

4.16 Transportation

This section describes the existing transportation and circulation conditions and identifies applicable plans, policies, and regulations related to transportation, including mass transit and non-motorized travel. This section evaluates the potential of the Fanita Ranch Project (proposed project) to result in impacts to access, circulation, and other transportation modes, including the potential for the proposed project to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; substantially increase hazards due to a design feature or incompatible use; and result in inadequate emergency access. Information in this section is based on the Transportation Impact Analysis (TIA) prepared by Linscott, Law & Greenspan, Engineers (LLG) (2020), included as Appendix N.

4.16.1 Environmental Setting

This section describes the proposed project's transportation study area and the existing roadway, transit, and bicycle networks.

4.16.1.1 Existing Transportation Network

Transportation Study Area

The transportation study area for the proposed project was based on the criteria identified in the San Diego Traffic Engineering Council/Institute of Traffic Engineers Guidelines for Traffic Impact Studies in the San Diego Region, March 2, 2000, as well as collaboration with City of Santee (City) staff. Based on this criteria, the traffic study 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" (SANTEC/ITE 2000).

Based on the above guidelines along with input from City staff, the study area for the proposed project includes 66 intersections, 64 street segments, and 7 freeway mainline segments. Figure 4.16-1, Transportation Study Area, depicts the transportation area of study. The following is a list of the study area intersections, street segments, and freeway mainline segments:

Study Area Intersections

- | | |
|---|---|
| 1. Princess Joann Road/Cuyamaca Street | 5. Woodglen Vista Drive/Magnolia Avenue |
| 2. Princess Joann Road/Magnolia Avenue | 6. El Nopal/Cuyamaca Street |
| 3. Ganley Road/Fanita Parkway | 7. El Nopal/Magnolia Avenue |
| 4. Woodglen Vista Drive/Cuyamaca Street | 8. El Nopal/Los Ranchitos Road |
| | 9. Lake Canyon Road/Fanita Parkway |

10. Lake Canyon Road/Carlton Hills Boulevard
11. Lake Canyon Road/Halberns Boulevard
12. Beck Drive/Cuyamaca Street
13. 2nd Street/Magnolia Avenue
14. Carefree Drive/Magnolia Avenue
15. Riverford Road/Riverside Drive
16. Mast Boulevard/State Route (SR-) 52 Eastbound (EB) Ramps
17. Mast Boulevard/SR-52 Westbound (WB) Ramps
18. Mast Boulevard/West Hills Parkway
19. Mast Boulevard/West Hills High School Driveway
20. Mast Boulevard/Medina Drive
21. Mast Boulevard/Pebble Beach Drive
22. Mast Boulevard/Fanita Parkway
23. Mast Boulevard/Carlton Hills Boulevard
24. Mast Boulevard/Halberns Boulevard
25. Mast Boulevard/Cuyamaca Street
26. Mast Boulevard/Park Center Drive
27. Mast Boulevard/Magnolia Avenue
28. Carlton Oaks Drive/West Hills Parkway
29. Carlton Oaks Drive/Pebble Beach Drive
30. Carlton Oaks Drive/Fanita Parkway
31. Carlton Oaks Drive/Carlton Hills Boulevard
32. Riverwalk Drive/Cuyamaca Street
33. Riverpark Drive/Cuyamaca Street
34. Town Center Parkway/Cuyamaca Street
35. Town Center Parkway/Riverview Parkway
36. Riverview Parkway/Magnolia Avenue
37. Riverford Road/SR-67 Southbound (SB) Ramps
38. Woodside Avenue/SR-67 Northbound (NB) Off-Ramp
39. Riverford Road/Woodside Avenue
40. Mission Gorge Road/West Hills Parkway
41. Mission Gorge Road/SR-52 EB Ramps
42. Mission Gorge Road/SR-52 WB Ramps
43. Mission Gorge Road/SR-125
44. Mission Gorge Road/Fanita Drive
45. Mission Gorge Road/Carlton Hills Boulevard
46. Mission Gorge Road/Town Center Parkway
47. Mission Gorge Road/Cuyamaca Street
48. Mission Gorge Road/Riverview Parkway
49. Mission Gorge Road/Cottonwood Avenue
50. Mission Gorge Road/Magnolia Avenue
51. Woodside Avenue North/SR-67 SB Off-Ramp
52. Woodside Avenue/SR-67 NB On-Ramp

53. Fanita Drive/SR-52 WB Off-Ramp
54. Fanita Drive/SR-52 EB On-Ramp
55. Buena Vista Avenue/Cuyamaca Street
56. Cuyamaca Street/SR-52 WB Ramps
57. Cuyamaca Street/SR-52 EB Ramps
58. Magnolia Avenue/SR-52 WB Ramps/SR-67 SB Ramps

59. Magnolia Avenue/SR-52 EB Ramps
60. Prospect Avenue/Fanita Drive
61. Prospect Avenue/Cuyamaca Street
62. Prospect Avenue/Cottonwood Avenue
63. Prospect Avenue/Magnolia Avenue
64. Prospect Avenue/SR-67 NB Off-Ramp
65. Prospect Avenue/Graves Avenue
66. Mast Boulevard/Weston Road

Study Area Street Segments**Princess Joann Road**

1. Cuyamaca Street to Magnolia Avenue

Woodglen Vista Drive

2. Cuyamaca Street to Magnolia Avenue

El Nopal

3. Cuyamaca Street to Magnolia Avenue
4. Magnolia Avenue to Los Ranchitos Road
5. Los Ranchitos Road to Riverford Road

Mast Boulevard

6. SR-52 to West Hills Parkway
7. West Hills Parkway to Medina Drive
8. Pebble Beach Drive to Fanita Parkway
9. Fanita Parkway to Carlton Hills Boulevard
10. Carlton Hills Boulevard to Halberns Boulevard

11. Halberns Boulevard to Cuyamaca Street
12. Cuyamaca Street to Magnolia Avenue
13. Magnolia Avenue to Los Ranchitos Road
14. West of Riverford Road

Carlton Oaks Drive

15. West Hills Parkway to Pebble Beach Drive
16. Fanita Parkway to Carlton Hills Boulevard

Mission Gorge Road

17. Western City Limits to West Hills Parkway
18. West Hills Parkway to SR-125
19. SR-125 to Fanita Drive
20. Fanita Drive to Carlton Hills Boulevard
21. Carlton Hills Boulevard to Town Center Drive
22. Town Center Parkway to Cuyamaca Street

23. Cuyamaca Street to Riverview Parkway
24. Riverview Parkway to Cottonwood Avenue
25. Cottonwood Avenue to Magnolia Avenue

Prospect Avenue

26. Fanita Drive to Cuyamaca Street
27. Cuyamaca Street to Cottonwood Avenue

West Hills Parkway

28. Mast Boulevard to Mission Gorge Road

Fanita Parkway

29. Project Site to Ganley Drive (future)
30. Ganley Drive to Lake Canyon Road
31. Lake Canyon Road to Mast Boulevard
32. Mast Boulevard to Carlton Oaks Drive

Fanita Drive

33. Mission Gorge Road to SR-52 Ramps
34. SR-52 Ramps to Prospect Avenue

Carlton Hills Boulevard

35. Lake Canyon Road to Mast Boulevard
36. Mast Boulevard to Carlton Oaks Drive
37. Carlton Oaks Drive to Mission Gorge Road

Halberns Boulevard

38. Lake Canyon Road to Mast Boulevard

Town Center Parkway

39. Mission Gorge Road to Cuyamaca Street
40. Cuyamaca Street to Riverview Parkway

Cuyamaca Street

41. Project Site to Magnolia Avenue (future)
42. Magnolia Avenue to Princess Joann Road (future)
43. Princess Joann Road to Chaparral Drive (future) Woodside Avenue
44. Chaparral Drive to Woodglen Vista Drive
45. Woodglen Vista Drive to El Nopal
46. El Nopal to Mast Boulevard
47. Mast Boulevard to River Park Drive
48. River Park Drive to Town Center Parkway
49. Town Center Parkway to Mission Gorge Road
50. Mission Gorge Road to SR-52 Ramps
51. SR-52 Ramps to south of Prospect Avenue

Riverview Parkway

52. Mission Gorge Road to Town Center Parkway
53. Town Center Parkway to Magnolia Avenue (future)

Magnolia Avenue

54. Cuyamaca Street to Princess Joann Road
55. Princess Joann Road to Woodglen Vista Drive

- 56. Woodglen Vista Drive to El Nopal
- 57. El Nopal to Mast Boulevard
- 58. Mast Boulevard to Riverview Parkway
- 59. Riverview Parkway to Mission Gorge Road
- 60. Mission Gorge Road to SR-52 Ramps

- 61. SR-52 Ramps to South of Prospect Avenue
Woodside Avenue
- 62. East of Magnolia Avenue
North Woodside Avenue
- 63. Riverford Road to Woodside Avenue
Riverford Road
- 64. Riverside Drive to SR-67 Ramps

Study Area Freeway Mainline Segments

State Route 52

- 1. Santo Road to Mast Boulevard
- 2. Mast Boulevard to SR-125
- 3. SR-125 to Cuyamaca Street
- 4. Cuyamaca Street to SR-67

State Route 67

- 5. Riverford Road to SR-52
- 6. SR-52 to Bradley Avenue

State Route 125

- 7. Grossmont College Drive to SR-52

4.16.1.2 Existing Roadway Network in the Study Area

The following is a brief description of the existing roadways and freeways in the study area.

Princess Joann Road is classified and currently built as a Residential Collector. As a residential roadway, Princess Joann Road is built with speed bumps for traffic calming. The posted speed limit is 25 miles per hour (mph) and on-street parking is permitted. Princess Joann Road would connect with the planned northward extension of Cuyamaca Street.

Woodglen Vista Drive is classified and currently built as a Residential Collector. The posted speed limit is 25 mph, though certain sections are built with speed bumps and a 15 mph advised speed. On-street parking is generally allowed.

El Nopal from Cuyamaca Street to Magnolia Avenue is classified and currently built as a Residential Collector. This section of El Nopal is built as a two-lane undivided roadway, with speed bumps constructed on the western portion. From Magnolia Avenue to the City limits located just west of Los Ranchitos Road, El Nopal is classified as a Collector and is currently built as a two-lane road with a two-way left-turn lane (TWLTL) median. The posted speed limit on this section is 35 mph. Continuing east, from the City limits to Riverford Road, El Nopal lies within unincorporated San Diego County. This section of El Nopal is classified as a Light Collector within the Lakeside Community Planning Area of the San Diego County General Plan Mobility Element. The roadway is currently constructed as two lanes with a striped median and a posted speed limit of 40 mph consistent with its classification. Curbside

parking is generally prohibited, except between Los Ranchitos Road and Mountain View Lane. The roadway is currently equipped with Class III bike lanes.

Mast Boulevard is a key east–west roadway in the City that is classified as a Four-Lane Major Arterial. The small section from the SR-52 ramps to West Hills Parkway is in the City of San Diego. This section is classified and currently built as a Four-Lane Major Arterial. From West Hills Parkway to Fanita Parkway, Mast Boulevard is currently constructed as a four-lane divided roadway with landscaped median. Class II bike lanes span the length of Mast Boulevard. Between Fanita Parkway and Carlton Hills Boulevard, Mast Boulevard is built as a four-lane roadway with TWLTL median. From Carlton Hills Boulevard to Park Center Drive, the roadway transitions back to four lanes with a raised median. Between Park Center Drive and Grand Teton Way there is another short stretch of the roadway built as four lanes with a TWLTL median, before the roadway transitions to two thru lanes with intermittent turn pockets until Los Ranchitos Road. This section of Mast Boulevard between Magnolia Avenue and Los Ranchitos is classified as a Two-Lane Collector. The posted speed limit on Mast Boulevard ranges between 35 mph and 40 mph and on-street parking is permitted intermittently. Mast Boulevard currently terminates at the City limits, before picking up again roughly 800 feet to the east in unincorporated San Diego County where it is classified as a Major Road. Per the Santee General Plan Mobility Element, there are no plans to connect Mast Boulevard between the City and the County of San Diego (County).

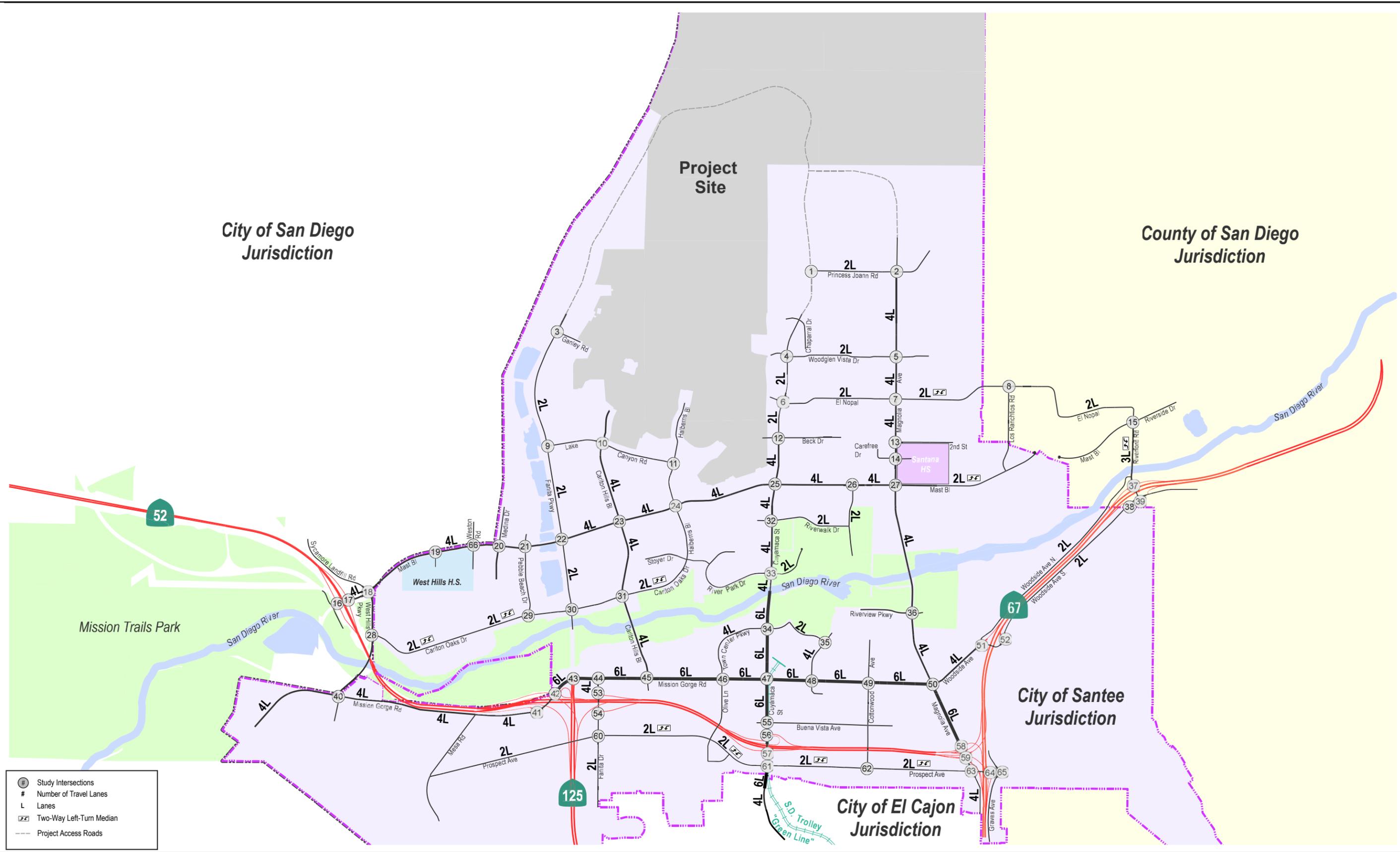
Carlton Oaks Drive is a generally east–west roadway classified as a Collector. Between West Hills Parkway and Carlton Hills Boulevard it is built as a two-lane roadway with TWLTL median and painted bike lanes in both directions. The posted speed limit is 35 mph and curbside parking is generally allowed on both sides of the street.

Mission Gorge Road is a principal east–west roadway in the City. From the western City limits to SR-52 it is classified and currently built as a Four-Lane Major Arterial. From SR-52 to Riverview Parkway, it is classified and currently built as a Six-Lane Prime Arterial. From Riverview Parkway to Magnolia Avenue, it is classified as a Four-Lane Major Arterial, however it is currently built as a six-lane street with a raised median. The posted speed limit varies between 35 mph and 45 mph. On-street parking is prohibited and no bicycle facilities are provided in the study area.

Prospect Avenue is an east–west connection and is classified and currently built as a Collector with TWLTL. Class II bike lanes are provided between Fanita Drive and Magnolia Avenue. The posted speed limit is 35 mph and on-street parking is allowed. Class II lanes are provided on this roadway from Fanita Drive to Magnolia Avenue.

West Hills Parkway is a north–south roadway connecting Mission Gorge Road and Mast Boulevard along the western edge of the City in the City of San Diego and is classified as a Major Arterial. It is currently built as a four-lane street with a painted double-yellow median. West Hills Parkway is built with Class II bike lanes on the shoulder, with on-street parking prohibited. The posted speed limit is 45 mph.

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Source: Linscott Law & Greenspan 2020.

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Fanita Parkway is classified as a Residential Collector between Mast Boulevard and Carlton Oaks Drive, and as a Parkway north of Mast Boulevard to Ganley Road. North of its existing terminus, Fanita Parkway is planned to be extended as a Parkway per the Santee General Plan Mobility Element. It is currently built as a two-lane undivided roadway for its entire length between Ganley Road and Carlton Oaks Drive. The posted speed limit is 40 mph north of Mast Boulevard and 35 mph to the south.

Fanita Drive from Mission Gorge Road to Prospect Avenue is classified and currently built as a Four-Lane Major Arterial. South of Prospect Avenue, Fanita Drive is classified as a Collector and narrows to a two-lane undivided roadway. On-street parking is prohibited between Mission Gorge Road and Prospect Avenue and allowed intermittently south of this point. Class II bike lanes are provided and on-street parking is prohibited. The posted speed limit is 40 mph.

Carlton Hills Boulevard is classified as a Collector from its northern terminus to Lake Canyon Road and as a Major Arterial from Lake Canyon Road to its southern terminus at Mission Gorge Road. From Lake Canyon Road to Mission Gorge Road it is built as a four-lane divided roadway with Class I bike lanes. The posted speed limit is 35 mph and curbside parking is allowed.

Halberns Boulevard is classified as a Residential Collector north of Lake Canyon Road and as a Collector from Lake Canyon Road to Mast Boulevard. From Lake Canyon Road to Mast Boulevard it is currently constructed as a two-lane roadway with TWLTL median and Class II bike lanes. The posted speed limit is 25 mph and on-street parking is allowed.

Town Center Parkway is classified as a Major Arterial. From Mission Gorge Road to Cuyamaca Street it is currently built as a four-lane divided roadway with Class II bike lanes and a posted speed limit of 35 mph. From Cuyamaca Street to Riverview Parkway it is classified and currently built as a two-lane Parkway with a TWLTL and shared-lane pavement markings for bicycles. The posted speed limit on this segment of Town Center Parkway is 25 mph. No on-street parking is allowed on any portion of Town Center Parkway.

Cuyamaca Street is a significant north-south roadway in the City. From its existing northern terminus to Town Center Parkway, Cuyamaca Street is classified as a Major Arterial. Between Town Center Parkway and the southern City limits, it is classified as a Prime Arterial. North of its existing terminus, Cuyamaca Street is planned to be extended as a Parkway per the Santee General Plan Mobility Element. It is currently built as a two-lane roadway divided by a raised median with a cross-section to allow for the median to be reconstructed allowing for four lanes from its northern terminus to Beck Drive. South of Beck Drive to Mast Boulevard, an additional northbound thru lane is provided. The posted speed limit along this section is 35 mph. Class II bike lanes are provided and on-street parking is prohibited. South of Mast Boulevard to Town Center Parkway, it is built to Four-Lane Major Arterial standards providing Class II bike lanes with on-street parking prohibited. From Town Center Parkway to Prospect Avenue, it is built to Six-Lane Prime

Arterial standards. Bike lanes are not provided and on-street parking is prohibited. The posted speed limit is 35 mph.

Riverview Parkway is classified as a Parkway. There is currently a gap between the existing portions of Riverview Parkway generally to the west and north of the Las Colinas Detention Facility that is planned to be completed in the future, per the Santee General Plan Mobility Element. It is currently built with two lanes in each direction separated by a TWLTL. Class II bike lanes are provided and on-street parking is prohibited. There is no posted speed limit on this segment.

Magnolia Avenue from Princess Joann Road to Mission Gorge Road is classified and currently constructed as a Four-Lane Major Arterial. From Kerrigan Street to 2nd Street and between Braverman Drive and Mission Gorge Road it is divided by a TWLTL while maintaining a Major Arterial cross-section. Class II bike lanes are provided and on-street parking is permitted intermittently. The posted speed limit is 40 mph. North of its existing terminus, Magnolia Avenue is planned to be extended as a Parkway per the Santee General Plan Mobility Element as a Four-Lane Parkway. From Mission Gorge Road to the southern City limits it is classified and currently built as a Six-Lane Prime Arterial roadway. South of the City limits, Magnolia Avenue narrows to a two-lane undivided roadway.

Woodside Avenue runs from Magnolia Avenue in the west (where Mission Gorge Road ends) to Chestnut Street (Lakeside) in the east. North Woodside Avenue splits off from Woodside Avenue east of the SR-67 off-ramp. From Magnolia Avenue to the split the roadway is classified as a Major Arterial and is currently constructed with four lanes and a TWLTL median. East of the split it is designated as a Collector with TWLTL and is constructed as a two-lane roadway with a mix of TWLTL median and striped median with turn pockets. Class II bike lanes are provided and on-street parking is generally prohibited except for a portion of the roadway between Shadow Hill Road and Northcote Road. The posted speed limit is 45 mph.

North Woodside Avenue is classified as a Collector and built as a two-lane undivided roadway. Class II bike lanes are provided on both sides of the roadway. On-street parking is allowed on the north side of the roadway. The posted speed limit is 40 mph.

Riverford Road is located within the Lakeside Community Planning Area of the unincorporated County where it is classified as a Prime Arterial from Riverside Drive to the SR-67 southbound ramps. South of Mast Boulevard, Riverford Road is currently constructed as a three-lane undivided roadway (two northbound lanes and one southbound lane) to just north of the San Diego River. This portion also provides a TWLTL. South of the San Diego River to Woodside Avenue, Riverford Road is currently constructed as a two-lane undivided roadway. The posted speed limit is 40 mph and curbside parking is generally prohibited. Bike lanes are provided.

Existing Transit Network

Transit service in the City is provided by the San Diego Metropolitan Transit Service. There are currently three bus routes and one light rail trolley route serving the City. No public transit currently serves the project site.

Route 832 is a loop running clockwise between Santee Town Center and the northern areas of the City via Cuyamaca Street, Woodglen Vista Drive, Magnolia Avenue, and Mission Gorge Road. Route 832 runs 7 days a week with service generally 6:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 5:00 p.m. Saturday and Sunday. Service is as frequent as every 45 minutes during peak periods and is at 1-hour intervals during off-peak periods and weekends.

