utilize the existing weekday AM and PM peak hour traffic counts used in the Villa Storia Traffic Impact Analysis and the signal timing plans provided by Caltrans. The study will identify recommended adjustments to the signal timings, offsets, detection, and other parameters to improve intersection performance along the study corridor, which the City and/or Caltrans shall implement.

**MM-TRA-5 Segment #8. Mission Avenue between Rancho Del Oro Drive and Academy Road**

– Prior to the issuance of the first building permit, the project applicant shall provide an additional 15 feet of right-of-way to include sidewalk and parkway space on Mission Avenue along the project frontage ~~include the widening the north side of Mission Avenue along the project frontage to four-lane Secondary Collector standards as identified in the Oceanside Circulation Element~~ and the full installation of a 3 inch conduit with copper wiring along the project frontage connecting to the CCTV camera at the Mission Avenue/ Academy Road signalized intersection (approximately 2,300 feet) within the conceptual circulation plan for the project. The project applicant shall pay a fair share contribution toward the ultimate widening of the south side of Mission Avenue between Rancho Del Oro Drive and Academy Road to four-lane Secondary Collector standards. These improvements and fair share contributions ~~recommendations~~ would mitigate the cumulative impact along this segment to below a level of significance since the impact is cumulative in nature. The improvements and payment of a fair share contribution shall occur prior to the issuance of the first building permit and to the satisfaction of the City of Oceanside.

**Additional Mitigation Measures**

**MM-TRA-6 Academy Road Storage Lanes** - Prior to the issuance of the first building permit, the project applicant shall include 150 foot dedicated left- and right-turn storage

lanes on Academy Road at the southbound approach to the Mission Avenue/Academy Road intersection within the conceptual circulation plan for the project to the satisfaction of the City of Oceanside.

**MM-TRA-7 Construction Traffic Control Plan** - Prior to the issuance of the first building permit, a Traffic Control will be prepared for approval by the City of Oceanside. The traffic control plan will show all signage, striping, delineate detours, flagging operations and any other devices which will be used during construction to guide motorists safely through the construction zone and allow for adequate access and circulation, to the satisfaction of the City. This Traffic Control Plan will be prepared in accordance with the City's traffic control guidelines and will be prepared to ensure that access will be maintained to individual properties, and that emergency access will not be restricted. Additionally, the Traffic Control Plan will ensure that congestion and delay of traffic resulting from project construction are not substantially increased and will be of a short-term nature. In addition, the construction contractor shall provide not less than a 2-week written notice prior to the start of construction by mailing to owners/occupants along streets to be impacted during construction.

During construction, the City will maintain continuous vehicular and pedestrian access to residential driveways from the public street to the private property line, except where necessary construction precludes such continuous access for reasonable periods of time. Access will be reestablished at the end of the workday. If a driveway needs to be closed or interfered with as described above, the construction contractor shall notify the owner or occupant of the closure of the driveway at least five working days prior to the closure.

The traffic control plan will include provisions to ensure that the construction contractor's work in any public street does not interfere unnecessarily with the work of other agencies such as emergency service providers, mail delivery, school busses, and waste services.

#### **4.14.7 Level of Significance After Mitigation**

All impacts would be reduced to a level below significance following implementation of the mitigation measures listed above in Section 4.14.6.

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