Route 833 is a generally north–south route running between Santee Town Center and the El Cajon Transit Center, via Mission Gorge Road, Magnolia Avenue, Graves Avenue, Pepper Drive, Mollison Avenue, E. Bradley Avenue, Fletcher Parkway, Arnele Avenue, and Marshall Avenue. Route 833 runs approximately 6:00 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 5:00 p.m. weekends. Route 833 runs at approximately 45-minute frequency all-day weekdays and 1-hour frequency on weekends.

Route 834 is a loop running between Santee Town Center and the western areas of the City. Route 834 runs along Town Center Parkway, Mission Gorge Road, West Hills Parkway, Mast Boulevard, and Carlton Hills Boulevard. Route 834 runs a weekday-only schedule, with hourly service from approximately 7:00 a.m. to 7:00 p.m.

San Diego Trolley Green Line (Route 530) serves the City with one station located at Santee Town Center. The Green Line runs from the Santee Town Center to Downtown San Diego via Mission Valley and the Old Town Transit Center. Headways are approximately 10–15 minutes on weekdays and 10–30 minutes on weekends.

Existing Bicycle Network

Class I, II, and III bicycle facilities make up the City’s existing bicycle network. Bicycle facilities along Mast Boulevard, Carlton Oaks Drive, Mission Gorge Road, Prospect Avenue, and Woodside Avenue provide east–west connections, while facilities along Carlton Hills Boulevard, Cuyamaca Street, and North Magnolia Avenue provide north–south connections. As a part of the Santee General Plan Mobility Element, extended bike lanes are planned to connect with existing bicycle facilities on these streets to achieve enhanced connectivity in the City. A description of the study areas roadways including their existing bicycle facilities is described above.

Existing Pedestrian Network

Newer streets in the City, particularly within the Santee Town Center area as well as along Mission Gorge Road, have sidewalks, which are separated from the street and designed along landscaped

corridors. The City's current policy is to provide non-contiguous sidewalks on all new and widened streets of collector classification or larger. Pedestrian facilities include sidewalks, curb ramps, and other amenities such as street trees for shading and pedestrian scale lighting. The northern portion of the City is well-connected by sidewalks. Sidewalks are less prevalent in the older, southern areas.

4.16.1.3 Existing Traffic Operations

Existing Traffic Operations Methodology

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

Traffic counts were conducted by Count Data in January/February 2018 while schools were in session. Manual hand counts at the study area intersections, including bicycle and pedestrian counts, were also conducted on these dates. Freeway volumes were taken from the most recently available California Department of Transportation (Caltrans) annual traffic census data, year 2016. The existing traffic volumes and analysis results differ from those presented in the Santee General Plan Mobility Element (data collected in November 2013). This is due to the counts being performed in more recent years and general daily fluctuation along roadways.

Intersection Methodology

Signalized intersections were analyzed under AM and PM peak-hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 19 of the Highway Capacity Manual, 6th edition (HCM 6), with the assistance of the Synchro (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. City and Caltrans location-specific signal timing information such as minimum greens, cycle lengths, splits for the freeway interchanges, and real-time peak-hour field observations were included in the analysis, where available. The procedures from the HCM 2000 methodology were used at intersections where the HCM 6 is limited in its analysis capabilities. For example, the HCM 6 cannot analyze clustered intersections where multiple intersections are operated by a single traffic signal controller.

Unsignalized intersections were analyzed under AM and PM peak-hour conditions. Average vehicle delay and LOS was determined based upon the procedures found in Chapters 20 and 21 of the HCM 6 with the assistance of the Synchro (version 10) computer software.

Street Segment Methodology

Street segment analysis is based on the comparison of daily traffic volumes (average daily trips [ADTs]) to the City's Revised Roadway Classifications and Standards table provided in the Santee General Plan Mobility Element. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. For locations within the County, the capacities taken from the County's Table 1, Average Daily Vehicle Trips, were used in the analysis (County of San Diego 2012). One segment in the study area is located within the City of San Diego: Mast Boulevard between the SR- 52 Ramps and West Hills Parkway. The capacity for this segment was taken from the City of San Diego's Roadway Classification, Level of Service, and ADT Table. Table 4.16-1 illustrates the City of Santee's Roadway Classifications and Standards providing segment capacities for different street classifications, based on traffic volumes and street characteristics.

Table 4.16-1. City of Santee Roadway Classifications and Standards

Street Classification	Description/Sub-classification	No. of Lanes	LOS/ADT Threshold				
			A	B	C	D	E
Circulation Element							
Prime Arterial	Median	6 lanes	25,000	35,000	50,000	55,000	60,000
Major Arterial	Median	4 lanes	15,000	21,000	30,000	35,000	40,000
Parkway	Median	4 lanes	15,000	21,000	30,000	35,000	40,000
	w/TWLTL	2 lanes w/TWLTL	5,000	7,000	10,000	13,000	15,000
	—	2 lanes	4,000	5,500	7,500	9,000	10,000
Collector	w/TWLTL	2 lanes w/TWLTL	5,000	7,000	10,000	13,000	15,000
	Industrial Collector	2 lanes	2,500	3,500	5,000	6,500	8,000
	Residential Collector	2 lanes	2,500	3,500	5,000	6,500	8,000
Non-Circulation Element							
Industrial Local		2 lanes	—	—	2,200*	—	—
Residential Local		2 lanes	—	—	2,200*	—	—
Cul-De-Sac Street		2 lanes	—	—	300*	—	—
Hillside Street		2 lanes	—	—	700*	—	—

Source: City of Santee 2017.

Notes:

¹ TWLTL = two-way left-turn lane.

² "*" Represents design capacity of non-Circulation Element street. LOS does not apply to non-Circulation Element streets.

Freeway Mainline Segment Methodology

Freeway segments were analyzed under AM and PM peak hour based on the standards outlined in the Caltrans Guide for the Preparation of Traffic Impact Studies using HCM 6. The freeway analyses were conducted using the Highway Capacity Software (HCS version 7.3). The freeway analysis is based on assessing freeway operations based on traffic volumes, freeway network, and other segment specific characteristics and reporting freeway volume-to-capacity ratio, speed and

density. Freeway density is a measurement of the flow rate (in passenger cars, per hour, per lane) over the average passenger-car speed in mph, which results in freeway LOS.

Per the City’s guidelines, the freeway analyses significance criteria may use the “Volume-to-Capacity” ratio (V/C) or “Speed” as the measure of effectiveness (MOE) to determine impacts on freeways. While freeway density and the corresponding LOS have been reported in the analyses, V/C was used as the MOE to determine significant project impacts on freeways given the software limitations in reporting speeds at congested conditions (i.e., LOS F). Table 4.16-2 presents the freeway segment criteria based on density.

Table 4.16-2. Freeway Segment Level of Service Criteria

LOS	V/C	Density Range (pc/mi/ln)
A	0.00–0.30	0–11
B	0.31–0.50	> 11–18
C	0.51–0.70	> 18–26
D	0.71–0.89	> 26–35
E	0.90–1.00	> 35–45
F	> 1.00	> 45

Sources: Caltrans 2002; Appendix N.

Notes: LOS = level of service; pc/mi/ln = passenger car per mile per lane; v/c = volume to capacity

Existing Intersection Operations

Existing AM and PM peak-hour operations for the 66 intersections within the study area are presented in Table 4.16-3.

Table 4.16-3. Existing Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing	
				Delay ^a	LOS ^b
1. Princess Joann Road/Cuyamaca Street	Santee	DNE ^c	AM	—	—
			PM	—	—
2. Princess Joann Road/Magnolia Avenue	Santee	AWSC ^d	AM	7.6	A
			PM	7.9	A
3. Ganley Road/Fanita Parkway	Santee	MSSC ^e	AM	9.3	A
			PM	9.1	A
4. Woodglen Vista Drive/Cuyamaca Street	Santee	AWSC	AM	8.9	A
			PM	9.0	A
5. Woodglen Vista Drive/Magnolia Avenue	Santee	Signal	AM	11.9	B
			PM	10.7	B
6. El Nopal/Cuyamaca Street	Santee	AWSC	AM	12.0	B
			PM	11.8	B
7. El Nopal/Magnolia Avenue	Santee	Signal	AM	23.9	C
			PM	18.3	B

Table 4.16-3. Existing Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing	
				Delay ^a	LOS ^b
8. El Nopal/Los Ranchitos Road	County	AWSC	AM	13.9	B
			PM	14.9	B
9. Lake Canyon Road/Fanita Parkway	Santee	AWSC	AM	7.9	A
			PM	8.3	A
10. Lake Canyon Road/Carlton Hills Boulevard	Santee	AWSC	AM	10.3	B
			PM	9.2	A
11. Lake Canyon Road/Halberns Boulevard	Santee	MSSC	AM	8.7	A
			PM	8.7	A
12. Beck Drive/Cuyamaca Street	Santee	AWSC	AM	22.4	C
			PM	13.3	B
13. 2nd Street/Magnolia Avenue	Santee	Signal	AM	8.0	A
			PM	6.6	A
14. Carefree Drive/Magnolia Avenue	Santee	Signal	AM	17.4	B
			PM	9.2	A
15. Riverford Road/Riverside Drive	County	Signal	AM	25.7	C
			PM	24.3	C
16. Mast Boulevard/SR-52 EB Ramps	San Diego/Caltrans	Signal	AM	9.5	A
			PM	13.1	B
17. Mast Boulevard/SR-52 WB Ramps	San Diego/Caltrans	Signal	AM	>100.0	F ₉
			PM	10.9	B
18. Mast Boulevard/West Hills Parkway	San Diego	Signal	AM	>100.0	F ₉
			PM	24.3	C
19. Mast Boulevard/West Hills High School	Santee	Signal	AM	3.9	A
			PM	7.4	A
20. Mast Boulevard/Medina Drive	Santee	Signal	AM	3.9	A
			PM	4.5	A
21. Mast Boulevard/Pebble Beach Drive	Santee	Signal	AM	5.0	A
			PM	3.7	A
22. Mast Boulevard/Fanita Parkway	Santee	Signal	AM	10.8	B
			PM	12.0	B
23. Mast Boulevard/Carlton Hills Boulevard	Santee	Signal	AM	42.4	D
			PM	44.8	D
24. Mast Boulevard/Halberns Boulevard	Santee	Signal	AM	13.5	B
			PM	13.8	B
25. Mast Boulevard/Cuyamaca Street	Santee	Signal	AM	36.9	D
			PM	33.3	C
	Santee	Signal	AM	7.1	A

Table 4.16-3. Existing Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing	
				Delay ^a	LOS ^b
26. Mast Boulevard/Park Center Drive			PM	8.7	A
27. Mast Boulevard/Magnolia Avenue	Santee	Signal	AM	32.9	C
			PM	26.8	C
28. Carlton Oaks Drive/West Hills Parkway	Santee	Signal	AM	15.0	B
			PM	9.8	A
29. Carlton Oaks Drive/Pebble Beach Drive	Santee	Signal	AM	8.9	A
			PM	5.0	A
30. Carlton Oaks Drive/Fanita Parkway	Santee	Signal	AM	10.9	B
			PM	9.2	A
31. Carlton Oaks Drive/Carlton Hills Boulevard	Santee	Signal	AM	33.0	C
			PM	23.3	C
32. Riverwalk Drive/Cuyamaca Street	Santee	Signal	AM	14.6	B
			PM	14.6	B
33. Riverpark Drive/Cuyamaca Street	Santee	Signal	AM	16.7	B
			PM	19.9	B
34. Town Center Parkway/Cuyamaca Street	Santee	Signal	AM	14.5	B
			PM	32.7	C
35. Town Center Parkway/Riverview Parkway	Santee	Signal	AM	11.6	B
			PM	14.5	B
36. Riverview Parkway/Magnolia Avenue	Santee	Signal	AM	10.1	B
			PM	11.2	B
37. Riverford Road/SR-67 SB Ramps	County/Caltrans	MSSC	AM	86.0	F
			PM	51.0	F
38. Woodside Avenue/SR-67 NB Off-Ramp	County/Caltrans	Signal	AM	40.4	D
			PM	43.2	D
39. Riverford Road/Woodside Avenue	County	Signal	AM	54.9	D
			PM	31.1	C
40. Mission Gorge Road/West Hills Parkway	Santee	Signal	AM	16.1	B
			PM	14.3	B
41. Mission Gorge Road/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	4.1	A
			PM	11.1	B
42. Mission Gorge Road/SR-52 WB Ramps	Santee/Caltrans	Signal	AM	1.8	A
			PM	0.6	A
43. Mission Gorge Road/SR-125	Santee/Caltrans	Signal	AM	32.6	C
			PM	29.1	C
	Santee	Signal	AM	37.7	D

Table 4.16-3. Existing Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing	
				Delay ^a	LOS ^b
44. Mission Gorge Road/Fanita Drive			PM	29.9	C
45. Mission Gorge Road/Carlton Hills Boulevard	Santee	Signal	AM	61.7	E
			PM	38.9	D
46. Mission Gorge Road/Town Center Parkway	Santee	Signal	AM	26.2	C
			PM	45.9	D
47. Mission Gorge Road/Cuyamaca Street	Santee	Signal	AM	43.3	D
			PM	47.4	D
48. Mission Gorge Road/Riverview Parkway	Santee	Signal	AM	19.0	B
			PM	17.0	B
49. Mission Gorge Road/Cottonwood Avenue	Santee	Signal	AM	26.7	C
			PM	20.6	C
50. Mission Gorge Road/Magnolia Avenue	Santee	Signal	AM	40.9	D
			PM	47.7	D
51. Woodside Avenue N./SR-67 SB Off-Ramp	Santee/Caltrans	AWSC	AM	26.0	D
			PM	16.0	C
52. Woodside Avenue/SR-67 NB On-Ramp	Santee/Caltrans	Signal	AM	10.0	A
			PM	9.3	A
53. Fanita Drive/SR-52 WB Off-Ramp	Santee/Caltrans	MSSC	AM	26.8	D
			PM	16.7	C
54. Fanita Drive/SR-52 EB On-Ramp	Santee/Caltrans	Uncontrolled	AM	15.2	C
			PM	9.9	A
55. Buena Vista Avenue/Cuyamaca Street	Santee	Signal	AM	11.2	B
			PM	28.9	C
56. Cuyamaca Street/SR-52 WB Ramps	Santee/Caltrans	Signal	AM	2.6	A
			PM	3.6	A
57. Cuyamaca Street/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	31.7	C
			PM	36.2	D
58. Magnolia Avenue/SR-52 WB Ramps/SR-67 SB Ramps	Santee/Caltrans	Signal	AM	6.8	A
			PM	5.9	A
59. Magnolia Avenue/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	8.8	A
			PM	20.1	C
60. Prospect Avenue/Fanita Drive	Santee	Signal	AM	27.2	C
			PM	19.1	B
61. Prospect Avenue/Cuyamaca Street	Santee	Signal	AM	29.1	C
			PM	34.4	C
	Santee	Signal	AM	8.3	A

Table 4.16-3. Existing Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing	
				Delay ^a	LOS ^b
62. Prospect Avenue/Cottonwood Avenue			PM	6.5	A
63. Prospect Avenue/Magnolia Avenue	Santee	Signal	AM	20.4	C
			PM	28.1	C
64. Prospect Avenue/SR-67 NB Off-Ramp	Santee/Caltrans	Signal	AM	9.5	A
			PM	8.6	A
65. Prospect Avenue/Graves Avenue	Santee	Signal	AM	20.1	C
			PM	33.7	C
66. Mast Boulevard/Weston Road	Santee	Signal	AM	5.3	A
			PM	1.5	A

Source: Appendix N.

Notes:

^a Average delay expressed in seconds per vehicle.

^b LOS.

^c Does not exist.

^d All-way stop controlled intersection. Average intersection delay reported.

^e Minor street stop controlled intersection. Minor street left-turn delay reported.

^f No traffic control devices are installed at this location. Therefore, the southbound left-turn movement is reported.

^g The HCM methodology does not accurately reflect operations at this intersection during the AM peak hour. Latent demand east of the intersection, as well as upstream congestion from SR-52 westbound, exceeds the limits of the analysis software/methodology. The LOS F result is based on the bottleneck effect of the lane-drop on the westbound on-ramp observed in the field.

¹ Jur. = Jurisdiction

² DNE, “—” = Does not exist

Signalized

Unsignalized

Delay/LOS Thresholds

Delay/LOS Thresholds

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

As shown in Table 4.16-3, the following study area intersections were calculated to currently operate at LOS E or F under existing conditions:

- Intersection 17. Mast Boulevard/SR-52 WB Ramps – LOS F (AM peak hour)
- Intersection 18. Mast Boulevard/West Hills Parkway – LOS F (AM peak hour)
- Intersection 37. Riverford Road/SR-67 SB Ramps – LOS F (AM/PM peak hours)
- Intersection 45. Mission Gorge Road/Carlton Hills Boulevard – LOS E (AM peak hour)

Existing Street Segment Operations

Table 4.16-4 summarizes the existing operations for the 64 street segments within the study area.

Table 4.16-4. Existing Street Segment Operations

Street Segment	Jur.	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d
Princess Joann Road					
1. Cuyamaca Street to Magnolia Avenue	Santee	8,000	530	A	0.066
Woodglen Vista Drive					
2. Cuyamaca Street to Magnolia Avenue	Santee	8,000	1,700	A	0.213
El Nopal					
3. Cuyamaca Street to Magnolia Avenue	Santee	8,000	3,780	C	0.473
4. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	8,870	C	0.591
5. Los Ranchitos Road to Riverford Road	County	16,200	9,810	D	—
Mast Boulevard					
6. SR-52 to West Hills Parkway	San Diego	40,000	26,440	C	0.661
7. West Hills Parkway to Medina Drive	Santee	40,000	19,540	B	0.489
8. Pebble Beach Drive to Fanita Parkway	Santee	40,000	19,590	B	0.490
9. Fanita Parkway to Carlton Hills Boulevard	Santee	30,000	16,800	B	0.420
10. Carlton Hills Boulevard to Halberns Boulevard	Santee	40,000	19,220	B	0.481
11. Halberns Boulevard to Cuyamaca Street	Santee	40,000	20,200	B	0.505
12. Cuyamaca Street to Magnolia Avenue	Santee	40,000	18,490	B	0.462
13. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	7,710	C	0.514
14. West of Riverford Road	County	19,000	1,810	A	—
Carlton Oaks Drive					
15. West Hills Parkway to Pebble Beach Drive	Santee	15,000	7,360	C	0.491
16. Fanita Parkway to Carlton Hills Boulevard	Santee	15,000	10,560	D	0.704
Mission Gorge Road					
17. Western City Limits to West Hills Parkway	Santee	40,000	16,510	B	0.413
18. West Hills Parkway to SR-125	Santee	40,000	17,000	B	0.425
19. SR-125 to Fanita Drive	Santee	60,000	45,440	C	0.757
20. Fanita Drive to Carlton Hills Boulevard	Santee	60,000	41,100	C	0.685
21. Carlton Hills Boulevard to Town Center Drive	Santee	60,000	37,960	C	0.633
22. Town Center Parkway to Cuyamaca Street	Santee	60,000	28,630	B	0.477
23. Cuyamaca Street to Riverview Parkway	Santee	60,000	23,140	A	0.386
24. Riverview Parkway to Cottonwood Avenue	Santee	60,000	25,550	B	0.426
25. Cottonwood Avenue to Magnolia Avenue	Santee	60,000	24,960	A	0.416
Prospect Avenue					
26. Fanita Drive to Cuyamaca Street	Santee	15,000	8,900	C	0.593
27. Cuyamaca Street to Cottonwood Avenue	Santee	15,000	9,880	C	0.659
West Hills Parkway					
28. Mast Boulevard to Mission Gorge Road	San Diego	40,000	11,610	A	0.290
Fanita Parkway					
29. Project Site to Ganley Drive	Santee	DNE	—	—	—

Table 4.16-4. Existing Street Segment Operations

Street Segment	Jur.	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d
30. Ganley Drive to Lake Canyon Road	Santee	10,000	2,610	A	0.261
31. Lake Canyon Road to Mast Boulevard	Santee	10,000	3,860	A	0.386
32. Mast Boulevard to Carlton Oaks Drive	Santee	10,000	3,330	A	0.333
Fanita Drive					
33. Mission Gorge Road to SR-52 Ramps	Santee	40,000	18,990	B	0.475
34. SR-52 Ramps to Prospect Avenue	Santee	40,000	11,650	A	0.291
Carlton Hills Boulevard					
35. Lake Canyon Road to Mast Boulevard	Santee	40,000	5,880	A	0.147
36. Mast Boulevard to Carlton Oaks Drive	Santee	40,000	10,030	A	0.251
37. Carlton Oaks Drive to Mission Gorge Road	Santee	40,000	24,960	C	0.624
Halberns Boulevard					
38. Lake Canyon Road to Mast Boulevard	Santee	15,000	2,210	A	0.147
Town Center Parkway					
39. Mission Gorge Road to Cuyamaca Street	Santee	40,000	19,280	B	0.482
40. Cuyamaca Street to Riverview Parkway	Santee	10,000	5,660	C	0.566
Cuyamaca Street					
41. Project Site to Magnolia Avenue (future)	Santee	DNE	—	—	—
42. Magnolia Avenue to Princess Joann Road(future)	Santee	DNE	—	—	—
43. Princess Joann Road to Chaparral Drive (future)	Santee	DNE	—	—	—
44. Chaparral Drive to Woodglen Vista Drive	Santee	15,000	670	A	0.045
45. Woodglen Vista Drive to El Nopal	Santee	15,000	4,360	A	0.291
46. El Nopal to Mast Boulevard	Santee	15,000	8,860	C	0.591
47. Mast Boulevard to River Park Drive	Santee	40,000	19,600	B	0.490
48. River Park Drive to Town Center Parkway	Santee	40,000	26,690	C	0.667
49. Town Center Parkway to Mission Gorge Road	Santee	50,000	21,850	B	0.437
50. Mission Gorge Road to SR-52 Ramps	Santee	50,000	39,020	C	0.780
51. SR-52 Ramps to south of Prospect Avenue	Santee	50,000	26,060	B	0.521
Riverview Parkway					
52. Mission Gorge Road to Town Center Parkway	Santee	40,000	7,640	A	0.191
53. Town Center Parkway to Magnolia Avenue	Santee	DNE	—	—	—
Magnolia Avenue					
54. Cuyamaca Street to Princess Joann Road	Santee	DNE	—	—	—
55. Princess Joann Road to Woodglen Vista Drive	Santee	40,000	2,020	A	0.051
56. Woodglen Vista Drive to El Nopal	Santee	40,000	9,030	A	0.226
57. El Nopal to Mast Boulevard	Santee	40,000	13,690	A	0.342
58. Mast Boulevards to Chubb Lane	Santee	40,000	22,440	C	0.561
59. Chubb Lane to Mission Gorge Road	Santee	40,000	25,830	C	0.646

Table 4.16-4. Existing Street Segment Operations

Street Segment	Jur.	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d
60. Mission Gorge Road to SR-52 Ramps	Santee	60,000	33,870	B	0.565
61. SR-52 Ramps to south of Prospect Avenue	Santee	40,000	12,600	A	0.315
Woodside Avenue					
62. East of Magnolia Avenue	Santee	40,000	27,210	C	0.680
N. Woodside Avenue					
63. Riverford Road to Woodside Avenue	Santee	10,000	3,390	A	0.339
Riverford Road					
64. Riverside Drive to SR-67 Ramps	County	23,500 ^e	18,390	E	—

Source: Appendix N.

Notes:

- ^a Capacities based on City of Santee, County, and City of San Diego Roadway Classification and LOS table (see Appendix N).
- ^b Average daily traffic volumes
- ^c Level of service
- ^d Volume-to-capacity ratio
- ^e Capacity for “3-lane light collector” interpolated between Two-Lane Light Collector with Continuous Left-Turn Lane (2.2B) and four-lane boulevard with intermittent turn lanes (4.2B).
- ¹ Jur. = Jurisdiction
- ² DNE, “—” = Does Not Exist
- ³ County of San Diego does not use V/C ratios as an MOE.

As shown in Table 4.16-4, all study area segments are calculated to currently operate at LOS D or better under existing conditions except the following:

- Segment 64. Riverford Road from Riverside Drive to SR-67 Ramps – LOS E

Existing Freeway Mainline Operations

Table 4.16-5 summarizes the existing freeway mainline segment operations.

Table 4.16-5. Existing Freeway Mainline Operations

Freeway Segment	Dir.	No. of Lanes ^a	Volume ^b	%K ^c		%D ^c		Truck Factor (%)	Peak-Hour Volume ^c		V/C ^d		Density ^e		LOS ^f	
				AM	PM	AM	PM		AM	PM	AM	PM	AM	PM	AM	PM
State Route 52																
1. Santo Road to Mast Boulevard	EB	3M	96,000	7.81	8.27	20.29	69.62	2.60	1,521	5,527	0.236	0.907	7.8	36.4	A	E
	WB	3M		7.81	8.27	79.71	30.38	2.60	5,976	2,412	0.980	0.375	42.9	12.3	E	B
2. Mast Boulevard to SR-125	EB	2M	83,000	6.68	8.59	26.47	64.97	2.60	1,468	4,632	0.334	1.053	11.3	—	B	F
	WB	2M		6.68	8.59	73.53	35.03	2.60	4,077	2,498	0.927	0.568	38.4	19.5	E	C
3. SR-125 to Cuyamaca Street	EB	2M+1A	80,000	6.16	8.88	34.88	60.08	2.60	1,719	4,268	0.260	0.647	8.9	22.6	A	C
	WB	2M+1A		6.16	8.88	65.12	39.92	2.60	3,209	2,836	0.486	0.430	16.6	14.7	B	B
4. Cuyamaca Street to SR-67	EB	2M+1A	77,000	5.82	8.38	28.56	61.89	2.60	1,280	3,994	0.194	0.605	6.5	20.7	A	C
	WB	2M+1A		5.82	8.38	71.44	38.11	2.60	3,202	2,459	0.485	0.373	16.4	12.6	B	B
State Route 67																
5. Riverford Road to SR-52	NB	2M	77,000	7.28	8.44	41.43	57.53	7.30	2,322	3,739	0.553	0.891	19.1	35.7	C	E
	SB	2M		7.28	8.44	58.57	42.47	7.30	3,283	2,760	0.783	0.658	29.1	23.2	D	C
6. South of SR-52	NB	2M+2A	93,000	7.28	8.44	41.43	57.53	6.70	2,805	4,516	0.333	0.536	11.5	18.5	B	C
	SB	3M		7.28	8.44	58.57	42.47	6.70	3,965	3,334	0.627	0.527	21.9	18.2	C	C
State Route 125																
7. Grossmont College Drive to SR-52	NB	3M+2A	68,000	7.37	9.02	60.89	43.92	4.40	3,052	2,694	0.283	0.249	9.6	8.5	A	A
	SB	4M		7.37	9.02	39.11	56.08	4.40	1,960	3,440	0.227	0.398	7.7	13.6	A	B

Source: Appendix N.

Notes:

- ^a Lane geometry taken from the Performance Measurement System (PeMS) lane configurations at corresponding post mile.
- ^b Existing ADT volumes from most recent Caltrans Traffic Census Program (2016).
- ^c Peak-hour volumes calculated from K and D factors provided in most recent Caltrans Traffic Census Program Peak-Hour Volume Data (2016).
- ^d V/C = (Peak-Hour Volume/Hourly Capacity)
- ^e Density measures passenger cars per mile per lane. Density = Flow Rate (passenger cars/hour/lane) ÷ Speed (average passenger-car speed in mph).
- ^f LOS = Level of Service
- ¹ M = Mainline
- ² A = Auxiliary
- ³ Truck factor sourced to most recent Caltrans Traffic Census Program Peak Hour Volume Data (2016).
- ⁴ “—” Shown in density column where density exceeds the maximum threshold for LOS.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45

As shown in Table 4.16-5, the following study area freeway mainline segments are calculated to currently operate at LOS E or F under existing conditions:

- **Mainline 1.** SR-52 from Santo Road to Mast Boulevard
 - Eastbound – LOS E (PM peak hour)
 - Westbound – LOS E (AM peak hour)
- **Mainline 2.** SR-52 from Mast Boulevard to SR-125
 - Eastbound – LOS F (PM peak hour)
 - Westbound – LOS E (AM peak hour)
- **Mainline 5.** SR-67 from Riverford Road to SR-52
 - Northbound – LOS E (PM peak hour)

4.16.2 Regulatory Framework

Below are the applicable federal, state, and local regulations pertaining to transportation.

4.16.2.1 Federal

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) is a wide-ranging civil rights law that prohibits, under certain circumstances, discrimination based on disability in employment, state and local government, public accommodations, commercial facilities, transportation, and telecommunications. To be protected by the ADA, one must have a disability or have a relationship or association with an individual with a disability. Numerous standards and guidance documents have been developed to facilitate the proper implementation of the ADA. Title 28, Part 36, of the Code of Federal Regulations prohibits discrimination on the basis of disability by public accommodations and requires places of public accommodation and commercial facilities to be designed, constructed, and altered in compliance with the accessibility standards established by this part. The regulation includes Appendix A of Part 36, Standards for Accessible Design, establishing minimum standards for ensuring accessibility when designing and constructing a new facility such as those within the proposed project.

Highway Capacity Manual

The HCM 6, prepared by the federal Transportation Research Board, is the result of a collaborative multiagency effort between the Transportation Research Board, Federal Highway Administration, and American Association of State Highway and Transportation Officials. The HCM 6 contains concepts, guidelines, and computational procedures for the capacity and quality of service of various highway facilities, including freeways, signalized and unsignalized intersections, rural highways, and the effects of transit, pedestrians, and bicycles on the performance of these systems.

The procedures from the HCM 2000 methodology were used at intersections where the HCM 6 is limited in its analysis capabilities.

Title 23, Code of Federal Regulations

Revised in April 1, 2005, the Code of Federal Regulations, Section 450.220 of Title 23, requires each state to carry out a continuing, comprehensive, and intermodal statewide transportation planning process. This planning process must include the development of a statewide transportation plan and transportation improvement program that facilitates the efficient, economic movement of people and goods in all areas of the state.

4.16.2.2 State

California Department of Transportation Standards

Caltrans is responsible for planning, designing, building, operating, and maintaining California's transportation system. Caltrans sets standards, policies, and strategic plans that aim to do the following: (1) provide the safest transportation system for users and workers, (2) maximize transportation system performance and accessibility, (3) efficiently deliver quality transportation projects and services, (4) preserve and enhance California's resources and assets, and (5) promote quality service. Caltrans has the discretionary authority to issue special permits for the use of state highways for other than normal transportation purposes. Caltrans also reviews all requests from utility companies, developers, volunteers, nonprofit organizations, and others desiring to conduct various activities within the State Highway right-of-way. The Caltrans Highway Design Manual, prepared by the Office of Geometric Design Standards (6th edition, updated 2018), establishes uniform policies and procedures to carry out the highway design functions of Caltrans. Caltrans has also prepared a Guide for the Preparation of Traffic Impact Studies (2002) to provide consistency and uniformity in the identification of traffic impacts generated by local land use proposals.

Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill 743, which creates a process to change the way transportation impacts are analyzed under CEQA. Senate Bill 743 requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Aside from changes to transportation analysis, Senate Bill 743 also included several important changes to CEQA that apply to transit oriented developments, including aesthetics and parking.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update, including the Guidelines section implementing Senate Bill 743 (Section 15064.3). Under OPR's revisions to the CEQA Guidelines, vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant transportation impact. Under the VMT standard, projects within 0.25 mile of either an existing major transit stop or a

stop along an existing high-quality transit corridor should generally be presumed to cause a less than significant transportation impact. Furthermore, under the proposed CEQA Guidelines revisions, for projects other than roadway capacity projects, automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, should not be considered a significant effect on the environment. The revisions to the CEQA Guidelines allow a lead agency to elect to evaluate transportation impacts under the revised CEQA Guidelines at any time and make the revised CEQA Guidelines applicable statewide beginning July 1, 2020.

4.16.2.3 Local

City of Santee Bicycle Master Plan

The City's Bicycle Master Plan (2009) was prepared as a comprehensive update of the bicycling portion of the Circulation and Trails Element of the Santee General Plan and the 1989 Bike and Trail Study Engineering Report. The City's Bicycle Master Plan provides a framework for the future development of the City's bicycle network.

The goal of the City's Bicycle Master Plan is to encourage alternative means of transportation on a regional and community scale. The City's Bicycle Master Plan objectives and policies that are relevant to the proposed project are described below:

- **Objective 1.0:** Provide safe and viable regional and community trails within the City.
 - **Policy 1.6:** Consider every street in Santee as a street that bicycles will use.
 - **Policy 1.7:** Consider bicycle friendly design using new technologies and innovative treatments on roads and bikeways.
- **Objective 3.0:** Provide accommodations for the trail user whenever possible.
 - **Policy 3.6:** The City shall strive to ensure that bicycle support facilities are provided at appropriate locations in the City.
 - **Policy 3.7:** Encourage and support using bicycles in conjunction with other forms of transportation.
- **Objective 6.0:** Bicycle Safety Awareness.
 - **Policy 6.1:** The City will encourage and support the creation of comprehensive safety awareness programs for cyclists and motorists.
- **Objective 7.0:** Bicycle Promotion.
 - **Policy 7.1:** Actively encourage City staff, employees, residents, and visitors to use bicycles as often as possible.

Regional Transportation Plans and Programs

The San Diego Association of Governments (SANDAG) serves as the forum for decision-making on regional issues such as growth, transportation, land use, the economy, the environment, and

criminal justice. SANDAG builds consensus, makes strategic plans, obtains and allocates resources, and provides information on a broad range of topics pertinent to the region's quality of life. SANDAG is governed by a Board of Directors composed of mayors, council members, and supervisors from each of the San Diego region's 19 local governments.

SANDAG has produced the following documents that identify transportation plans and policies in the San Diego area.

San Diego Forward: The Regional Plan

SANDAG adopted the San Diego Forward: The Regional Plan on October 9, 2015 (SANDAG 2015). This plan combines the Regional Comprehensive Plan and the Regional Transportation Plan and its Sustainable Communities Strategy. The future focus is on smart growth and sustainable development, with the provision of transportation choices. This planning effort combines land use planning with transportation goals and state-mandated greenhouse gas reduction targets.

2018 State Transportation Improvement Program

The State Transportation Improvement Program is a biennial 5-year program of state and federally funded transportation projects developed locally and approved by the California Transportation Commission. Every 2 years, the California Transportation Commission provides an estimate of revenues available to each metropolitan area for use in developing a program of projects based on local priorities. Upon approval by the California Transportation Commission, the State Transportation Improvement Program of projects is incorporated into the Regional Transportation Improvement Program (RTIP), which also includes other locally funded transportation projects.

2018 Regional Transportation Improvement Program

The RTIP is a multi-year program of proposed major highway, arterial, transit, and non-motorized projects. Improvements to nearly all of the major highways in the San Diego region are included in the 2018 RTIP. The 2018 RTIP covers fiscal years 2016/17 to 2020/21. The 2018 RTIP, including an air quality emissions analysis, was adopted on September 28, 2018.

Santee General Plan

Divided into nine elements, the Santee General Plan is a statement of intent by the City as to the future development of the community. This is accomplished through objectives and policies that serve as a long-term policy guide for physical, economic, and environmental growth.

As one of the mandated elements of the Santee General Plan, the Mobility Element (City of Santee 2017) serves an update to the General Plan's Circulation Element intended to provide a vision and framework for the development of the City's transportation network through the year 2035, while assuming full buildout of the current Santee General Plan land uses. This update describes existing

transportation systems in the City and establishes a plan for a multi-modal transportation system. This element is intended to provide for a balanced mobility system that will support travel demands associated with land uses in the Land Use Element while maintaining a high quality of life for the residents of the City and all roadway users.

The goal of the Mobility Element is a balanced, interconnected multimodal transportation network that allows for the efficient and safe movement of all people and goods, and that supports the current and future needs of City community members and travel generated by planned land uses. The relevant objectives and policies are as follows (City of Santee 2017):

- **Objective 1.0:** Ensure that the existing and future transportation system is accessible, safe, reliable, efficient, integrated, convenient, well-connected and multimodal. The system will accommodate active transportation, and accommodate people of all ages and abilities, including pedestrians, disabled, bicyclists, users of mass transit, motorists, emergency responders, freight providers, and adjacent land uses.
 - **Policy 1.1:** The City shall provide integrated transportation and land use decisions that enhance smart growth development served by complete streets, which facilitate multimodal transportation opportunities.
 - **Policy 1.2:** The City should design streets in a manner that is sensitive to the local context and recognizes that needs vary between mixed use, urban, suburban, and rural settings.
- **Objective 2.0:** Develop an efficient, safe and multi-modal transportation network, consisting of local roads, collectors, arterials, freeways and transit services, in a manner that promotes the health and mobility of Santee residents and that meets future circulation needs, provides access to all sectors of the City, and supports established and planned land uses.
 - **Policy 2.1:** The City shall encourage an automobile LOS “D” on street segments and at intersections throughout the circulation network while also maintaining or improving the effectiveness of the non-automotive components of the circulation system (i.e., pedestrians, bicyclists, and public transit), especially in the Santee Town Center area. The City may approve a lower automobile LOS if it finds that the effectiveness of non-automotive components of the circulation system would be maintained or improved as a result.
 - **Policy 2.2:** The City should ensure adequate accessibility for all modes to the northern undeveloped area of the City by designating a functional network of public streets for future dedication either prior to, or concurrent with anticipated need.
 - **Policy 2.7:** The City should coordinate with Caltrans, SANDAG, MTS [Metropolitan Transit System], and other responsible agencies to identify, plan, and implement needed transportation improvements.

- **Objective 7.0:** Develop, maintain, and support a safe, comprehensive and integrated bikeway system that encourages bicycling, as documented in the City’s Bicycle Master Plan.
 - **Policy 7.4:** The City should require new development and redevelopment to provide connections to existing and proposed bicycle routes, where appropriate.
- **Objective 8.0:** Develop and maintain an accessible, safe, complete and convenient pedestrian system that encourages walking.
 - **Policy 8.1:** The City should require the incorporation of pedestrian-friendly design concepts where feasible including separated sidewalks and bikeways, landscaped parkways, traffic calming measures, safe intersection designs and access to transit facilities and services into both public and private developments.

4.16.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, impacts to transportation would be significant if the proposed project would:

- **Threshold 1:** Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- **Threshold 2:** Conflict or be inconsistent with CEQA Guidelines, Section 15064.3, subdivision (b).
- **Threshold 3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- **Threshold 4:** Result in inadequate emergency access.

4.16.4 Method of Analysis

The TIA prepared by LLG (Appendix N) creates trip generation rates for the proposed project land uses based on corresponding land uses listed in the (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, by SANDAG. Additional rates were sourced to the Institute of Transportation Engineers (ITE) Trip Generation Manual, where noted. Although the project is proposed to be phased, the analysis contained in the TIA adds 100 percent of proposed project traffic to baseline conditions. This presents a worst-case summary of project traffic for the purposes of determining impacts.

The City of Santee, County of San Diego, or City of San Diego significance thresholds were utilized for the proposed project depending on the location of the transportation facility. Each entity’s significance thresholds are summarized below.

City of Santee

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 shown in Table

4.16-6 for freeway segments, roadway segments, and intersections are based on published SANTEC/ITE guidelines with the exception that LOS D is considered acceptable per the Santee General Plan. If the project exceeds the thresholds in Table 4.16-6, then the project may be considered to have a significant project impact.

Table 4.16-6. City of Santee Traffic Impact Significance Thresholds

LOS with Project ^a	Allowable Increase Due to Project Impacts ^b				
	Freeways		Roadway Segments		Intersections
	V/C	Speed (mph)	V/C ^c	Speed (mph)	Delay (sec.)
E and F	0.01	1.0	0.02	1.0	2.0

Source: Appendix N.

Notes:

- ^a All LOS 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 (using Table 3-3 in the TIA or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally LOS D (LOS C for undeveloped or not densely developed locations per jurisdiction definitions).
- ^b 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 applicant shall then identify feasible mitigations (within the TIA) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a. above), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the applicant shall be responsible for mitigating significant impact changes.
- ^c The V/C ratio threshold of 0.02 is based on the fact that such a small change is virtually unnoticeable for the average motorists. For example: for a four-lane roadway (two-lane each direction) with a capacity of 40,000 vehicles, the peak-hour directional volumes are about 2,800. Two percent of that is 56 vehicles per hour, which translate to less than one vehicle per lane every 2 minutes for that approach. Such a small change is hardly noticeable to motorists. Therefore, a V/C ratio of 0.02 is a very conservative threshold.
- ¹ V/C = Volume-to-Capacity Ratio
- ² Speed = Arterial speed measured in miles per hour
- ³ Delay = Average stopped delay per vehicle measured in seconds for intersections
- ⁴ LOS = Level of Service

County of San Diego

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

The allowable ADT increases on LOS E/F operation roadways were obtained from County guidelines and are summarized in Table 4.16-7 for Mobility Element streets.

Table 4.16-7. County of San Diego Allowable Increases on Congested Mobility Element Streets

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

Source: Appendix N.

Notes:

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

Table 4.16-8 was obtained from County guidelines and summarizes the allowable increases in delay or traffic volumes at signalized and unsignalized intersections. Exceeding the thresholds in Table 4.16-8 would result in a significant impact.

Table 4.16-8. County of San Diego Allowable Increases in Delay or Traffic Volumes on Intersections

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

Source: Appendix N.

Notes:

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

City of San Diego

According to the City of San Diego's Significance Determination Thresholds report dated July 2016, a project is considered to have a significant impact if the new project traffic has decreased the operations of surrounding roadways by a City-defined threshold. For projects deemed complete on or after January 1, 2011, the City-defined threshold by roadway type or intersection is shown in Table 4.16-9.

Table 4.16-9. City Of San Diego Traffic Impact Significance Thresholds

LOS with Project ^b	Allowable Increase Due to Project Impacts ^a	
	Roadway Segments	Intersections
	V/C	Delay (sec.)
E	0.02	2.0
F	0.01	1.0

Source: Appendix N.

Notes:

- ^a If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note b), the applicant shall be responsible for mitigating the project's direct significant and cumulatively considerable traffic impacts.
- ^b All LOS measurements are based upon Highway Capacity Manual procedures for peak-hour conditions. However, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual). The acceptable LOS for freeways, roadways, and intersections is generally LOS D (LOS C for undeveloped locations).
- ¹ Delay = Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meter
- ² LOS = Level of Service
- ³ V/C = Volume-to-Capacity Ratio (capacity at LOS E should be used)

Vehicle Miles Traveled Analysis

In order to analyze VMT impacts, thresholds were developed bases on OPR's Technical Advisory and the San Diego ITE SB 743 Subcommittee Guidelines Figure 4-1, VMT Analysis for Individual Land Development Projects. Based on the anticipated trip generation of greater than 2,400 ADT and the proposed project's inconsistency with the Santee General Plan, a project-specific SANDAG model run is required. Per the San Diego ITE SB 743 Subcommittee Guidelines, "The target is to achieve a project VMT per capita or VMT per employee that is 85 percent or less of the appropriate average based on suggestions in [the] guidelines. Note that the lead agencies have discretion for choosing a VMT metric and threshold." Based on discussions with City staff, the proposed project would be presumed to have a less than significant impact if the proposed VMT per capita is less than 15 percent of the City VMT per capita. Thus, the threshold for significance for projects located within the City would be exceeded if a project's VMT per capita is higher than 85 percent of the Citywide average VMT per capita.

The technical approach for analyzing VMT for the project was broken down into several components:

- Adherence to OPR's Technical Advisory
- Adherence to the San Diego ITE SB 743 Subcommittee's Guidelines
- Utilization of local, independent resources and data science (i.e. GPS/navigation data analytics)
- Accounting for the total site population
- Review of the VMT analysis on near-term conditions, which represents the worst-case scenario as average trip lengths and mode splits would reduce auto-dependency and associated VMT over time

4.16.5 Project Impacts and Mitigation Measures

4.16.5.1 Threshold 1: Circulation System Performance

Would the implementation of the proposed project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact: The proposed project would cause a conflict with an applicable plan or policy addressing the circulation system during project construction and operation.

Mitigation: Construction Traffic Control Plans (TRA-1); Intersection and Segment Improvements (TRA-2 through TRA-30).

Significance Before Mitigation: Potentially significant.

Significance After Mitigation: Significant and Unavoidable (Operation).

Impact Analysis

Given the scale of the proposed project, development would occur over several years with buildout occurring over a 10- to 15-year period. In order to provide for a worst-case analysis, significant impacts were measured assuming construction of the entire proposed project at once. Potential project impacts were then tied to a unit occupancy amount to identify the point in time in which mitigation measures would be needed.

Project Trip Generation

The proposed project would generate new vehicular trips to the local and regional network. As stated previously, the trip generation rates used for the proposed land uses are based on corresponding land uses listed in the (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, by SANDAG. Additional rates were sourced to the ITE Trip Generation Manual where noted. Table 4.16-10 identifies the trip generation rates and calculations for the proposed project land uses.

Table 4.16-10. Project Trip Generation

ID	Land Use	Size	Daily Trip Ends (ADTs) ^a		AM Peak Hour					PM Peak Hour				
			Rate ^b	Volume	Rate ^b	In:Out Split	Volume			Rate ^b	In:Out Split	Volume		
							In	Out	Total			In	Out	Total
Residential														
A	Village Center Medium-Density (Average 12 DU/acre)	435 DU	8/DU	3,480	8%	20:80	56	222	278	10%	70:30	244	104	348
B	Active Adult ^c (Average 15 DU/acre)	445 DU	4.27/DU	1,900	0.24	33:67	35	72	107	0.30	61:39	82	52	134
C	Medium-Density (Average 13 DU/acre)	790 DU	8/DU	6,320	8%	20:80	101	405	506	10%	70:30	442	190	632
D	Low-Density (Average 5 DU/acre)	1,279 DU	10/DU	12,790	8%	30:70	307	716	1,023	10%	70:30	895	384	1,279
E	<i>Subtotal Residential (A+B+C+D)</i>	<i>2,949 DU</i>	—	<i>24,490</i>	—	—	<i>499</i>	<i>1,415</i>	<i>1,914</i>	—	—	<i>1,663</i>	<i>730</i>	<i>2,393</i>
Non-Residential														
F	Local Serving Retail	80 KSF	40/KSF	3,200	3%	60:40	58	38	96	9%	50:50	144	144	288
G	Primary Trips		45%	1,440	—	—	26	17	43	—	—	65	65	130
H	Pass-By/Diverted Trip Reduction		55%	(1,760)	—	—	(32)	(21)	(53)	—	—	(79)	(79)	(158)
I	K-8 School ^d	1,000 students	1.85/student	1,850	1.11	53:47	588	522	1,110	0.14	35:65	49	91	140
J	Primary Trips		60%	1,110	—	—	353	313	666	—	—	29	55	84
K	Pass-By/Diverted Trip Reduction		40%	(740)	—	—	(235)	(209)	(444)	—	—	(20)	(36)	(56)
L	Agriculture/Farm ^e	36.2 Acres	2/acre	72	0.26	43:57	4	5	9	0.45	57:43	9	7	16
M	Active Park ^f	19.9 Acres	50/acre	995	4%	50:50	20	20	40	8%	50:50	40	40	80
N	Passive Park ^g	53.5 Acres	5/acre	268	0.15	57:43	5	3	8	0.2	45:55	5	6	11
O	Recreation Center ^h	10 KSF	28.82/KSF	288	2.05	66:34	12	6	18	2.74	49:51	11	12	23
P	RV Parking/Solar Farm ⁱ	250spaces	0.2/space	50	6%	50:50	2	1	3	9%	50:50	3	2	5

Table 4.16-10. Project Trip Generation

ID	Land Use	Size	Daily Trip Ends (ADTs) ^a		AM Peak Hour					PM Peak Hour				
			Rate ^b	Volume	Rate ^b	In:Out			Rate ^b	In:Out				
						Split	In	Out		Total	Split	In	Out	Total
Q	Subtotal Non-Residential (F+I+L+M+N+O+P)			6,723	—	—	689	595	1,284	—	—	261	602	563
	Gross Trip Generation (E+Q)			31,213	—	—	1,188	2,010	3,198	—	—	1,924	1,032	2,956
R	Total Primary Trips (E+G+J+L+M+N+O+P)			28,713	—	—	921	1,780	2,701	—	—	1,825	917	2,742
	Total Pass-By/Diverted Link Trip Reduction (H+K)			(2,500)	—	—	(267)	(230)	(497)	—	—	(99)	(115)	(214)
S	Internal/Mixed-Use Reduction (R*8.5%) ⁱ			(2,441)	—	—	(78)	(151)	(229)	—	—	(155)	(78)	(233)
	Net External Trip Generation (R+S)			26,272	—	—	843	1,629	2,472	—	—	1,670	839	2,509

Source: Appendix N.

Notes:

- ^a Average Daily Trips
- ^b Rates are based on SANDAG’s (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, for all gross, primary, and pass-by-diverted trip rates, except where noted. SANDAG calculates AM and PM peak-hour trips as a percentage of ADT. ITE rates utilize ratios of the independent variable for calculating ADT, AM and PM peak-hour trips.
- ^c SANDAG references the ITE trip generation rates for the source of their “Retirement Community” rate. Therefore, the ITE 251 rate for “Detached Senior Adult Housing” was used.
- ^d K–8 school will accommodate up to 1,000 students. ITE “Charter School” rate applied, (ITE 537). Since preparation of this transportation analysis, the number of students has been reduced to 700 students, resulting in a lower trip generation.
- ^e SANDAG “agriculture” rate applied. Since no peak splits are provided by SANDAG, peak splits taken from ITE 818 “Nursery (Wholesale)” rates. Events would not be daily and would occur largely outside the commuter AM and PM peak periods.
- ^f Active Park rate sourced to SANDAG rate for “City Park.” The project also proposes a trail network throughout the site. The trails would traverse through parks, open space, and habitat preserve. Any trips associated with trails would be captured through the park trip generation.
- ^g Passive Park ADT rate sourced to SANDAG rate for “Neighborhood Park.” Since no peak splits are provided by SANDAG, peak splits taken from ITE 417 “Regional Park” rates.
- ^h Recreation center may be open to public. SANDAG does not provide a rate for this specific use. ITE 495 rate for “Recreational Community Center” applied. The 10,000-square-foot recreation center is located within the joint use site, adjacent to the school.
- ⁱ Portion of RV parking open to public. Since no rate is provided by SANDAG or ITE for “RV Parking,” SANDAG rate for “Industrial Storage” applied.
- ^j SANDAG mixed-use reduction rate of 8.5 percent applied, adjusted to reflect the custom select zone assignment model run.
- ¹ As previously mentioned, since the completion of the transportation analysis included in this EIR, the project description has slightly changed, resulting in a shift between residential densities, changes to park acreage, and a reduction in school students from 1,000 to 700 students. With these changes, the resulting trip generation decreases compared to the numbers analyzed in this EIR. Therefore, the analysis presented herein provides a conservative assessment of the local transportation system.
- ² Appendix D of EIR Appendix N provides the trip generation calculations for the current proposed project, showing the lower volumes.

Gross trips are the total trips to, from, and on the project site, also called driveway trips in the context of smaller development sites. Gross trips include both primary trips and pass-by/diverted link trips. Primary trips are new trips on the external street system that occur because a development is built; the development itself becomes one end of a primary trip, either the origin or destination. Primary trips account for 45 percent of commercial trip generation and 60 percent of the school trip generation based on published SANDAG rates. For the proposed project, pass-by and diverted link trips would occur on the project site. Pass-by trips are trips made by traffic already using the adjacent roadway that enter the site as an intermediate stop on the way from another destination without changing routes. Diverted link trips are trips that would divert from a different roadway other than that fronting a proposed project land use. Fanita Parkway, Cuyamaca Street, and Magnolia Avenue are planned to serve as the “driveways” to the proposed project from the greater Santee area. Typically, pass-by and diverted link trips would be drawn from an existing traffic stream on roadways adjacent to or near the project site. However, in this case, it is not expected that drivers with a primary origin and destination outside the project site pass-by or diverted link trips would divert into the project site to patronize the retail use prior to reaching their ultimate destination. Therefore, pass-by and diverted link trips were assigned within the internal proposed project street system.

Applying the rates listed above in Table 4.16-10, the following gross trip generation amounts were calculated:

- The residential portion of the proposed project is calculated to generate a gross total of 24,490 ADT with 1,914 trips (499 inbound/1,415 outbound) during the AM peak hour and 2,393 trips (1,663 inbound/730 outbound) during the PM peak hour.
- The non-residential development, including commercial, school, and parks, is calculated to generate a gross total of 6,723 ADT with 1,284 trips (689 inbound/595 outbound) during the AM peak hour and 563 trips (261/302 outbound) during the PM peak hour.
- The entire proposed project is calculated to generate a gross total of 31,213 ADT with 3,198 trips (1,188 inbound/2,010 outbound) during the AM peak hour and 2,956 trips (1,924 inbound/1,032 outbound) during the PM peak hour.

With respect to commercial trip generation, pass-by and diverted link trips account for 55 percent based on published SANDAG rates. For the school trip generation, pass-by and diverted link trips account for 40 percent based on published SANDAG rates.

Internal Trips

Where a project contains a mix of uses that would interact with one another, a deduction against a project’s primary trips may be taken to account for the share of trips that would occur internally on the project site). The proposed project ultimately applied an “internal capture” rate of 8.5

percent, calculated from the ITE Trip Generation Handbook. Internal capture estimates were also performed for the project using the SANDAG Series 12 model select zone analysis. SANDAG uses an enhanced four-step transportation model. Although there are studies showing substantial reductions in trip generation for projects with a mix of different land use types similar to the proposed project, an internal capture reduction rate of 8.5 percent was applied to the primary trips generated by the project to provide for a conservative trip generation estimate.

External Trips

Net external trips were then determined by subtracting the internal trips from the primary trips. As shown above in Table 4.16-10, the proposed project is estimated to generate a total of 26,272 net external daily trips with 2,472 trips in the AM peak hour (843 inbound and 1,629 outbound) and 2,509 trips in the PM peak hour (1,670 inbound and 839 outbound).

Existing + Project Operational Impacts

The following section presents the analysis of Existing + Project study scenarios. The Existing + Project condition represents the effect of proposed project traffic on the existing street network, at the time of traffic data collection without assuming additional cumulative projects or additional street improvements in the baseline condition. Although this represents an unrealistic condition to assume 100 percent of the proposed project would be built over existing conditions, it has been included in compliance with CEQA.

Additionally, Fanita Parkway, Cuyamaca Street, and Magnolia Avenue corridors are proposed to provide access to the project site and would be built according to the classifications necessary to accommodate proposed project traffic. Fanita Parkway and Cuyamaca Street would be constructed prior to issuance of the first occupancy permit. In addition, the realignment of the Santee Lakes Recreation Preserve and Padres Dam Municipal Water District (PDMWD) Ray Stoyer Water Recycling Facility facilities entry/exit point to complete the fourth leg of the Fanita Parkway/Ganley Road intersection would occur with the extension of Fanita Parkway. Existing traffic volumes from these two locations were rerouted to the Fanita Parkway/Ganley Road intersection. Magnolia Avenue would also be constructed by the project from Cuyamaca Street to its existing terminus just north of Princess Joann Road as a project design feature and is included in the Existing + Project analysis.

Existing + Project Intersection Operations

Table 4.16-11 summarizes the peak-hour intersection operations under the Existing + Project scenario evaluated at 66 intersections.

Table 4.16-11. Existing + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing		Existing + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
1. Princess Joann Road/Cuyamaca Street	Santee	DNE/MSSC ^d	AM	—	—	15.3	C	15.3	No
			PM	—	—	15.4	C	15.4	
2. Princess Joann Road/Magnolia Avenue	Santee	AWSC ^e	AM	7.6	A	12.6	B	5.0	No
			PM	7.9	A	12.3	B	4.4	
3. Ganley Road/Fanita Parkway	Santee	MSSC	AM	9.3	A	>100.0	F	>2.0	Yes
			PM	9.1	A	74.4	F	65.3	
4. Woodglen Vista Drive/Cuyamaca Street	Santee	AWSC	AM	8.9	A	30.0	D	21.1	Yes
			PM	9.0	A	79.5	F	70.5	
5. Woodglen Vista Drive/Magnolia Avenue	Santee	Signal	AM	11.9	B	13.7	B	1.8	No
			PM	10.7	B	10.8	B	0.1	
6. El Nopal/Cuyamaca Street	Santee	AWSC	AM	12.0	B	>100.0	F	>2.0	Yes
			PM	11.8	B	>100.0	F	>2.0	
7. El Nopal/Magnolia Avenue	Santee	Signal	AM	23.9	C	31.3	C	7.4	No
			PM	18.3	B	24.4	C	6.1	
8. El Nopal/Los Ranchitos Road	County	AWSC	AM	13.9	B	23.2	C	9.3	No
			PM	14.9	B	34.6	D	19.7	
9. Lake Canyon Road/Fanita Parkway	Santee	AWSC	AM	7.9	A	>100.0	F	>2.0	Yes
			PM	8.3	A	>100.0	F	>2.0	
10. Lake Canyon Road/Carlton Hills Boulevard	Santee	AWSC	AM	10.3	B	11.6	B	1.3	No
			PM	9.2	A	10.4	A	1.2	
11. Lake Canyon Road/Halberns Boulevard	Santee	MSSC	AM	8.7	A	8.7	A	0.0	No
			PM	8.7	A	8.7	A	0.0	
12. Beck Drive/Cuyamaca Street	Santee	AWSC	AM	22.4	C	>100.0	F	>2.0	Yes
			PM	13.3	B	>100.0	F	>2.0	
13. 2nd Street/Magnolia Avenue	Santee	Signal	AM	8.0	A	8.0	A	0.0	No
			PM	6.6	A	6.7	A	0.1	

Table 4.16-11. Existing + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing		Existing + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
14. Carefree Drive/Magnolia Avenue	Santee	Signal	AM	17.4	B	21.5	C	4.1	No
			PM	9.2	A	9.6	A	0.4	
15. Riverford Road/Riverside Drive	County	Signal	AM	25.7	C	32.5	C	6.8	No
			PM	24.3	C	30.5	C	6.2	
16. Mast Boulevard/SR-52 EB Ramps	San Diego/Caltrans	Signal	AM	9.5	A	9.6	A	0.1	No
			PM	13.1	B	17.0	B	3.9	
17. Mast Boulevard/SR-52 WB Ramps ⁹	San Diego/Caltrans	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	10.9	B	12.9	B	2.0	
18. Mast Boulevard/West Hills Parkway ⁹	San Diego	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	24.3	C	50.4	D	26.1	
19. Mast Boulevard/West Hills H.S.	Santee	Signal	AM	3.9	A	5.1	A	1.2	No
			PM	7.4	A	10.1	B	2.7	
20. Mast Boulevard/Medina Drive	Santee	Signal	AM	3.9	A	4.0	A	0.1	No
			PM	4.5	A	4.6	A	0.1	
21. Mast Boulevard/Pebble Beach Drive	Santee	Signal	AM	5.0	A	5.1	A	0.1	No
			PM	3.7	A	3.8	A	0.1	
22. Mast Boulevard/Fanita Parkway	Santee	Signal	AM	10.8	B	83.4	F	72.6	Yes
			PM	12.0	B	83.8	F	71.8	
23. Mast Boulevard/Carlton Hills Boulevard	Santee	Signal	AM	42.4	D	45.4	D	3.0	No
			PM	44.8	D	47.6	D	2.8	
24. Mast Boulevard/Halberns Boulevard	Santee	Signal	AM	13.5	B	13.6	B	0.1	No
			PM	13.8	B	13.9	B	0.1	
25. Mast Boulevard/Cuyamaca Street	Santee	Signal	AM	36.9	D	72.8	E	35.9	Yes
			PM	33.3	C	55.3	E	22.0	
26. Mast Boulevard/Park Center Drive	Santee	Signal	AM	7.1	A	7.1	A	0.0	No
			PM	8.7	A	8.7	A	0.0	

Table 4.16-11. Existing + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing		Existing + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
27. Mast Boulevard/Magnolia Avenue	Santee	Signal	AM	32.9	C	33.2	C	0.3	No
			PM	26.8	C	28.3	C	1.5	
28. Carlton Oaks Drive/West Hills Parkway	San Diego	Signal	AM	15.0	B	16.1	B	1.1	No
			PM	9.8	A	10.6	B	0.8	
29. Carlton Oaks Drive/Pebble Beach Drive	Santee	Signal	AM	8.9	A	9.3	A	0.4	No
			PM	5.0	A	5.0	A	0.0	
30. Carlton Oaks Drive/Fanita Parkway	Santee	Signal	AM	10.9	B	17.6	B	6.7	No
			PM	9.2	A	10.6	B	1.4	
31. Carlton Oaks Drive/Carlton Hills Boulevard	Santee	Signal	AM	33.0	C	44.2	D	11.2	No
			PM	23.3	C	28.2	C	4.9	
32. Riverwalk Drive/Cuyamaca Street	Santee	Signal	AM	14.6	B	26.1	C	11.5	No
			PM	14.6	B	20.5	C	5.9	
33. Riverpark Drive/Cuyamaca Street	Santee	Signal	AM	16.7	B	18.2	B	1.5	No
			PM	19.9	B	23.5	C	3.6	
34. Town Center Parkway/Cuyamaca Street	Santee	Signal	AM	14.5	B	14.6	B	0.1	No
			PM	32.7	C	37.4	D	4.7	
35. Town Center Parkway/Riverview Parkway	Santee	Signal	AM	11.6	B	12.3	B	0.7	No
			PM	14.5	B	14.6	B	0.1	
36. Riverview Parkway/Magnolia Avenue	Santee	Signal	AM	10.1	B	11.2	B	1.1	No
			PM	11.2	B	12.5	B	1.3	
37. Riverford Road/SR-67 SB Ramps	County/Caltrans	MSSC	AM	86.0	F	>100.0	F	34	Yes
			PM	51.0	F	63.3	F	67	
38. Woodside Avenue/SR-67 NB Off-Ramp	County/Caltrans	Signal	AM	40.4	D	45.3	D	4.9	No
			PM	43.2	D	46.1	D	2.9	
39. Riverford Road/Woodside Avenue	County	Signal	AM	54.9	D	65.8	E	10.9	Yes
			PM	31.1	C	34.6	C	3.5	

Table 4.16-11. Existing + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing		Existing + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
40. Mission Gorge Road/West Hills Parkway	Santee	Signal	AM	16.1	B	21.4	C	5.3	No
			PM	14.3	B	14.7	B	0.4	
41. Mission Gorge Road/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	4.1	A	4.4	A	0.3	No
			PM	11.1	B	11.9	B	0.8	
42. Mission Gorge Road/SR-52 WB Ramps	Santee/Caltrans	Signal	AM	1.8	A	1.8	A	0.0	No
			PM	0.6	A	0.6	A	0.0	
43. Mission Gorge Road/SR-125	Santee/Caltrans	Signal	AM	32.6	C	49.7	D	17.1	No
			PM	29.1	C	47.0	D	17.9	
44. Mission Gorge Road/Fanita Drive	Santee	Signal	AM	37.7	D	40.0	D	2.3	No
			PM	29.9	C	43.8	D	13.9	
45. Mission Gorge Road/Carlton Hills Boulevard	Santee	Signal	AM	61.7	E	90.2	F	28.5	Yes
			PM	38.9	D	45.2	D	6.3	
46. Mission Gorge Road/Town Center Parkway	Santee	Signal	AM	26.2	C	26.3	C	0.1	No
			PM	45.9	D	46.0	D	0.1	
47. Mission Gorge Road/Cuyamaca Street	Santee	Signal	AM	43.3	D	46.7	D	3.4	No
			PM	47.4	D	53.7	D	6.3	
48. Mission Gorge Road/Riverview Parkway	Santee	Signal	AM	19.0	B	19.9	B	0.9	No
			PM	17.0	B	17.2	B	0.2	
49. Mission Gorge Road/Cottonwood Avenue	Santee	Signal	AM	26.7	C	26.8	C	0.1	No
			PM	20.6	C	20.7	B	0.1	
50. Mission Gorge Road/Magnolia Avenue	Santee	Signal	AM	40.9	D	45.4	D	4.5	No
			PM	47.7	D	49.1	D	1.4	
51. Woodside Avenue/SR-67 SB Off-Ramp	Santee/Caltrans	AWSC	AM	26.0	D	26.3	D	0.3	No
			PM	16.0	C	16.3	C	0.3	
52. Woodside Avenue/SR-67 NB On-Ramp	Santee/Caltrans	Signal	AM	10.0	A	10.1	B	0.1	No
			PM	9.3	A	9.4	A	0.1	

Table 4.16-11. Existing + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing		Existing + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
53. Fanita Drive/SR-52 WB Off-Ramp	Santee/Caltrans	MSSC	AM	26.8	D	29.7	D	2.9	No
			PM	16.7	C	17.2	C	0.5	
54. Fanita Drive/SR-52 EB On-Ramp	Santee/Caltrans	Uncontrolled ^f	AM	15.2	C	16.5	C	1.3	No
			PM	9.9	A	10.1	B	0.2	
55. Buena Vista Avenue/Cuyamaca Street	Santee	Signal	AM	11.2	B	11.6	B	0.4	No
			PM	28.9	C	39.8	D	10.9	
56. Cuyamaca Street/SR-52 WB Ramps	Santee/Caltrans	Signal	AM	2.6	A	2.7	A	0.1	No
			PM	3.6	A	3.8	A	0.2	
57. Cuyamaca Street/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	31.7	C	32.4	C	0.7	No
			PM	36.2	D	38.3	D	2.1	
58. Magnolia Avenue/SR-52 WB Ramps/SR-67 SB	Santee/Caltrans	Signal	AM	6.8	A	10.0	A	3.2	No
			PM	5.9	A	5.9	A	0.0	
59. Magnolia Avenue/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	8.8	A	8.8	A	0.0	No
			PM	20.1	C	21.7	C	1.6	
60. Prospect Avenue/Fanita Drive	Santee	Signal	AM	27.2	C	27.5	C	0.3	No
			PM	19.1	B	19.3	B	0.2	
61. Prospect Avenue/Cuyamaca Street	Santee	Signal	AM	29.1	C	29.2	C	0.1	No
			PM	34.4	C	34.5	C	0.1	
62. Prospect Avenue/Cottonwood Avenue	Santee	Signal	AM	8.3	A	8.3	A	0.0	No
			PM	6.5	A	6.5	A	0.0	
63. Prospect Avenue/Magnolia Avenue	Santee	Signal	AM	20.4	C	21.2	C	0.8	No
			PM	28.1	C	30.0	C	1.9	
64. Prospect Avenue/SR-67 NB Off-Ramp	Santee/Caltrans	Signal	AM	9.5	A	9.7	A	0.2	No
			PM	8.6	A	9.1	A	0.5	

Table 4.16-11. Existing + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing		Existing + Project		Δ ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
65. Prospect Avenue/Graves Avenue	Santee	Signal	AM	20.1	C	20.1	C	0.0	No
			PM	33.7	C	33.7	C	0.0	
66. Mast Boulevard/Weston Road	Santee	Signal	AM	5.3	A	5.4	A	0.1	No
			PM	1.5	A	1.9	A	0.4	

Source: Appendix N.

Notes:

- ^a Average delay expressed in seconds per vehicle.
- ^b Level of Service
- ^c Δ denotes the increase in delay due to project.
- ^d Minor Street Stop Controlled intersection. Minor street left-turn delay reported.
- ^e All-Way Stop Controlled intersection. Average intersection delay reported.
- ^f No traffic control devices are installed at this location. Therefore, the southbound left-turn movement is reported.
- ^g The HCM methodology does not accurately reflect operations at this intersection during the AM peak hour. Latent demand east of the intersection, as well as upstream congestion from SR-52 WB, exceeds the limits of the analysis software/methodology. The LOS F result is based on the bottleneck effect of the lane-drop on the WB on-ramp observed in the field.
- ¹ Sig? = Significant impact, yes or no
- ² Jur. = Jurisdiction
- ³ DNE, "—" = does not exist

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

As shown in Table 4.16-12, 12 study area intersections are calculated to operate at LOS E or F with the addition of proposed project traffic because the project-induced increase in delay is greater than 2 seconds for LOS E or F operating intersections. Based on the established significance criteria stated in Section 4.16.4, Method of Analysis, 12 significant direct intersection impacts would occur.

Existing + Project Street Segment Operations

Table 4.16-12 summarizes the daily street segment operations under the Existing + Project scenario evaluated at 64 street segments.

Table 4.16-12. Existing + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Project Volumes	Δ ^e V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
Princess Joann Road											
1. Cuyamaca Street to Magnolia Avenue	Santee	8,000	530	A	0.066	530	A	0.066	0	0.000	No
Woodglen Vista Drive											
2. Cuyamaca Street to Magnolia Avenue	Santee	8,000	1,700	A	0.213	1,700	A	0.213	0	0.000	No
El Nopal											
3. Cuyamaca Street to Magnolia Avenue	Santee	8,000	3,780	C	0.473	3,780	C	0.473	0	0.000	No
4. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	8,870	C	0.591	11,500	D	0.767	2,630	0.176	No
5. Los Ranchitos Road to Riverford Road	County	16,200	9,810	D	—	12,440	E	—	2,630	—	Yes
Mast Boulevard											
6. SR-52 to West Hills Parkway	San Diego	40,000	26,440	C	0.661	33,010	D	0.825	6,570	0.164	No
7. West Hills Parkway to Medina Drive	Santee	40,000	19,540	B	0.489	29,000	C	0.725	9,460	0.236	No
8. Pebble Beach Drive to Fanita Parkway	Santee	40,000	19,590	B	0.490	29,050	C	0.726	9,460	0.236	No
9. Fanita Parkway to Carlton Hills Boulevard	Santee	40,000	16,800	B	0.420	19,430	B	0.486	2,630	0.066	No

Table 4.16-12. Existing + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Project Volumes	Δ ^e V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
10. Carlton Hills Boulevard to Halberns Boulevard	Santee	40,000	19,220	B	0.481	21,320	C	0.533	2,100	0.052	No
11. Halberns Boulevard to Cuyamaca Street	Santee	40,000	20,200	B	0.505	22,300	C	0.558	2,100	0.053	No
12. Cuyamaca Street to Magnolia Avenue	Santee	40,000	18,490	B	0.462	18,750	B	0.469	260	0.007	No
13. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	7,710	C	0.514	7,710	C	0.514	0	0.000	No
14. West of Riverford Road	County	19,000	1,810	A	—	1,810	A	—	0	—	No
Carlton Oaks Drive											
15. West Hills Parkway to Pebble Beach Drive	Santee	15,000	7,360	C	0.491	7,890	C	0.526	530	0.035	No
16. Fanita Parkway to Carlton Hills Boulevard	Santee	15,000	10,560	D	0.704	13,450	E	0.897	2,890	0.193	Yes
Mission Gorge Road											
17. Western City Limits to West Hills Parkway	Santee	40,000	16,510	B	0.413	19,140	B	0.479	2,630	0.066	No
18. West Hills Parkway to SR-125	Santee	40,000	17,000	B	0.425	17,000	B	0.425	0	0.000	No
19. SR-125 to Fanita Drive	Santee	60,000	45,440	C	0.757	51,220	D	0.854	5,780	0.097	No
20. Fanita Drive to Carlton Hills Boulevard	Santee	60,000	41,100	C	0.685	47,670	C	0.795	6,570	0.110	No
21. Carlton Hills Boulevard to Town Center Parkway	Santee	60,000	37,960	C	0.633	41,110	C	0.685	3,150	0.052	No
22. Town Center Parkway to Cuyamaca Street	Santee	60,000	28,630	B	0.477	31,260	B	0.521	2,630	0.044	No

Table 4.16-12. Existing + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Project Volumes	Δ ^e V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
23. Cuyamaca Street to Riverview Parkway	Santee	60,000	23,140	A	0.386	24,450	A	0.408	1,310	0.022	No
24. Riverview Parkway to Cottonwood Avenue	Santee	60,000	25,550	B	0.426	26,860	B	0.448	1,310	0.022	No
25. Cottonwood Avenue to Magnolia Avenue	Santee	60,000	24,960	A	0.416	26,270	B	0.438	1,310	0.022	No
Prospect Avenue											
26. Fanita Drive to Cuyamaca Street	Santee	15,000	8,900	C	0.593	8,900	C	0.593	0	0.000	No
27. Cuyamaca Street to Cottonwood Avenue	Santee	15,000	9,880	C	0.659	9,880	C	0.659	0	0.000	No
West Hills Parkway											
28. Mast Boulevard to Mission Gorge Road	Santee	40,000	11,610	A	0.290	13,710	A	0.343	2,100	0.053	No
Fanita Parkway											
29. Project Site to Ganley Drive ^f	Santee	DNE/15,000	—	—	—	12,350	D	0.823	12,350	—	No
30. Ganley Drive to Lake Canyon Road	Santee	10,000	2,610	A	0.261	14,960	F	1.496	12,350	1.235	Yes
31. Lake Canyon Road to Mast Boulevard	Santee	10,000	3,860	A	0.386	15,160	F	1.516	11,300	1.130	Yes
32. Mast Boulevard to Carlton Oaks Drive	Santee	10,000	3,330	A	0.333	6,750	C	0.675	3,420	0.342	No
Fanita Drive											
33. Mission Gorge to SR-52 Ramps	Santee	40,000	18,990	B	0.475	19,250	B	0.481	260	0.006	No
34. SR-52 Ramps to Prospect Avenue	Santee	40,000	11,650	A	0.291	11,910	A	0.298	260	0.007	No

Table 4.16-12. Existing + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Project Volumes	Δ ^e V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
Carlton Hills Boulevard											
35. Lake Canyon Road to Mast Boulevard	Santee	40,000	5,880	A	0.147	6,930	A	0.173	1,050	0.026	No
36. Mast Boulevard to Carlton Oaks Drive	Santee	40,000	10,030	A	0.251	11,610	A	0.290	1,580	0.039	No
37. Carlton Oaks Drive to Mission Gorge Road	Santee	40,000	24,960	C	0.624	29,430	C	0.736	4,470	0.112	No
Halberns Boulevard											
38. Lake Canyon Road to Mast Boulevard	Santee	10,000	2,210	A	0.221	2,210	A	0.221	0	0.000	No
Town Center Parkway											
39. Mission Gorge Road to Cuyamaca Street	Santee	40,000	19,280	B	0.482	19,540	B	0.489	260	0.007	No
40. Cuyamaca Street to Riverview Parkway	Santee	10,000	5,660	C	0.377	5,920	C	0.592	260	0.026	No
Cuyamaca Street											
41. Project Site to Magnolia Avenue ^g	Santee	DNE/15,000	—	—	—	13,920	E	0.928	13,920	0.928	No
42. Magnolia Avenue to Princess Joann Road ^g	Santee	DNE/15,000	—	—	—	7,620	C	0.508	7,620	0.508	No
43. Princess Joann Road to Chaparral Drive ^g	Santee	DNE/15,000	—	—	—	7,620	C	0.508	7,620	0.508	No
44. Chaparral Drive to Woodglen Vista Drive ^g	Santee	15,000	670	A	0.045	8,290	C	0.553	7,620	0.508	No
45. Woodglen Vista Drive to El Nopal	Santee	15,000	4,360	A	0.291	11,980	D	0.799	7,620	0.508	No
46. El Nopal to Mast Boulevard	Santee	15,000	8,860	C	0.591	16,480	F	1.099	7,620	0.508	Yes
47. Mast Boulevard to River Park Drive	Santee	40,000	19,600	B	0.490	25,380	C	0.635	5,780	0.145	No

Table 4.16-12. Existing + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Project Volumes	Δ ^e V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
48. River Park Drive to Town Center Parkway	Santee	40,000	26,690	C	0.667	32,210	D	0.805	5,520	0.138	No
49. Town Center Parkway to Mission Gorge Road	Santee	50,000	21,850	B	0.437	26,840	B	0.537	4,990	0.100	No
50. Mission Gorge Road to SR-52 Ramps	Santee	50,000	39,020	C	0.780	41,650	D	0.833	2,630	0.053	No
51. SR-52 Ramps to south of Prospect Avenue	Santee	50,000	26,060	B	0.521	27,110	B	0.542	1,050	0.021	No
Riverview Parkway											
52. Mission Gorge Road to Town Center Parkway	Santee	40,000	7,640	A	0.191	7,900	A	0.198	260	0.007	No
53. Town Center Parkway to Magnolia Avenue	Santee	DNE	—	—	—	—	—	—	—	—	No
Magnolia Avenue											
54. Cuyamaca Street to Princess Joann Road ^h	Santee	DNE/10,000	—	—	—	6,310	C	0.631	6,310	0.631	No
55. Princess Joann Road to Woodglen Vista Drive	Santee	40,000	2,020	A	0.051	8,330	A	0.208	6,310	0.157	No
56. Woodglen Vista Drive to El Nopal	Santee	40,000	9,030	A	0.226	15,340	B	0.384	6,310	0.158	No
57. El Nopal to Mast Boulevard	Santee	40,000	13,690	A	0.342	17,370	B	0.434	3,680	0.092	No
58. Mast Boulevard to Riverview Parkway	Santee	40,000	22,440	C	0.561	25,590	C	0.640	3,150	0.079	No
59. Riverview Parkway to Mission Gorge Road	Santee	40,000	25,830	C	0.646	28,980	C	0.725	3,150	0.079	No
60. Mission Gorge Road to SR-52 Ramps	Santee	60,000	33,870	B	0.565	35,450	C	0.591	1,580	0.026	No

Table 4.16-12. Existing + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Project Volumes	Δ ^e V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
61. SR-52 Ramps to south of Prospect Avenue	Santee	40,000	12,600	A	0.315	13,130	A	0.328	530	0.013	No
Woodside Avenue											
62. East of Magnolia Avenue	Santee	40,000	27,210	C	0.680	27,470	C	0.687	260	0.007	No
N. Woodside Avenue											
63. Riverford Road to Woodside Avenue	Santee	10,000	3,390	A	0.339	3,390	A	0.339	0	0.000	No
Riverford Road											
64. Riverside Drive to SR-67 Ramps	County	23,500 ⁱ	18,390	E	—	19,700	E	—	1,310	—	Yes

Source: Appendix N.

Notes: DNE, "—" = Does not exist; Jur. = Jurisdiction; Sig = Significant impact, yes or no

^a Capacities based on City of Santee, County of San Diego, and City of San Diego Roadway Classification and LOS tables (see Appendix A in EIR Appendix N).

^b Average Daily Traffic

^c Level of Service

^d Volume-to-Capacity ratio

^e Δ denotes a project-induced increase in the Volume-to-Capacity ratio. For County of San Diego, an increase in project trips is used to measure impacts.

^f This future section of Fanita Parkway is proposed to be constructed by the project as a two-lane Parkway with an LOS E capacity of 15,000 ADT.

^g The 15,000 ADT capacity for the existing sections of Cuyamaca Street was continued along this future section providing access to the project. The intersection operations at both ends of the Cuyamaca Street street segment between the project site and Magnolia Avenue report LOS C or better operations. Therefore, adequate operations are expected along this roadway. The section of Cuyamaca Street between Chaparral Drive and Woodglen Vista Drive would be improved to a Four-Lane Major Arterial under Year 2035 conditions as a project design feature to adequately transition to the four-lane section south of Woodglen Vista Drive.

^h The 10,000 ADT capacity for the connection of Magnolia Avenue was used along this future section providing access to the proposed project.

ⁱ Capacity for "Three-Lane Light Collector" interpolated between Two-Lane Light Collector with Continuous Left-Turn Lane (2.2B) and Four-Lane Boulevard with Intermittent Turn Lanes (4.2B). County does not use V/C ratios as an MOE.

¹ Jur = Jurisdiction

² DNE, "—" = Does not exist

³ Sig = Significant impact, yes or no.

⁴ County of San Diego does not use V/C ratios as a measure of effectiveness.

As shown in Table 4.16-12, there are six study area street segment that are calculated to operate at LOS E or F with the addition of proposed project traffic because the proposed project-induced change in V/C is greater than 0.02 for these LOS E or F operating street segments. Segment 41 is not deemed to be a significant impact as the intersection operations at both ends of this segment are calculated to operate at LOS C or better. Based on the established significance criteria stated in Section 4.16.4, six significant direct impacts would occur.

Existing + Project Freeway Segment Operations

Table 4.16-13 summarizes the freeway segment operations under the Existing + Project scenario evaluated at seven freeway segments.

Table 4.16-13. Existing + Project Freeway Segment Operations

Freeway Segment	Dir.	Lanes ^a	Existing								Existing + Project								Δ V/C ^f		Sig?
			Volume ^b		V/C ^c		Density ^d		LOS ^e		Volume		V/C		Density		LOS				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
State Route 52																					
Santo Road to Mast Boulevard	EB	3M	1,521	5,527	0.236	0.907	7.8	36.4	A	E	1,765	6,011	0.274	0.986	9.0	43.5	A	E	0.038	0.079	Yes
	WB	3M	5,976	2,412	0.980	0.375	42.9	12.3	E	B	6,448	2,655	1.058	0.413	—	13.5	F	B	0.077	0.038	Yes
Mast Boulevard to SR-125	EB	2M	1,468	4,632	0.334	1.053	11.3	—	B	F	1,502	4,699	0.342	1.068	11.6	—	B	F	0.008	0.015	Yes
	WB	2M	4,077	2,498	0.927	0.568	38.4	19.5	E	C	4,142	2,532	0.942	0.576	39.6	19.8	E	C	0.015	0.008	No
SR-125 to Cuyamaca Street	EB	2M+1A	1,719	4,268	0.260	0.647	8.9	22.6	A	C	1,753	4,335	0.266	0.657	9.1	23.0	A	C	0.005	0.010	No
	WB	2M+1A	3,209	2,836	0.486	0.430	16.6	14.7	B	B	3,274	2,870	0.496	0.435	17.0	14.9	B	B	0.010	0.005	No
Cuyamaca Street to SR-67	EB	2M+1A	1,280	3,994	0.194	0.605	6.5	20.7	A	C	1,345	4,028	0.204	0.610	6.9	20.9	A	C	0.010	0.005	No
	WB	2M+1A	3,202	2,459	0.485	0.373	16.4	12.6	B	B	3,236	2,526	0.490	0.383	16.6	13.0	B	B	0.005	0.010	No
State Route 67																					
Riverford Road to SR-52	NB	2M	2,322	3,739	0.553	0.891	19.1	35.7	C	E	2,338	3,747	0.557	0.892	19.2	35.9	C	E	0.004	0.002	No
	SB	2M	3,283	2,760	0.783	0.658	29.1	23.2	D	C	3,291	2,777	0.785	0.663	29.3	23.4	D	C	0.002	0.004	No
SR-52 to Bradley Avenue	NB	2M+2A	2,805	4,516	0.333	0.536	11.5	18.5	B	C	2,872	4,650	0.341	0.552	11.8	19.1	B	C	0.008	0.016	No
	SB	3M	3,965	3,334	0.627	0.527	21.9	18.2	C	C	4,095	3,401	0.648	0.538	22.8	18.6	C	C	0.020	0.010	No

Table 4.16-13. Existing + Project Freeway Segment Operations

Freeway Segment	Dir.	Lanes ^a	Existing								Existing + Project								Δ V/C ^f		Sig?
			Volume ^b		V/C ^c		Density ^d		LOS ^e		Volume		V/C		Density		LOS				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
State Route 125																					
Grossmont College Drive to SR-52	NB	3M+2A	3,052	2,694	0.283	0.249	9.6	8.5	A	A	3,221	3,028	0.298	0.280	10.2	9.6	A	A	0.015	0.031	No
	SB	4M	1,960	3,440	0.227	0.398	7.7	13.6	A	B	2,286	3,608	0.265	0.418	9.0	14.2	A	B	0.038	0.020	No

Source: Appendix N.

Notes:

- ^a Lane geometry taken from PeMS lane configurations at corresponding postmile.
- ^b Existing volume calculated from most recent Caltrans Traffic Census Program Peak-Hour Volume Data (2016).
- ^c V/C = (Peak-Hour Volume/Hourly Capacity)
- ^d Density measures passenger cars per mile per lane. Density = Flow Rate (passenger cars/hour/lane) ÷ Speed (average passenger-car speed in mph).
- ^e LOS
- ^f “Δ” denotes the project-induced increase in V/C. Per City Guidelines, a significant impact occurs when the V/C is increased by greater than 0.01 for LOS E or LOS F.
- ¹ M = Mainline
- ² A = Auxiliary
- ³ Sig? = Significant impact, yes or no.
- ⁴ “—” Shown in density column where density exceeds the maximum threshold for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

As shown in Table 4.16-13, there are five study area freeway mainline segments that are calculated to operate at LOS E or F with the addition of proposed project traffic. However, the proposed project-induced change in V/C is not greater than 0.01 at three study area freeway mainline segments. Therefore, based on the established significance criteria stated in Section 4.16.4, two significant direct impacts would occur.

Near-Term Cumulative Operational Impacts

The following section presents the analysis of the Existing + Cumulative Projects + Project scenario, which is an assessment of the impact of the total proposed project in relation to the near-term baseline condition. Based on the most recent information received from local agencies, 55 cumulative development projects are planned for the area for the near-term condition, which are described in Chapter 4, Environmental Impact Analysis.

Table 4.16-14 summarizes the Existing + Cumulative Projects + Project intersection operations evaluated at 66 intersections.

Table 4.16-14. Existing + Cumulative Projects + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
1. Princess Joann Road/Cuyamaca Street	Santee	DNE/MSSC	AM	—	—	15.3	C	—	No
			PM	—	—	15.4	C	—	
2. Princess Joann Road/Magnolia Avenue	Santee	AWSC ^d	AM	7.7	A	12.8	B	5.1	No
			PM	7.9	A	12.4	B	4.5	
3. Ganley Road/Fanita Parkway	Santee	MSSC ^e	AM	9.4	A	>100.0	F	>2.0	Yes
			PM	9.2	A	80.7	F	71.5	
4. Woodglen Vista Drive/Cuyamaca Street	Santee	AWSC	AM	8.9	A	30.9	D	22.0	Yes
			PM	9.1	A	82.9	F	73.8	
5. Woodglen Vista Drive/Magnolia Avenue	Santee	Signal	AM	12.0	B	13.8	B	1.8	No
			PM	10.7	B	10.8	B	0.1	
6. El Nopal/Cuyamaca Street	Santee	AWSC	AM	12.3	B	>100.0	F	>2.0	Yes
			PM	12.1	B	>100.0	F	>2.0	
7. El Nopal/Magnolia Avenue	Santee	Signal	AM	24.3	C	32.2	C	7.9	No
			PM	18.6	B	25.4	C	6.8	
8. El Nopal/Los Ranchitos Road	County	AWSC	AM	14.4	B	24.6	C	10.2	Yes
			PM	15.5	C	38.0	E	22.5	
9. Lake Canyon Road/Fanita Parkway	Santee	AWSC	AM	8.1	A	>100.0	F	>2.0	Yes
			PM	8.5	A	>100.0	F	>2.0	
10. Lake Canyon Road/Carlton Hills Boulevard	Santee	AWSC	AM	10.4	B	11.9	B	1.5	No
			PM	9.3	A	10.5	B	1.2	

Table 4.16-14. Existing + Cumulative Projects + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
11. Lake Canyon Road/Halberns Boulevard	Santee	MSSC	AM	8.7	A	8.7	A	0.0	No
			PM	8.7	A	8.7	A	0.0	
12. Beck Drive/Cuyamaca Street	Santee	AWSC	AM	24.1	C	>100.0	F	>2.0	Yes
			PM	13.7	B	>100.0	F	>2.0	
13. 2nd Street/Magnolia Avenue	Santee	Signal	AM	8.2	A	8.2	A	0.0	No
			PM	6.7	A	7.0	A	0.3	
14. Carefree Drive/Magnolia Avenue	Santee	Signal	AM	17.8	B	22.4	C	4.6	No
			PM	9.3	A	9.8	A	0.5	
15. Riverford Road/Riverside Drive	County	Signal	AM	26.5	C	33.9	C	7.4	No
			PM	25.1	C	31.9	C	6.8	
16. Mast Boulevard/SR-52 EB Ramps	San Diego/Caltrans	Signal	AM	10.5	B	10.8	B	0.3	No
			PM	15.3	B	23.8	C	8.5	
17. Mast Blvd/SR-52 WB Ramps ⁹	San Diego/Caltrans	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	13.1	B	16.8	B	3.7	
18. Mast Boulevard/West Hills Parkway ⁹	San Diego	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	37.5	D	89.1	F	51.6	
19. Mast Boulevard/West Hills H.S.	Santee	Signal	AM	3.8	A	5.1	A	1.3	No
			PM	7.4	A	11.5	B	4.1	
20. Mast Boulevard/Medina Drive	Santee	Signal	AM	3.7	A	3.8	A	0.1	No
			PM	4.1	A	4.2	A	0.1	
21. Mast Boulevard/Pebble Beach Drive	Santee	Signal	AM	4.9	A	5.0	A	0.1	No
			PM	3.9	A	4.0	A	0.1	
22. Mast Boulevard/Fanita Parkway	Santee	Signal	AM	12.5	B	91.8	F	79.3	Yes
			PM	13.5	B	91.7	F	78.2	
23. Mast Boulevard/Carlton Hills Boulevard	Santee	Signal	AM	43.2	D	47.5	D	4.3	No
			PM	45.9	D	49.6	D	3.7	
24. Mast Boulevard/Halberns Boulevard	Santee	Signal	AM	13.6	B	13.7	B	0.1	No
			PM	13.9	B	14.0	B	0.1	
25. Mast Boulevard/Cuyamaca Street	Santee	Signal	AM	38.0	D	70.0	E	32.0	Yes
			PM	33.7	C	57.7	E	24.0	
26. Mast Boulevard/Park Center Drive	Santee	Signal	AM	7.1	A	7.1	A	0.0	No
			PM	8.9	A	8.8	A	0.0	
27. Mast Boulevard/Magnolia Avenue	Santee	Signal	AM	36.6	D	36.9	D	0.3	No
			PM	28.1	C	30.2	C	2.1	
	San Diego	Signal	AM	16.9	B	19.0	B	2.1	No

Table 4.16-14. Existing + Cumulative Projects + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Δ ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
28. Carlton Oaks Drive/West Hills Parkway			PM	11.4	B	13.1	B	1.7	
29. Carlton Oaks Drive/Pebble Beach Drive	Santee	Signal	AM	9.0	A	9.5	A	0.5	No
			PM	5.0	A	5.0	A	0.0	
30. Carlton Oaks Drive/Fanita Parkway	Santee	Signal	AM	11.6	B	19.1	B	7.5	No
			PM	9.5	A	11.1	B	1.6	
31. Carlton Oaks Drive/Carlton Hills Boulevard	Santee	Signal	AM	34.9	C	51.3	D	16.4	No
			PM	24.3	C	30.6	C	6.3	
32. Riverwalk Drive/Cuyamaca Street	Santee	Signal	AM	15.0	B	28.7	C	13.7	No
			PM	15.0	B	21.8	C	6.8	
33. Riverpark Drive/Cuyamaca Street	Santee	Signal	AM	17.1	B	18.9	B	1.8	No
			PM	20.6	C	25.0	C	4.4	
34. Town Center Parkway/Cuyamaca Street	Santee	Signal	AM	14.9	B	15.1	B	0.2	No
			PM	36.1	D	42.5	D	6.4	
35. Town Center Parkway/Riverview Parkway	Santee	Signal	AM	10.9	B	11.6	B	0.7	No
			PM	13.2	B	13.3	B	0.1	
36. Riverview Parkway/Magnolia Avenue	Santee	Signal	AM	10.6	B	12.1	B	1.5	No
			PM	11.8	B	13.4	B	1.6	
37. Riverford Road/SR-67 SB Ramps	County/Caltrans	MSSC	AM	>100.0	F	>100.0	F	34	Yes
			PM	59.1	F	78.4	F	67	
38. Woodside Avenue/SR-67 NB Off-Ramp	County/Caltrans	Signal	AM	41.3	D	46.1	D	4.8	No
			PM	44.3	D	47.7	D	3.4	
39. Riverford Road/Woodside Avenue	County	Signal	AM	60.3	E	72.2	E	11.9	Yes
			PM	33.0	C	36.8	D	3.8	
40. Mission Gorge Road/West Hills Parkway	Santee	Signal	AM	22.0	C	29.3	C	7.3	No
			PM	16.5	B	16.9	B	0.4	
41. Mission Gorge Road/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	4.1	A	4.4	A	0.3	No
			PM	11.1	B	11.9	B	0.8	
42. Mission Gorge Road/SR-52 WB Ramps	Santee/Caltrans	Signal	AM	1.8	A	1.8	A	0.0	No
			PM	0.6	A	0.6	A	0.0	
43. Mission Gorge Road/SR-125	Santee/Caltrans	Signal	AM	33.8	C	39.3	D	5.5	No
			PM	29.9	C	49.3	D	19.4	
	Santee	Signal	AM	38.7	D	41.1	D	2.4	No

Table 4.16-14. Existing + Cumulative Projects + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Δ ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
44. Mission Gorge Road/Fanita Drive			PM	31.9	C	50.2	D	18.3	
45. Mission Gorge Road/Carlton Hills Boulevard	Santee	Signal	AM	65.3	E	94.0	F	28.7	Yes
			PM	39.2	D	46.4	D	7.2	
46. Mission Gorge Road/Town Center Parkway	Santee	Signal	AM	26.7	C	26.8	C	0.1	No
			PM	48.6	D	48.7	D	0.1	
47. Mission Gorge Road/Cuyamaca Street	Santee	Signal	AM	44.4	D	48.2	D	3.8	Yes
			PM	49.7	D	60.6	E	10.9	
48. Mission Gorge Road/Riverview Parkway	Santee	Signal	AM	37.3	D	41.6	D	4.3	No
			PM	21.0	C	21.6	C	0.6	
49. Mission Gorge Road/Cottonwood Avenue	Santee	Signal	AM	26.6	C	26.4	C	0.1	No
			PM	20.5	C	20.4	C	0.1	
50. Mission Gorge Road/Magnolia Avenue	Santee	Signal	AM	47.6	D	52.5	D	4.9	No
			PM	50.4	D	51.4	D	1.0	
51. Woodside Avenue/SR-67 SB Off-Ramp	Santee/Caltrans	AWSC	AM	29.3	D	29.6	D	0.3	No
			PM	17.1	C	17.4	C	0.3	
52. Woodside Avenue/SR-67 NB On-Ramp	Santee/Caltrans	Signal	AM	10.1	B	10.2	B	0.1	No
			PM	9.5	A	9.5	A	0.0	
53. Fanita Drive/SR-52 WB Off-Ramp	Santee/Caltrans	MSSC	AM	30.1	D	33.7	D	3.5	No
			PM	17.6	C	18.2	C	0.5	
54. Fanita Drive/SR-52 EB On-Ramp	Santee/Caltrans	Uncontrolled ^f	AM	16.4	C	18.0	C	1.6	No
			PM	10.1	B	10.4	B	0.3	
55. Buena Vista Avenue/Cuyamaca Street	Santee	Signal	AM	18.5	B	20.1	C	1.6	Yes
			PM	>100.0	F	>100.0	F	>2.0	
56. Cuyamaca Street/SR-52 WB Ramps	Santee/Caltrans	Signal	AM	2.9	A	2.9	A	0.0	No
			PM	3.8	A	4.0	A	0.2	
57. Cuyamaca Street/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	33.8	C	34.8	C	1.0	No
			PM	44.2	D	46.6	D	2.4	
58. Magnolia Avenue/SR-52 WB Ramps/SR-67 SB	Santee/Caltrans	Signal	AM	7.3	A	11.3	B	4.0	No
			PM	5.8	A	5.8	A	0.0	
59. Magnolia Avenue/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	9.5	A	9.6	A	0.1	No
			PM	26.1	C	30.0	C	3.9	
	Santee	Signal	AM	29.3	C	29.7	C	0.4	No

Table 4.16-14. Existing + Cumulative Projects + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Δ ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
60. Prospect Avenue/ Fanita Drive			PM	19.5	B	19.7	B	0.2	
61. Prospect Avenue/ Cuyamaca Street	Santee	Signal	AM	29.9	C	30.0	C	0.1	No
			PM	35.1	D	35.2	D	0.1	
62. Prospect Avenue/ Cottonwood Avenue	Santee	Signal	AM	8.4	A	8.4	A	0.0	No
			PM	6.6	A	6.6	A	0.0	
63. Prospect Avenue/ Magnolia Avenue	Santee	Signal	AM	21.6	C	22.4	C	0.8	No
			PM	30.8	C	32.7	C	1.9	
64. Prospect Avenue/ SR-67 NB Off-Ramp	Santee/ Caltrans	Signal	AM	9.9	A	10.2	B	0.3	No
			PM	9.1	A	9.6	A	0.5	
65. Prospect Avenue/ Graves Avenue	Santee	Signal	AM	22.6	C	22.6	C	0.0	No
			PM	40.3	D	40.3	D	0.0	
66. Mast Boulevard/ Weston Road	Santee	Signal	AM	21.9	C	36.2	D	14.3	No
			PM	20.0	B	20.1	C	0.1	

Source: Appendix N.

Notes:

- ^a Average delay expressed in seconds per vehicle.
- ^b LOS
- ^c Δ denotes the increase in delay due to project.
- ^d All-Way Stop Controlled intersection. Average intersection delay reported.
- ^e Minor Street Stop Controlled intersection. Minor street left-turn delay reported.
- ^f No traffic control devices are installed at this location. Therefore, the southbound left-turn movement is reported.
- ^g The HCM methodology does not accurately reflect operations at this intersection during the AM peak hour. Latent demand east of the intersection, as well as upstream congestion from SR-52 WB, exceeds the limits of the analysis software/methodology. The LOS F result is based on the bottleneck effect of the lane-drop on the WB on-ramp observed in the field.
- ¹ Sig = Significant impact, yes or no.
- ² Jur. = Jurisdiction
- ³ DNE, "—" = Does not exist

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

As shown in Table 4.16-14, there are 15 study area intersections that are calculated to operate at LOS E or F conditions with the addition of proposed project traffic. Based on the established significance criteria stated in Section 4.16.4, 15 significant direct impacts would occur since the proposed project-induced increase in delay is greater than 2 seconds for the LOS E or F operating intersections.

Existing + Cumulative Projects + Project Street Segment Operations

Table 4.16-15 summarizes the Existing + Cumulative Projects + Project street segment operations evaluated at 64 street segments.

Table 4.16-15. Existing + Cumulative Projects + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing + Cumulative			Existing + Cumulative + Project			Project Volumes	Δe V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
Princess Joann Road											
1. Cuyamaca Street to Magnolia Avenue	Santee	8,000	685	A	0.086	685	A	0.086	0	0.000	No
Woodglen Vista Drive											
2. Cuyamaca Street to Magnolia Avenue	Santee	8,000	1,759	A	0.220	1,759	A	0.220	0	0.000	No
El Nopal											
3. Cuyamaca Street to Magnolia Avenue	Santee	8,000	3,886	C	0.486	3,886	C	0.486	0	0.000	No
4. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	9,146	C	0.610	11,776	D	0.785	2,630	0.175	No
5. Los Ranchitos Road to Riverford Road	County	16,200	10,130	D	—	12,760	E	—	2,630	—	Yes
Mast Boulevard											
6. SR-52 to West Hills Parkway	San Diego	40,000	30,730	D	0.768	37,300	E	0.933	6,570	0.164	Yes
7. West Hills Parkway to Medina Drive	Santee	40,000	22,962	C	0.574	32,422	D	0.811	9,460	0.237	No
8. Pebble Beach Drive to Fanita Parkway	Santee	40,000	21,361	C	0.534	30,821	D	0.771	9,460	0.237	No
9. Fanita Parkway to Carlton Hills Boulevard	Santee	40,000	18,022	B	0.451	20,652	B	0.516	2,630	0.066	No
10. Carlton Hills Boulevard to Halberns Boulevard	Santee	40,000	20,299	B	0.507	22,399	C	0.560	2,100	0.053	No
11. Halberns Boulevard to Cuyamaca Street	Santee	40,000	21,669	C	0.542	23,769	C	0.594	2,100	0.053	No
12. Cuyamaca Street to Magnolia Avenue	Santee	40,000	19,616	B	0.490	19,876	B	0.497	260	0.007	No
13. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	9,056	C	0.604	9,056	C	0.604	0	0.000	No
14. West of Riverford Road	County	19,000	2,986	A	—	2,986	A	—	0	—	No
Carlton Oaks Drive											
15. West Hills Parkway to Pebble Beach Drive	Santee	15,000	7,831	C	0.522	8,361	C	0.557	530	0.035	No
16. Fanita Parkway to Carlton Hills Boulevard	Santee	15,000	11,194	D	0.746	14,084	E	0.939	2,890	0.193	Yes
Mission Gorge Road											
17. Western City Limits to West Hills Parkway	Santee	40,000	18,268	B	0.457	20,898	B	0.522	2,630	0.066	No
18. West Hills Parkway to SR-125	Santee	40,000	18,965	B	0.474	18,965	B	0.474	0	0.000	No
19. SR-125 to Fanita Drive	Santee	60,000	48,026	C	0.800	53,806	D	0.897	5,780	0.096	No
20. Fanita Drive to Carlton Hills Boulevard	Santee	60,000	43,029	C	0.719	49,599	C	0.827	6,570	0.110	No

Table 4.16-15. Existing + Cumulative Projects + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing + Cumulative			Existing + Cumulative + Project			Project Volumes	Δe V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
21. Carlton Hills Boulevard to Town Center Parkway	Santee	60,000	40,160	C	0.669	43,310	C	0.722	3,150	0.053	No
22. Town Center Parkway to Cuyamaca Street	Santee	60,000	31,416	B	0.524	34,046	B	0.567	2,630	0.044	No
23. Cuyamaca Street to Riverview Parkway	Santee	60,000	26,846	B	0.447	28,156	B	0.469	1,310	0.022	No
24. Riverview Parkway to Cottonwood Avenue	Santee	60,000	27,772	B	0.463	29,082	B	0.485	1,310	0.022	No
25. Cottonwood Avenue to Magnolia Avenue	Santee	60,000	26,946	B	0.449	28,256	B	0.471	1,310	0.022	No
Prospect Avenue											
26. Fanita Drive to Cuyamaca Street	Santee	15,000	9,302	C	0.620	9,302	C	0.620	0	0.000	No
27. Cuyamaca Street to Cottonwood Avenue	Santee	15,000	10,243	D	0.683	10,243	D	0.683	0	0.000	No
West Hills Parkway											
28. Mast Boulevard to Mission Gorge Road	Santee	40,000	13,456	A	0.336	15,556	B	0.389	2,100	0.053	No
Fanita Parkway											
29. Project Site to Ganley Drive ^f	Santee	DNE/ 15,000	—	—	—	12,350	D	1.235	12,350	—	No
30. Ganley Drive to Lake Canyon Road	Santee	10,000	2,782	A	0.278	15,132	F	1.513	12,350	1.235	Yes
31. Lake Canyon Road to Mast Boulevard	Santee	10,000	4,158	B	0.416	15,458	F	1.546	11,300	1.130	Yes
32. Mast Boulevard to Carlton Oaks Drive	Santee	10,000	3,713	A	0.371	7,133	C	0.713	3,420	0.342	No
Fanita Drive											
33. Mission Gorge to SR-52 Ramps	Santee	40,000	19,836	B	0.496	20,096	B	0.502	260	0.006	No
34. SR-52 Ramps to Prospect Avenue	Santee	40,000	12,261	A	0.307	12,521	A	0.313	260	0.006	No
Carlton Hills Boulevard											
35. Lake Canyon Road to Mast Boulevard	Santee	40,000	6,135	A	0.153	7,185	A	0.180	1,050	0.027	No
36. Mast Boulevard to Carlton Oaks Drive	Santee	40,000	10,492	A	0.262	12,072	A	0.302	1,580	0.040	No
37. Carlton Oaks Drive to Mission Gorge Road	Santee	40,000	25,993	C	0.650	30,463	D	0.762	4,470	0.112	No
Halberns Boulevard											
38. Lake Canyon Road to Mast Boulevard	Santee	10,000	2,254	A	0.225	2,254	A	0.225	0	0.000	No

Table 4.16-15. Existing + Cumulative Projects + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing + Cumulative			Existing + Cumulative + Project			Project Volumes	Δe V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
Town Center Parkway											
39. Mission Gorge Road to Cuyamaca Street	Santee	40,000	21,231	C	0.531	21,491	C	0.537	260	0.006	No
40. Cuyamaca Street to Riverview Parkway	Santee	10,000	6,782	C	0.678	7,042	C	0.704	260	0.026	No
Cuyamaca Street											
41. Project Site to Magnolia Avenue ^g	Santee	DNE/ 15,000	—	—	—	13,920	E	0.928	13,920	—	No
42. Magnolia Avenue to Princess Joann Road ^g	Santee	DNE/ 15,000	—	—	—	7,620	C	0.508	7,620	—	No
43. Princess Joann Road to Chaparral Drive ^g	Santee	DNE/ 15,000	—	—	—	7,620	C	0.508	7,620	—	No
44. Chaparral Drive to Woodglen Vista Drive	Santee	15,000	683	A	0.046	8,303	C	0.554	7,620	0.508	No
45. Woodglen Vista Drive to El Nopal	Santee	15,000	4,472	A	0.298	12,092	D	0.806	7,620	0.508	No
46. El Nopal to Mast Boulevard	Santee	15,000	9,173	C	0.612	16,793	F	1.120	7,620	0.508	Yes
47. Mast Boulevard to River Park Drive	Santee	40,000	20,527	B	0.513	26,307	C	0.658	5,780	0.145	No
48. River Park Drive to Town Center Parkway	Santee	40,000	28,084	C	0.702	33,604	D	0.840	5,520	0.138	No
49. Town Center Parkway to Mission Gorge Road	Santee	50,000	24,245	B	0.485	29,235	C	0.585	4,990	0.100	No
50. Mission Gorge Road to SR-52 Ramps	Santee	50,000	42,639	D	0.853	45,269	E	0.905	2,630	0.052	Yes
51. SR-52 Ramps to south of Prospect Avenue	Santee	50,000	28,971	C	0.579	30,021	C	0.600	1,050	0.021	No
Riverview Parkway											
52. Mission Gorge Road to Town Center Parkway	Santee	40,000	8,440	A	0.211	8,700	A	0.218	260	0.007	No
53. Town Center Parkway to Magnolia Avenue	Santee	DNE	—	—	—	—	—	—	0	—	No
Magnolia Avenue											
54. Cuyamaca Street to Princess Joann Road ^h	Santee	DNE/ 10,000	—	—	—	6,310	C	0.631	6,310	—	No
55. Princess Joann Road to Woodglen Vista Drive	Santee	40,000	2,204	A	0.055	8,514	A	0.213	6,310	0.158	No
56. Woodglen Vista Drive to El Nopal	Santee	40,000	9,415	A	0.235	15,725	B	0.393	6,310	0.158	No
57. El Nopal to Mast Boulevard	Santee	40,000	14,291	A	0.357	17,971	B	0.449	3,680	0.092	No

Table 4.16-15. Existing + Cumulative Projects + Project Street Segment Operations

Street Segment	Jur.	Existing Capacity (LOS E) ^a	Existing + Cumulative			Existing + Cumulative + Project			Project Volumes	Δe V/C	Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
58. Mast Boulevard to Riverview Parkway	Santee	40,000	23,594	C	0.590	26,744	C	0.669	3,150	0.079	No
59. Riverview Parkway to Mission Gorge Road	Santee	40,000	27,797	C	0.695	30,947	D	0.774	3,150	0.079	No
60. Mission Gorge Road to SR-52 Ramps	Santee	60,000	36,725	C	0.612	38,305	C	0.638	1,580	0.026	No
61. SR-52 Ramps to south of Prospect Avenue	Santee	40,000	13,098	A	0.327	13,628	A	0.341	530	0.014	No
Woodside Avenue											
62. East of Magnolia Avenue	Santee	40,000	28,163	C	0.704	28,423	C	0.711	260	0.007	No
N. Woodside Avenue											
63. Riverford Road to Woodside Avenue	Santee	10,000	3,524	A	0.352	3,524	A	0.352	0	0.000	No
Riverford Road											
64. Riverside Drive to SR-67 Ramps	County	23,500 ^f	18,916	E	—	20,226	E	—	1,310	—	Yes

Source: Appendix N.

Notes:

^a Capacities based on City of Santee, County of San Diego, and City of San Diego Roadway Classification and LOS tables (see Appendix A in EIR Appendix N).

^b Average Daily Traffic

^c Level of Service

^d Volume-to-Capacity ratio

^e Δ denotes a project-induced increase in the Volume-to-Capacity ratio. For County of San Diego, an increase in project trips is used to measure impacts.

^f This future section of Fanita Parkway is proposed to be constructed by the project as a two-lane Parkway with an LOS E capacity of 15,000 ADT.

^g The 15,000 ADT capacity for the existing sections of Cuyamaca Street was continued along this future section providing access to the project. The intersection operations at both ends of the Cuyamaca Street street segment between the project site and Magnolia Avenue report LOS C or better operations. Therefore, adequate operations are expected along this roadway. The section of Cuyamaca Street between Chaparral Drive and Woodglen Vista Drive would be improved to a Four-Lane Major Arterial under Year 2035 conditions as a project design feature to adequately transition to the four-lane section south of Woodglen Vista Drive.

^h The 10,000 ADT capacity for the connection of Magnolia Avenue was used along this future section providing access to the project.

ⁱ Capacity for “3-Ln Light Collector” interpolated between Two-Lane Light Collector with Continuous Left-Turn Lane (2.2B) and Four-Lane Boulevard with Intermittent Turn Lanes (4.2B).

¹ Jur = Jurisdiction

² DNE, “—” = Does not exist

³ Sig = Significant impact, yes or no.

⁴ County of San Diego does not use V/C ratios as a measure of effectiveness.

As shown in Table 4.16-15, nine study area street segments are calculated to operate at LOS E or F conditions with the addition of proposed project traffic. However, Segment 41 is not deemed to be a significant impact as the intersection operations at both ends of this segment are calculated to operate at LOS C or better. Based on the established significance criteria stated in Section 4.16.4, eight significant direct impacts would occur since the proposed project-induced change in V/C is greater than 0.02 for these LOS E or F operating street segments.

Existing + Cumulative Projects + Project Freeway Mainline Operations

Table 4.16-16 summarizes the Existing + Cumulative Projects + Project freeway mainline segment operations evaluated at seven freeway mainline segments. As shown in Table 4.16-16, there are five study area freeway mainline segments that are calculated to operate at LOS E or F conditions with the addition of proposed project traffic. However, because three segments do not result in a project-induced change in V/C greater than 0.01, these segments do not result in a significant impact. Based on the established significance criteria stated in Section 4.16.4, two significant direct impacts would occur.

Table 14.16-16. Existing + Cumulative Projects Freeway Segment Operations

Freeway Segment	Dir.	Lanes ^a	Existing + Cumulative								Existing + Cumulative + Project								Δ V/C ^f		Sig?
			Volume ^b		V/C ^c		Density ^d		LOS ^e		Volume		V/C		Density		LOS				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
State Route 52																					
Santo Road to Mast Boulevard	EB	3M	1,640	5,958	0.255	0.977	8.4	42.6	A	E	1,884	6,442	0.293	1.056	9.6	—	A	F	0.038	0.079	Yes
	WB	3M	6,442	2,600	1.056	0.404	—	13.3	F	B	6,914	2,843	1.134	0.442	—	14.5	F	B	0.078	0.038	Yes
Mast Boulevard to SR-125	EB	2M	1,560	4,922	0.355	1.119	12.0	—	B	F	1,594	4,989	0.363	1.134	12.3	—	B	F	0.008	0.015	No
	WB	2M	4,332	2,654	0.985	0.603	43.5	20.8	E	C	4,397	2,688	1.000	0.611	44.9	21.1	E	C	0.015	0.008	No
SR-125 to Cuyamaca Street	EB	2M+1A	1,861	4,621	0.282	0.700	9.6	24.9	A	C	1,895	4,688	0.287	0.710	9.8	25.3	A	C	0.005	0.010	No
	WB	2M+1A	3,474	3,070	0.527	0.465	18.1	15.9	B	B	3,539	3,104	0.536	0.470	18.4	16.1	C	B	0.009	0.005	No
Cuyamaca Street to SR-67	EB	2M+1A	1,370	4,274	0.208	0.648	7.0	22.4	A	C	1,435	4,308	0.218	0.653	7.3	22.6	A	C	0.010	0.005	No
	WB	2M+1A	3,426	2,632	0.519	0.399	17.6	13.5	B	B	3,460	2,699	0.524	0.409	17.8	13.9	B	B	0.005	0.010	No
State Route 67																					
Riverford Road to SR-52	NB	2M	2,386	3,841	0.568	0.915	19.7	37.5	C	E	2,402	3,849	0.572	0.917	19.8	37.7	C	E	0.004	0.002	No
	SB	2M	3,373	2,835	0.805	0.676	30.3	24.0	D	C	3,381	2,852	0.807	0.681	30.4	24.2	D	C	0.002	0.004	No
SR-52 to Bradley Avenue	NB	2M+2A	2,896	4,662	0.344	0.553	11.9	19.1	B	C	2,963	4,796	0.352	0.569	12.2	19.7	B	C	0.008	0.016	No
	SB	3M	4,094	3,442	0.647	0.545	22.7	18.8	C	C	4,224	3,509	0.668	0.555	23.6	19.2	C	C	0.021	0.010	No

Table 14.16-16. Existing + Cumulative Projects Freeway Segment Operations

Freeway Segment	Dir.	Lanes ^a	Existing + Cumulative								Existing + Cumulative + Project								Δ V/C ^f		Sig?
			Volume ^b		V/C ^c		Density ^d		LOS ^e		Volume		V/C		Density		LOS				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
State Route 125																					
Grossmont College Drive to SR-52	NB	3M+2A	3,227	2,849	0.299	0.264	10.2	9.0	A	A	3,396	3,183	0.314	0.295	10.7	10.0	A	A	0.015	0.031	No
	SB	4M	2,073	3,638	0.240	0.421	8.2	14.3	A	B	2,399	3,806	0.278	0.440	9.5	15.0	A	B	0.038	0.019	No

Source: Appendix N.

Notes:

- ^a Lane geometry taken from PeMS lane configurations at corresponding postmile.
- ^b Existing volume calculated from most recent Caltrans Traffic Census Program Peak-Hour Volume Data (2016). See Table 6-3 for K and D factors. Cumulative assignment added to existing volumes to arrive at Existing + Cumulative.
- ^c V/C = (Peak-Hour Volume/Hourly Capacity)
- ^d Density measures passenger cars per mile per lane. Density = Flow Rate (passenger cars/hour/lane) ÷ Speed (average passenger-car speed in mph).
- ^e Level of Service
- ^f “Δ” denotes the project-induced increase in V/C. Per City Guidelines, a significant impact occurs when the V/C is increased by greater than 0.01 for LOS E or LOS F.
- ¹ M = Mainline
- ² A = Auxiliary
- ³ Sig? = Significant impact, yes or no.
- ⁴ “—” Shown in density column where density exceeds the maximum threshold for LOS F.

LOS	Density Range (pc/mi/ln)
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45

Year 2035 + Project Operational Impacts

The following section presents the analysis of the impact of the net increase in traffic due to the proposed project in relation to the Year 2035 baseline condition, which assumes the adopted Santee General Plan land uses for the project site. The analyses include intersection, street segment and freeway mainline operations. The Mobility Element traffic model assumed the adopted Santee General Plan land uses on the project site. With this assumption, the connections of Fanita Parkway, Cuyamaca Street, and Magnolia Avenue were included in the baseline Year 2035 conditions per their Santee General Plan Mobility Element classifications and capacities. Therefore, both the baseline and with project analysis include these access serving roadways. In addition, the realignment of the Santee Lakes Recreation Preserve and PDMWD facilities entry/exit point to complete the fourth leg of the Fanita Parkway/Ganley Road intersection would occur with the extension of Fanita Parkway by the proposed project. Additionally, the Santee General Plan land uses within the site assume the construction of 1,380 residential units, as well as commercial, parkland, civic and open space uses. Therefore, the Year 2035 baseline traffic volumes represent the buildout of the adopted Santee General Plan land uses. The Mobility Element traffic model did not assume the widening of SR-52 to six lanes nor the extension of Mast Boulevard between the City and County.

Year 2035 + Project Intersection Operations

Table 4.16-17 summarizes the Year 2035 + Project intersection operations evaluated at 66 intersections.

Table 4.16-17. Year 2035 + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Year 2035 Baseline		Year 2035 + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
1. Princess Joann Road/Cuyamaca Street	Santee	MSSC	AM	17.8	C	49.0	E	31.2	Yes
			PM	15.8	C	24.4	C	8.6	
2. Princess Joann Road/Magnolia Avenue	Santee	AWSC ^d	AM	9.4	A	13.5	B	4.1	No
			PM	9.6	A	12.7	B	3.1	
3. Ganley Road/Fanita Parkway	Santee	MSSC ^e	AM	17.9	C	>100.0	F	>2.0	Yes
			PM	18.7	C	93.9	F	75.2	
4. Woodglen Vista Drive/Cuyamaca Street	Santee	AWSC	AM	26.6	D	>100.0	F	>2.0	Yes
			PM	98.7	F	>100.0	F	>2.0	
5. Woodglen Vista Drive/Magnolia Avenue	Santee	Signal	AM	13.2	B	14.1	B	0.9	No
			PM	10.1	B	10.2	B	0.1	
6. El Nopal/Cuyamaca Street	Santee	AWSC	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	>100.0	F	>100.0	F	>2.0	
7. El Nopal/Magnolia Avenue	Santee	Signal	AM	27.0	C	30.8	C	3.8	No
			PM	22.6	C	26.5	C	3.9	
8. El Nopal/Los Ranchitos Road	County	AWSC	AM	19.9	C	28.4	D	8.5	Yes
			PM	29.3	D	45.5	E	16.2	
9. Lake Canyon Road/Fanita Parkway	Santee	AWSC	AM	15.8	C	>100.0	F	>2.0	Yes
			PM	35.0	D	>100.0	F	>2.0	
10. Lake Canyon Road/Carlton Hills Boulevard	Santee	AWSC	AM	11.1	B	11.9	B	0.8	No
			PM	10.0	A	10.4	B	0.4	
11. Lake Canyon Road/Halberns Boulevard	Santee	MSSC	AM	8.8	A	8.8	A	0.0	No
			PM	8.8	A	8.8	A	0.0	
12. Beck Drive/Cuyamaca Street	Santee	AWSC	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	>100.0	F	>100.0	F	>2.0	
13. 2nd Street/Magnolia Avenue	Santee	Signal	AM	8.3	A	8.3	A	0.0	No
			PM	6.9	A	7.2	A	0.3	
14. Carefree Drive/Magnolia Avenue	Santee	Signal	AM	19.9	B	22.0	C	2.1	No
			PM	10.4	B	10.7	B	0.3	
15. Riverford Road/Riverside Drive	County	Signal	AM	44.3	D	54.8	D	10.5	No
			PM	42.7	D	49.0	D	6.3	
16. Mast Blvd/SR-52 EB Ramps	San Diego/Caltrans	Signal	AM	12.4	B	12.7	B	0.3	No
			PM	33.6	C	52.1	D	18.5	

Table 4.16-17. Year 2035 + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Year 2035 Baseline		Year 2035 + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
17. Mast Boulevard/ SR-52 WB Ramps ^g	San Diego/ Caltrans	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	18.1	B	20.6	C	2.5	
18. Mast Boulevard/ West Hills Parkway ^g	San Diego	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	68.3	E	94.3	F	26.0	
19. Mast Boulevard/ West Hills H.S.	Santee	Signal	AM	4.7	A	5.6	A	0.9	No
			PM	10.3	B	12.4	B	2.1	
20. Mast Boulevard/ Medina Drive	Santee	Signal	AM	3.8	A	3.9	A	0.1	No
			PM	3.9	A	4.0	A	0.1	
21. Mast Boulevard/ Pebble Beach Drive	Santee	Signal	AM	11.1	B	12.5	B	1.4	No
			PM	4.5	A	4.6	A	0.1	
22. Mast Boulevard/ Fanita Parkway	Santee	Signal	AM	73.7	E	>100.0	F	>2.0	Yes
			PM	56.9	E	>100.0	F	>2.0	
23. Mast Boulevard/ Carlton Hills Boulevard	Santee	Signal	AM	48.3	D	54.0	D	5.7	No
			PM	49.6	D	49.7	D	0.1	
24. Mast Boulevard/ Halberns Boulevard	Santee	Signal	AM	19.1	B	19.2	B	0.1	No
			PM	32.1	C	32.7	C	0.6	
25. Mast Boulevard/ Cuyamaca Street	Santee	Signal	AM	55.2	E	78.0	E	22.8	Yes
			PM	>100.0	F	>100.0	F	>2.0	
26. Mast Boulevard/ Park Center Drive	Santee	Signal	AM	7.8	A	7.8	A	0.0	No
			PM	10.2	B	10.2	B	0.0	
27. Mast Boulevard/ Magnolia Avenue	Santee	Signal	AM	53.3	D	54.2	D	0.9	No
			PM	41.3	D	42.6	D	1.3	
28. Carlton Oaks Drive/West Hills Parkway	San Diego	Signal	AM	20.1	C	20.9	C	0.8	No
			PM	13.1	B	14.0	B	0.9	
29. Carlton Oaks Drive/Pebble Beach Drive	Santee	Signal	AM	10.8	B	11.2	B	0.4	No
			PM	5.2	A	5.2	A	0.0	
30. Carlton Oaks Drive/ Fanita Parkway	Santee	Signal	AM	16.6	B	21.6	C	5.0	No
			PM	10.4	B	11.3	B	0.9	
31. Carlton Oaks Drive/ Carlton Hills Boulevard	Santee	Signal	AM	45.1	D	54.2	D	9.1	No
			PM	35.3	C	39.5	D	4.2	
32. Riverwalk Drive/ Cuyamaca Street	Santee	Signal	AM	20.1	C	32.2	C	12.1	No
			PM	21.0	C	26.3	C	5.3	
33. Riverpark Drive/ Cuyamaca Street	Santee	Signal	AM	18.4	B	19.8	B	1.4	No
			PM	23.7	C	26.1	C	2.4	

Table 4.16-17. Year 2035 + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Year 2035 Baseline		Year 2035 + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
34. Town Center Parkway/ Cuyamaca Street	Santee	Signal	AM	18.9	B	19.3	B	0.4	No
			PM	50.0	D	52.9	D	2.9	
35. Town Center Parkway/Riverview Parkway	Santee	Signal	AM	8.4	A	8.5	A	0.1	No
			PM	11.9	B	12.2	B	0.3	
36. Riverview Parkway/ Magnolia Avenue	Santee	Signal	AM	25.7	C	31.1	C	5.4	No
			PM	27.6	C	30.5	C	2.9	
37. Riverford Road/SR-67 SB Ramps	County/ Caltrans	MSSC	AM	>100.0	F	>100.0	F	15	Yes
			PM	>100.0	F	>100.0	F	18	
38. Woodside Avenue/ SR-67 NB Off-Ramp	County/ Caltrans	Signal	AM	46.9	D	49.8	D	2.9	No
			PM	51.8	D	54.6	D	2.8	
39. Riverford Road/ Woodside Avenue	County	Signal	AM	96.9	F	>100.0	F	7.4	Yes
			PM	47.7	D	50.6	D	2.9	
40. Mission Gorge Road/West Hills Parkway	Santee	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	19.8	B	20.3	C	0.5	
41. Mission Gorge Road/SR-52 EB Ramps	Santee/ Caltrans	Signal	AM	4.4	A	4.6	A	0.2	No
			PM	11.7	B	11.9	B	0.2	
42. Mission Gorge Road/SR-52 WB Ramps	Santee/ Caltrans	Signal	AM	3.0	A	3.0	A	0.0	No
			PM	1.8	A	1.8	A	0.0	
43. Mission Gorge Road/SR-125	Santee/ Caltrans	Signal	AM	32.1	C	44.9	D	12.8	No
			PM	40.1	C	49.2	C	9.1	
44. Mission Gorge Road/Fanita Drive	Santee	Signal	AM	43.7	D	45.5	D	1.8	No
			PM	41.7	D	52.2	D	10.5	
45. Mission Gorge Road/Carlton Hills Boulevard	Santee	Signal	AM	83.1	F	>100.0	F	>2.0	Yes
			PM	56.3	E	66.8	E	10.5	
46. Mission Gorge Road/Town Center Parkway	Santee	Signal	AM	30.0	C	30.1	C	0.1	No
			PM	65.1	E	65.2	E	0.1	
47. Mission Gorge Road/Cuyamaca Street	Santee	Signal	AM	45.6	D	47.7	D	2.1	Yes
			PM	79.0	E	88.5	F	9.5	
48. Mission Gorge Road/Riverview Parkway	Santee	Signal	AM	41.9	D	44.1	D	2.2	No
			PM	43.3	D	44.1	D	0.8	
	Santee	Signal	AM	90.2	F	90.3	F	0.1	No

Table 4.16-17. Year 2035 + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Year 2035 Baseline		Year 2035 + Project		Δ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
49. Mission Gorge Road/Cottonwood Avenue			PM	>100.0	F	186.6	F	0.1	
50. Mission Gorge Road/Magnolia Avenue	Santee	Signal	AM	58.5	E	60.0	E	1.5	No
			PM	66.3	E	68.2	E	1.9	
51. Woodside Avenue/SR-67 SB Off-Ramp	Santee/Caltrans	AWSC	AM	39.6	E	39.9	E	0.3	No
			PM	19.4	C	19.6	C	0.2	
52. Woodside Avenue/SR-67 NB On-Ramp	Santee/Caltrans	Signal	AM	10.6	B	10.7	B	0.1	No
			PM	10.1	B	10.1	B	0.0	
53. Fanita Drive/SR-52 WB Off-Ramp	Santee/Caltrans	MSSC	AM	55.3	F	57.2	F	1.9	No
			PM	19.7	C	19.9	C	0.2	
54. Fanita Drive/SR-52 EB On-Ramp	Santee/Caltrans	Uncontrolled ^f	AM	21.9	C	23.5	C	1.6	No
			PM	10.7	B	10.9	B	0.2	
55. Buena Vista Avenue/Cuyamaca Street	Santee	Signal	AM	38.0	D	41.5	D	3.5	Yes
			PM	>100.0	F	>100.0	F	>2.0	
56. Cuyamaca Street/SR-52 WB Ramps	Santee/Caltrans	Signal	AM	3.0	A	3.1	A	0.1	No
			PM	4.3	A	4.4	A	0.1	
57. Cuyamaca Street/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	36.0	D	36.3	D	0.3	No
			PM	50.2	D	53.0	D	2.8	
58. Magnolia Avenue/SR-52 WB Ramps/SR-67 SB	Santee/Caltrans	Signal	AM	7.4	A	9.9	A	2.5	No
			PM	5.8	A	5.8	A	0.0	
59. Magnolia Avenue/SR-52 EB Ramps	Santee/Caltrans	Signal	AM	12.2	B	12.4	B	0.2	No
			PM	46.2	D	50.5	D	4.3	
60. Prospect Avenue/Fanita Drive	Santee	Signal	AM	64.5	E	64.8	E	0.3	No
			PM	23.0	C	23.3	C	0.3	
61. Prospect Avenue/Cuyamaca Street	Santee	Signal	AM	35.5	D	35.6	D	0.1	No
			PM	38.8	D	38.9	D	0.1	
62. Prospect Avenue/Cottonwood Avenue	Santee	Signal	AM	10.6	B	10.6	B	0.0	No
			PM	7.9	A	7.9	A	0.0	
63. Prospect Avenue/Magnolia Avenue	Santee	Signal	AM	33.6	C	34.3	C	0.7	No
			PM	39.9	D	40.5	D	0.6	

Table 4.16-17. Year 2035 + Project Intersection Operations

Intersection	Jur.	Control Type	Peak Hour	Year 2035 Baseline		Year 2035 + Project		Δ ^c Delay	Sig?
				Delay ^a	LOS ^b	Delay	LOS		
64. Prospect Avenue/ SR-67 NB Off-Ramp	Santee/ Caltrans	Signal	AM	10.1	A	10.3	B	0.2	No
			PM	9.8	A	10.0	A	0.2	
65. Prospect Avenue/ Graves Avenue	Santee	Signal	AM	25.2	C	25.2	C	0.0	No
			PM	53.5	D	53.5	D	0.0	
66. Mast Boulevard/ Weston Road	Santee	Signal	AM	29.1	C	49.3	D	20.2	No
			PM	10.5	B	10.6	B	0.1	

Source: Appendix N.

Notes:

- ^a Average delay expressed in seconds per vehicle.
- ^b Level of Service
- ^c Δ denotes the increase in delay due to project.
- ^d All-Way Stop Controlled intersection. Average intersection delay reported.
- ^e Minor Street Stop Controlled intersection. Minor street left-turn delay reported.
- ^f No traffic control devices are installed at this location. Therefore, the southbound left-turn movement is reported.
- ^g The HCM methodology does not accurately reflect operations at this intersection during the AM peak hour. Latent demand east of the intersection, as well as upstream congestion from SR-52 WB, exceed the limits of the analysis software/methodology. The LOS F result is based on the bottleneck effect of the lane-drop on the WB on-ramp observed in the field.
- ¹ Jur = Jurisdiction
- ² Sig = Significant impact, yes or no.

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

As shown in Table 4.16-17, 23 study area intersections under the Year 2035 + Project scenario are calculated to operate at LOS E or F with the addition of proposed project traffic. However, because six of these intersections do not have a project-induced delay greater than 2 seconds, they are not considered a significant impact. Based on the established significance criteria stated in Section 4.16.4, 17 significant cumulative impacts would occur since the proposed project-induced change in delay is greater than 2 seconds for these LOS E or F operating intersections.

Year 2035 + Project Street Segment Operations

Table 4.16-18 summarizes the Year 2035 + Project street segment operations evaluated at 64 street segments.

Table 4.16-18. Year 2035 + Project Street Segment Operations

Street Segment	Jurisdiction	Existing Capacity (LOS E) ^a	ME Capacity (LOS E) ^a	Year 2035 Baseline			Year 2035 + Project			Δ ^e V/C	Project Volumes	Sig?
				ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
Princess Joann Road												
1. Cuyamaca Street to Magnolia Avenue	Santee	8,000	8,000	4,200	C	0.525	4,200	C	0.525	0.000	0	No
Woodglen Vista Drive												
2. Cuyamaca Street to Magnolia Avenue	Santee	8,000	8,000	4,000	C	0.500	4,000	C	0.500	0.000	0	No
El Nopal												
3. Cuyamaca Street to Magnolia Avenue	Santee	8,000	8,000	4,300	C	0.538	4,300	C	0.538	0.000	0	No
4. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	15,000	12,800	D	0.853	14,960	E	0.997	0.144	2,160	Yes
5. Los Ranchitos Road to Riverford Road	County	16,200	16,200	13,700	E	—	15,860	E	—	—	2,160	Yes
Mast Boulevard												
6. SR-52 to West Hills Parkway	San Diego	40,000	40,000	30,500	D	0.763	33,930	D	0.848	0.085	3,430	No
7. West Hills Parkway to Medina Drive	Santee	40,000	40,000	29,000	C	0.725	34,540	D	0.864	0.139	5,540	No
8. Pebble Beach Drive to Fanita Parkway	Santee	40,000	40,000	29,000	C	0.725	34,380	D	0.860	0.135	5,380	No
9. Fanita Parkway to Carlton Hills Boulevard	Santee	40,000	40,000	21,500	C	0.538	22,870	C	0.572	0.034	1,370	No
10. Carlton Hills Boulevard to Halberns Boulevard	Santee	40,000	40,000	28,700	C	0.718	30,330	D	0.758	0.040	1,630	No
11. Halberns Boulevard to Cuyamaca Street	Santee	40,000	40,000	28,700	C	0.718	30,330	D	0.758	0.040	1,630	No
12. Cuyamaca Street to Magnolia Avenue	Santee	40,000	40,000	22,300	C	0.558	22,400	C	0.560	0.002	100	No
13. Magnolia Avenue to Los Ranchitos Road	Santee	15,000	15,000	6,300	B	0.420	6,300	B	0.420	0.000	0	No
14. West of Riverford Road	County	19,000	37,000	7,000	B	—	7,000	B	—	—	0	No

Table 4.16-18. Year 2035 + Project Street Segment Operations

Street Segment	Jurisdiction	Existing Capacity (LOS E) ^a	ME Capacity (LOS E) ^a	Year 2035 Baseline			Year 2035 + Project			Δ ^e V/C	Project Volumes	Sig?
				ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
Carlton Oaks Drive												
15. West Hills Parkway to Pebble Beach Drive	Santee	15,000	15,000	8,800	C	0.587	9,330	C	0.622	0.035	530	No
16. Fanita Parkway to Carlton Hills Boulevard	Santee	15,000	15,000	13,200	E	0.880	14,050	E	0.937	0.057	850	Yes
Mission Gorge Road												
17. Western City Limits to West Hills Parkway	Santee	40,000	40,000	21,200	C	0.530	23,050	C	0.576	0.046	1,850	No
18. West Hills Parkway to SR-125	Santee	40,000	40,000	19,700	B	0.493	19,700	B	0.493	0.000	0	No
19. SR-125 to Fanita Drive	Santee	60,000	60,000	49,200	C	0.820	52,630	D	0.877	0.057	3,430	No
20. Fanita Drive to Carlton Hills Boulevard	Santee	60,000	60,000	48,700	C	0.812	52,440	D	0.874	0.062	3,740	No
21. Carlton Hills Boulevard to Town Center Parkway	Santee	60,000	60,000	44,400	C	0.740	46,920	C	0.782	0.042	2,520	No
22. Town Center Parkway to Cuyamaca Street	Santee	60,000	60,000	37,700	C	0.628	39,700	C	0.662	0.034	2,000	No
23. Cuyamaca Street to Riverview Parkway	Santee	60,000	60,000	28,200	B	0.470	29,510	B	0.492	0.022	1,310	No
24. Riverview Parkway to Cottonwood Avenue	Santee	60,000	40,000	28,400	B	0.473	29,710	B	0.495	0.022	1,310	No
25. Cottonwood Avenue to Magnolia Avenue	Santee	60,000	40,000	26,400	B	0.440	27,710	B	0.462	0.022	1,310	No
Prospect Avenue												
26. Fanita Drive to Cuyamaca Street	Santee	15,000	15,000	7,600	C	0.507	7,600	C	0.507	0.000	0	No
27. Cuyamaca Street to Cottonwood Avenue	Santee	15,000	15,000	8,700	C	0.580	8,700	C	0.580	0.000	0	No
West Hills Parkway												
28. Mast Boulevard to Mission Gorge Road	Santee	40,000	40,000	16,100	B	0.403	17,420	B	0.436	0.033	1,320	No

Table 4.16-18. Year 2035 + Project Street Segment Operations

Street Segment	Jurisdiction	Existing Capacity (LOS E) ^a	ME Capacity (LOS E) ^a	Year 2035 Baseline			Year 2035 + Project			Δ ^e V/C	Project Volumes	Sig?
				ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
Fanita Parkway												
29. Project Site to Ganley Drive ^f	Santee	DNE	10,000/15,000	7,380	C	0.738	12,350	D	0.823	0.085	5,290	No
30. Ganley Drive to Lake Canyon Road	Santee	10,000	10,000	9,920	E	0.992	15,130	F	1.513	0.497	5,290	Yes
31. Lake Canyon Road to Mast Boulevard	Santee	10,000	15,000	10,910	F	1.091	15,460	F	1.546	0.455	4,860	Yes
32. Mast Boulevard to Carlton Oaks Drive	Santee	10,000	10,000	6,000	C	0.600	7,380	C	0.738	0.138	1,380	No
Fanita Drive												
33. Mission Gorge to SR-52 Ramps	Santee	40,000	40,000	16,300	B	0.408	16,400	B	0.410	0.002	100	No
34. SR-52 Ramps to Prospect Avenue	Santee	40,000	40,000	16,300	B	0.408	16,400	B	0.410	0.002	100	No
Carlton Hills Boulevard												
35. Lake Canyon Road to Mast Boulevard	Santee	40,000	40,000	7,400	A	0.185	7,820	A	0.196	0.011	420	No
36. Mast Boulevard to Carlton Oaks Drive	Santee	40,000	40,000	13,100	A	0.328	13,740	A	0.344	0.016	640	No
37. Carlton Oaks Drive to Mission Gorge Road	Santee	40,000	40,000	32,800	D	0.820	33,820	D	0.846	0.026	1,020	No
Halberns Boulevard												
38. Lake Canyon Road to Mast Boulevard	Santee	15,000	15,000	3,500	A	0.233	3,500	A	0.233	0.000	0	No
Town Center Parkway												
39. Mission Gorge Road to Cuyamaca Street	Santee	40,000	40,000	16,500	B	0.413	16,600	B	0.415	0.002	100	No
40. Cuyamaca Street to Riverview Parkway	Santee	10,000	10,000	7,200	C	0.720	7,300	C	0.730	0.010	100	No
Cuyamaca Street												
41. Project Site to Magnolia Avenue ^g	Santee	DNE/15,000	15,000	8,630	C	0.575	13,920	E	0.928	0.353	5,290	No ^g
42. Magnolia Avenue to Princess Joann Road ^g	Santee	DNE/15,000	40,000	6,800	B	0.453	8,930	C	0.595	0.142	2,130	No
43. Princess Joann Road to Chaparral Drive ^g	Santee	DNE/15,000	40,000	9,400	C	0.627	11,530	D	0.769	0.142	2,130	No

Table 4.16-18. Year 2035 + Project Street Segment Operations

Street Segment	Jurisdiction	Existing Capacity (LOS E) ^a	ME Capacity (LOS E) ^a	Year 2035 Baseline			Year 2035 + Project			Δ ^e V/C	Project Volumes	Sig?
				ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
44. Chaparral Drive to Woodglen Vista Drive	Santee	15,000	40,000	9,400	C	0.627	11,530	D	0.769	0.142	2,130	No
45. Woodglen Vista Drive to El Nopal	Santee	15,000	40,000	12,600	D	0.840	14,730	E	0.982	0.142	2,130	Yes
46. El Nopal to Mast Boulevard	Santee	15,000	40,000	16,500	F	1.100	18,630	F	1.242	0.142	2,130	Yes
47. Mast Boulevard to River Park Drive	Santee	40,000	40,000	26,600	C	0.665	27,510	C	0.688	0.023	910	No
48. River Park Drive to Town Center Parkway	Santee	40,000	40,000	31,700	D	0.793	32,670	D	0.817	0.024	970	No
49. Town Center Parkway to Mission Gorge Road	Santee	50,000	60,000	30,100	C	0.602	31,640	C	0.633	0.031	1,540	No
50. Mission Gorge Road to SR-52 Ramps	Santee	50,000	60,000	49,600	E	0.992	50,660	F	1.013	0.021	1,060	Yes
51. SR-52 Ramps to south of Prospect Avenue	Santee	50,000	60,000	30,600	C	0.612	31,020	C	0.620	0.008	420	No
Riverview Parkway												
52. Mission Gorge Road to Town Center Parkway	Santee	40,000	40,000	11,600	A	0.290	11,860	A	0.297	0.007	260	No
53. Town Center Parkway to Magnolia Avenue	Santee	DNE	15,000	10,700	D	0.713	10,700	D	0.713	0.00	0	No
Magnolia Avenue												
54. Cuyamaca Street to Princess Joann Road ^h	Santee	DNE/10,000	40,000	4,300	B	0.430	7,470	C	0.747	0.317	3,170	No
55. Princess Joann Road to Woodglen Vista Drive	Santee	40,000	40,000	9,500	A	0.238	12,670	A	0.317	0.079	3,170	No
56. Woodglen Vista Drive to El Nopal	Santee	40,000	40,000	13,600	A	0.340	16,770	B	0.419	0.079	3,170	No
57. El Nopal to Mast Boulevard	Santee	40,000	40,000	27,300	C	0.683	28,310	C	0.708	0.025	1,010	No
58. Mast Boulevard to Riverview Parkway	Santee	40,000	40,000	26,200	C	0.655	27,940	C	0.699	0.044	1,740	No
59. Riverview Parkway to Mission Gorge Road	Santee	40,000	40,000	30,400	D	0.760	32,450	D	0.811	0.051	2,050	No
60. Mission Gorge Road to SR-52 Ramps	Santee	60,000	60,000	36,300	C	0.605	36,940	C	0.616	0.011	640	No

Table 4.16-18. Year 2035 + Project Street Segment Operations

Street Segment	Jurisdiction	Existing Capacity (LOS E) ^a	ME Capacity (LOS E) ^a	Year 2035 Baseline			Year 2035 + Project			Δ ^e V/C	Project Volumes	Sig?
				ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C			
61. SR-52 Ramps to south of Prospect Avenue	Santee	40,000	40,000	33,900	D	0.848	34,120	D	0.853	0.005	220	No
Woodside Avenue												
62. East of Magnolia Avenue	Santee	40,000	40,000	36,500	E	0.913	36,600	E	0.915	0.002	100	No
N. Woodside Avenue												
63. Riverford Road to Woodside Avenue	Santee	10,000	15,000	13,000	F	1.300	13,000	F	1.300	0.000	0	No
Riverford Road												
64. Riverside Drive to SR-67 Ramps	County	23,500	57,000	24,900	F	—	25,430	F	—	—	530	Yes

Source: Appendix N.

Notes:

- ^a Capacities based on City of Santee, County of San Diego, and City of San Diego Roadway Classification and LOS tables (see Appendix A in EIR Appendix N). Existing capacities used in the Year 2035 analysis.
- ^b Average Daily Traffic
- ^c Level of Service
- ^d Volume-to-Capacity ratio
- ^e Δ denotes a project-induced increase in the Volume-to-Capacity ratio. For County of San Diego, an increase in project trips is used to measure impacts.
- ^f The Mobility Element classifies this section of Fanita Parkway as a 10,000 ADT Two-Lane Undivided Parkway. The project proposes to construct this roadway as a Two-Lane Divided Parkway enhancing the capacity to 15,000 ADT.
- ^g The 15,000 ADT capacity for the existing sections of Cuyamaca Street was continued along this future section providing access to the project. The intersection operations at both ends of the Cuyamaca Street street segment between the project site and Magnolia Avenue report LOS D or better operations. Therefore, adequate operations are expected along this roadway. See Section 17.1.4 in Appendix N for detailed analyses of Cuyamaca Street. In addition, the section of Cuyamaca Street between Chaparral Drive and Woodglen Vista Drive would be improved to a Four-Lane Major Arterial under Year 2035 conditions as a project design feature to adequately transition to the four-lane section south of Woodglen Vista Drive required as Year 2035 proposed project mitigation.
- ^h The 10,000 ADT capacity for the connection of Magnolia Avenue was used along this future section providing access to the project.
- ¹ Jur = Jurisdiction
- ² DNE, "—" = Does not exist
- ³ Sig = Significant impact, yes or no.
- ⁴ County of San Diego does not use V/C ratios as a measure of effectiveness.

As shown in Table 4.16-18, 12 study area street segments under the Year 2035 + Project scenario are calculated to operate at LOS E or F with the addition of proposed project traffic. However, because three segments do not result in a project-induced change in V/C greater than 0.02 seconds, these street segments would not result in a significant impact. Based on the established significance criteria stated in Section 4.16.4, nine significant cumulative impacts would occur since the proposed project-induced change in V/C is greater than 0.02 seconds for these LOS E or F operating street segments.

Year 2035 + Project Freeway Segment Operations

Table 4.16-19 summarizes the Year 2035 + Project freeway segment operations evaluated at seven freeway mainline segments.

Table 4.16-19. Year 2035 + Project Freeway Segment Operations

Freeway Segment	Dir.	Lanes ^a	Year 2035 Baseline								Year 2035 + Project								Δ V/C ^f		Sig?
			Volume ^b		V/C ^c		Density ^d		LOS ^e		Volume		V/C		Density		LOS				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
State Route 52																					
Santo Road to Mast Boulevard	EB	3M	2,039	7,410	0.317	1.215	10.4	—	A	F	2,164	7,587	0.336	1.245	11.0	—	A	F	0.020	0.029	Yes
	WB	3M	8,012	3,233	1.314	0.503	—	16.5	F	B	8,240	3,333	1.351	0.518	—	17.1	F	B	0.037	0.015	Yes
Mast Boulevard to SR-125	EB	2M	2,012	6,351	0.458	1.444	15.5	-	B	F	2,029	6,375	0.461	1.449	15.6	—	B	F	0.003	0.005	No
	WB	2M	5,590	3,424	1.271	0.778	—	28.7	F	D	5,621	3,438	1.278	0.782	—	28.9	F	D	0.007	0.003	No
SR-125 to Cuyamaca Street	EB	2M+1A	2,563	6,365	0.388	0.965	13.2	41.6	B	E	2,580	6,389	0.391	0.968	13.3	41.9	B	E	0.003	0.004	No
	WB	2M+1A	4,786	4,229	0.725	0.641	26.1	22.4	D	C	4,817	4,243	0.730	0.643	26.3	22.5	D	C	0.005	0.002	No
Cuyamaca Street to SR-67	EB	2M+1A	1,822	5,684	0.276	0.861	9.3	33.6	A	D	1,853	5,698	0.281	0.863	9.5	33.7	A	D	0.005	0.002	No
	WB	2M+1A	4,557	3,500	0.690	0.530	24.3	18.0	C	B	4,574	3,524	0.693	0.534	24.5	18.1	C	C	0.003	0.004	No
State Route 67																					
Riverford Road to SR-52	NB	2M	2,926	4,710	0.697	1.122	24.9	—	C	F	2,934	4,713	0.699	1.122	24.9	—	C	F	0.002	0.001	No
	SB	2M	4,136	3,477	0.987	0.829	43.7	31.7	E	D	4,140	3,483	0.988	0.831	43.8	31.9	E	D	0.001	0.002	No
SR-52 to Bradley Avenue	NB	2M+2A	4,600	7,405	0.546	0.888	18.9	35.6	C	E	4,635	7,454	0.550	0.894	19.0	36.0	C	E	0.004	0.006	No
	SB	3M	6,502	5,466	1.028	0.865	—	34.0	F	D	6,565	5,494	1.038	0.869	—	34.3	F	D	0.010	0.004	No
State Route 125																					
Grossmont College Drive to SR-52	NB	3M+2A	4,173	3,684	0.386	0.341	13.2	11.6	B	B	4,259	3,806	0.394	0.352	13.4	12.0	B	B	0.008	0.011	No
	SB	4M	2,681	4,704	0.310	0.544	10.6	18.6	A	C	2,838	4,773	0.328	0.552	11.2	18.9	B	C	0.018	0.008	No

Source: Appendix N.

Notes:

- ^a Lane geometry taken from PeMS lane configurations at corresponding postmile.
- ^b Existing volume calculated from most recent Caltrans Traffic Census Program Peak-Hour Volume Data (2016) and grown against Mobility Element forecast volumes to reach Year 2035 conditions.
- ^c V/C = (Peak-Hour Volume/Hourly Capacity)
- ^d Density measures passenger cars per mile per lane. Density = Flow Rate (passenger cars/hour/lane) ÷ Speed (average passenger-car speed in mph).
- ^e Level of Service
- ^f "Δ" denotes the project-induced increase in V/C. Per City Guidelines, a significant impact occurs when the V/C is increased by greater than 0.01 for LOS E or LOS F.
- ¹ M = Mainline
- ² A = Auxiliary
- ³ Sig? = Significant impact, yes or no.
- ⁴ "—" Shown in density column where density exceeds the maximum threshold for LOS F.

LOS

- A
- B
- C
- D
- E
- F

Density Range (pc/mi/ln)

- 0 – 11
- > 11 – 18
- > 18 – 26
- > 26 – 35
- > 35 – 45
- > 45

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As shown in Table 4.16-19, there are nine study area freeway mainline segments under the Year 2035 + Project scenario that are calculated to operate at LOS E or F with the addition of proposed project traffic. However, because seven segments would not result in project-induced change in V/C is greater than 0.01 seconds, they would not result in a significant impact. Based on the established significance criteria stated in Section 4.16.4, two significant cumulative impacts would occur since the proposed project-induced change in V/C is greater than 0.01 seconds for these LOS E or F operating freeway segments.

Land Use Plan Without School

The preferred land use plan with school designates a 15-acre site for a potential K–8 school to accommodate up to 700 students. The TIA analyzes a 1,000 student school on the project site, which represents a conservative analysis. A secondary land use plan has been analyzed to assess traffic conditions without the inclusion of a school as part of the proposed project in the case that the Santee Unified School District decides not to pursue the site for a school. Without the school, an additional 59 single-family units, or approximately 2 percent of the total residential units of the proposed project, would be constructed. This 2 percent increase is based on the overall land use plan and maximum density requirements. The total residential units would increase from 2,949 units under the preferred land use plan with school to 3,008 units under the land use plan without school.

Overall, without the school and with the additional 59 single-family residential units, the project's primary trip generation would decrease compared to the preferred land use plan with school. The primary trip generation would decrease under the land use plan without school due to the classification of the school as a “charter school” land use, which generates a higher number of external trips. The non-residential gross ADT would decrease about 27.5 percent from 6,723 ADT under the preferred land use plan with school to 4,873 ADT under the land use plan without school. Thus, the internal capture rate applied to the land use plan without school was proportionally decreased from 8.5 percent to 6.2 percent. With this lower internal/mixed-use capture rate, there would be a reduction in the primary trip generation, and the total external trip generation for the land use plan without school would increase from a total 26,272 ADT under the preferred land use plan with school to 26,445 ADT for a net difference in 173 ADT.

Table 4.16-20 depicts the trip generation of the land use plan without school.

Table 4.16-20. Project Trip Generation (Land Use Plan Without School)

ID	Land Use	Size	Daily Trip Ends (ADTs) ^a		AM Peak Hour					PM Peak Hour						
			Rate ^b	Volume	% of ADT	In:Out		Volume			% of ADT	In:Out		Volume		
						Split	In	Out	Total	Split		In	Out	Total		
Residential																
A	Village Center Medium-Density (Average 12 DU/acre)	435 DU	8/DU	3,480	8%	20:80	56	222	278	10	70:30	244	104	348		
B	Active Adult ^c (Average 15 DU/acre)	445 DU	4.27/DU	1,900	0.24	33:67	35	72	107	0.30	61:39	82	52	134		
C	Medium-Density (Average 13 DU/acre)	790 DU	8/DU	6,320	8%	20:80	101	405	506	10	70:30	442	190	632		
D	Low-Density (Average 5 DU/acre)	1,338 DU	10/DU	13,380	8%	30:70	321	749	1,070	10	70:30	937	401	1,338		
E	<i>Subtotal Residential (A+B+C+D)</i>	<i>3,008 DU</i>	—	<i>25,080</i>	—	—	<i>513</i>	<i>1,448</i>	<i>1,961</i>	—	—	<i>1,705</i>	<i>747</i>	<i>2,452</i>		
Non-Residential																
F	Local Serving Retail	80 KSF	40/KSF	3,200	3%	60:40	58	38	96	9%	50:50	144	144	288		
G	Primary Trips		45%	1,440	—	—	26	17	43	—	—	65	65	130		
H	Pass-By/Diverted Trip Reduction		55%	(1,760)	—	—	(32)	(21)	(53)	—	—	(79)	(79)	(158)		
I	Agriculture/Farm ^d	36.2 Acres	2/acre	72	0.26	43:57	4	5	9	0.45	57:43	9	7	16		
J	Active Park ^e	19.9 Acres	50/acre	995	4%	50:50	20	20	40	8	50:50	40	40	80		
K	Passive Park ^f	53.5 Acres	5/acre	268	0.15	57:43	5	3	8	0.2	45:55	5	6	11		
L	Recreation Center ^g	10 KSF	28.82/KSF	288	1.76	66:34	12	6	18	2.31	47:53	11	12	23		
M	RV Parking/Solar Farm ^h	250 spaces	0.2/space	50	6%	50:50	2	1	3	9	50:50	3	2	5		
N	Subtotal Non-Residential (F+I+J+K+L+M)			4,873	—	—	101	73	174	—	—	212	211	423		
	Gross Trip Generation (E+N)			29,953	—	—	614	1,521	2,135	—	—	1,917	958	2,875		

Table 4.16-20. Project Trip Generation (Land Use Plan Without School)

ID	Land Use	Size	Daily Trip Ends (ADTs) ^a		AM Peak Hour					PM Peak Hour						
			Rate ^b	Volume	% of ADT	In:Out		Volume			% of ADT	In:Out		Volume		
						Split		In	Out	Total		Split	In	Out	Total	
O	Total Primary Trips (E+G+I+J+K+L+M)		—	28,193	—	—	582	1,500	2,082	—	—	1,838	879	2,717		
	Total Pass-By/Diverted Link Trip Reduction (H)		—	(1,760)	—	—	(32)	(21)	(177)	—	—	(79)	(79)	(158)		
P	Internal/Mixed-Use Reduction (O*6.2%) ⁱ		—	(1,748)	—	—	(36)	(93)	(129)	—	—	(114)	(54)	(168)		
	Net External Trip Generation (O+P)		—	26,445	—	—	546	1,407	1,953	—	—	1,724	825	2,549		

Source: Appendix N.

Notes:

- ^a Average Daily Trips
- ^b Rates are based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, for all gross, primary, and pass-by-diverted trip rates, except where noted.
- ^c SANDAG references the ITE trip generation rates for the source of their "Retirement Community" rate. Therefore, the ITE 251 rate for "Detached Senior Adult Housing" was used.
- ^d SANDAG "agriculture" rate applied. Since no peak splits are provided by SANDAG, peak splits taken from ITE 818 "Nursery (Wholesale)" rates. Events would not be daily and would occur largely outside the commuter AM and PM peak periods.
- ^e Active Park rate sourced to SANDAG rate for "City Park." The project also proposes a trail network throughout the site. The trails would traverse through parks, open space, and habitat preserve. Any trips associated with trails would be captured through the park trip generation.
- ^f Passive Park ADT rate sourced to SANDAG rate for "Neighborhood Park." Since no peak splits are provided by SANDAG, peak splits taken from ITE 417 "Regional Park" rates.
- ^g Recreation center may be open to public. SANDAG does not provide a rate for this specific use. ITE 495 rate for "Recreational Community Center" applied. The 10,000-square-foot recreation center is located within the joint use site, adjacent to the school.
- ^h Portion of RV parking open to public. Since no rate is provided by SANDAG or ITE for "RV Parking," SANDAG rate for "Industrial Storage" applied.
- ⁱ SANDAG mixed-use reduction rate of 6.2 percent applied, adjusted to reflect the proportion of non-residential ADT compared to the proposed project (Table 7-2 in Appendix N). See Section 13.0 in Appendix N for details.
- ¹ As previously mentioned, since the completion of the transportation analysis included in this EIR, the project description has slightly changed, resulting in a shift between residential densities, changes to park acreage, and a reduction in school students from 1,000 to 700 students. With these changes, the resulting trip generation decreases compared to the numbers analyzed in this EIR. Therefore, the analysis presented herein provides a conservative assessment of the local transportation system.
- ² Appendix D of EIR Appendix N provides the trip generation calculations for the current proposed project, showing the lower volumes.

The TIA prepared by LLG (Appendix N) analyzed the same three scenarios: Existing + Project, Near-Term Cumulative + Project, and Year 2035 + Project without the presence of the school and with the addition of the 59 units. The analysis determined that the land use plan without school would not result in any new impacts beyond those identified in Tables 4.16-11 through 4.16-19 under the preferred land use plan with school. The only difference in impact that would occur is the timing of the impact at Intersection 8, El Nopal/Ranchitos Road, which is calculated as an impact under the Existing + Project (Without School) scenario. However, Intersection 8 is calculated to be a significant direct impact under Existing + Cumulative Projects + Proposed Project conditions under the preferred land use plan with school. Therefore, an impact would occur to this intersection under either land use plan. For a complete analysis of the land use plan without school refer to Section 13.0 in Appendix N.

Transit Facilities

The project site is currently undeveloped, and there is no existing roadway infrastructure; therefore, there is currently no transit service to the site. However, there are existing public transit bus stops along Cuyamaca Street and Magnolia Avenue and on Fanita Parkway at Mast Boulevard operated by the MTS. Upon development of the proposed project improvements, the local circulation system would be interconnected between the project site and the City land uses to the south. Once constructed, bus transit routes may use Fanita Parkway, Cuyamaca Street, and Magnolia Avenue. Therefore, the proposed project would not conflict with the City's policies and objectives addressing transit facilities, and impacts would be less than significant.

Bicycle and Pedestrian Facilities

Bicycle circulation throughout the project site would be provided through a combination of on-street bike lanes and off-street multi-purpose trails. The Habitat Preserve would offer hiking and mountain biking trails primarily on existing trail routes to avoid sensitive habitat areas. Bicycle trails would be designed for both recreation and to provide direct access between the villages. Bicycle parking would be provided in all multi-family neighborhoods and for all commercial uses. The TDM Plan (see Appendix N) would also include community-wide bicycle facilities and services, including shared bicycle parking facilities in the Village Centers. Each village would provide a bike station where riders would have access to water and air pumps, electric bike charging stations, and a bicycle sharing system.

Outside of the village development areas, the proposed project design of Fanita Parkway, Cuyamaca Street, and Magnolia Avenue would facilitate the movement of transportation to/from off-site locations in the south. Sidewalks would be constructed parallel to each roadway to facilitate linkages between the project site and existing bicycle and pedestrian facilities. For Fanita Parkway, improvements to the street would be carried all the way to Mast Boulevard and would include on-street bike lanes, a multi-purpose trail on the western side, and a sidewalk on the eastern

side of the street. Both the sidewalk and multi-purpose trail would be separated from the street by a landscaped parkway. The proposed extension of Cuyamaca Street between the project site and Chaparral Drive would also include on-street bike lanes, a multi-purpose trail on the western side, and a nature trail on the eastern side of the street. The multi-purpose trail would be separated from the street by a landscaped parkway. The proposed extension of Magnolia Avenue would include a sidewalk on the western side with bike lanes and emergency parking on both sides.

Pedestrian circulation throughout the project site would be provided through a network of sidewalks, multi-purpose trails, and hiking trails. Every street on the project site would include a sidewalk or multi-purpose trail to accommodate pedestrian travel. Therefore, the proposed project would not conflict with the City's policies and objectives addressing bicycle and pedestrian facilities, and impacts would be less than significant.

Circulation System Improvements

The following presents the analysis of the design of the proposed on-site circulation system and off-site improvement areas. Refer to Figure 3-7, Vehicular Circulation Plan, in Chapter 3, Project Description, for a depiction of the proposed project circulation network.

On-Site Circulation

As there are currently no improved streets within the project site boundary, the internal roadways would be constructed as part of the proposed project. The on-site network of streets and intersections would consist of different design types based on expected traffic volumes. The internal roadways would vary within the parameters of the City's standard design for local streets and Residential Collectors and be designed to meet City standards for street geometry. Local streets would be designed to carry up to 2,200 ADT and Residential Collectors would be designed to carry up to 8,000 ADT. It is not anticipated that any on-site roadway would exceed the ADT thresholds set forth in Section 4.16.4 by these design standards.

The TIA (Appendix N) assessed intersections of key internal project roadways at 11 locations. On-site traffic volumes were distributed and assigned to the project site using the total internal site trip generation noted as the "Primary Trip Generation" from Table 4.16-10. Internal pass-by and diverted link trips were also included in the on-site traffic volumes. On-site trip distribution was developed by assessing the land use plan and assigning trips generated by the various proposed land uses for the site. Table 4.16-21 summarizes the peak-hour analysis for on-site intersections and roundabouts at the 11 locations.

Table 4.16-21. On-Site Intersection and Roundabout Operations

Intersection	Control Type	Peak Hour	Project Conditions	
			Delay ^a	LOS ^b
Cuyamaca Street/Street "A"/Street "W"	Roundabout	AM	11.7	B
		PM	24.8	C
Fanita Parkway/Street "E"	Roundabout	AM	8.4	A
		PM	9.0	A
Fanita Parkway/Street "A"	Roundabout	AM	10.1	B
		PM	5.9	A
Fanita Parkway/Street "N"	Roundabout	AM	8.1	A
		PM	4.3	A
Fanita Parkway/Street "M"	Roundabout	AM	5.3	A
		PM	4.1	A
Cuyamaca Street/Street "V"	Roundabout	AM	4.9	A
		PM	5.3	A
Cuyamaca Street/Magnolia Avenue	Signal	AM	10.7	B
		PM	18.3	B
Cuyamaca Street/Street "T"	MSSC ^c	AM	11.8	B
		PM	18.0	C
Street "W"/Street "WW"	MSSC	AM	13.5	B
		PM	15.4	C
Street "W"/Street "X"	MSSC	AM	10.3	B
		PM	11.1	B
Street "X"/Street "V"	MSSC	AM	16.4	C
		PM	20.7	C

Source: Appendix N.

Notes:

- ^a Average delay expressed in seconds per vehicle
- ^b Level of Service
- ^c Minor Street Stop Controlled intersection. Minor street critical movements delay reported.

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

As shown in Table 4.16-21, all locations are forecasted to operate at LOS C or better conditions with the addition of proposed project traffic. Impacts would be less than significant.

Fanita Parkway

Fanita Parkway is an on-site roadway that would provide access to the developed portion of the project site. Analysis of this roadway, including design features and traffic volumes, is discussed below. Specific information regarding the lane geometry, bike lanes, and trails can be found in Chapter 3.

Fanita Parkway is forecasted to serve 47 percent of project trips to and from the City streets to the south. The project proposes improvements to the existing section of Fanita Parkway starting at Mast Boulevard, traveling to the existing terminus at Ganley Road to avoid potential project impacts. From there, the roadway would be fully constructed by the proposed project as a project design feature.

For the segment of Fanita Parkway between Mast Boulevard and Lake Canyon Road, the roadway would be widened to a four-lane parkway with an LOS E capacity of 40,000 ADT to accommodate future traffic volumes.

From Lake Canyon Road to Ganley Road, Fanita Parkway would be constructed as a modified three-lane parkway, which would accommodate future traffic volumes. Two 12-foot-wide travel lanes would be provided in the southbound direction with one 12-foot-wide lane in the northbound direction. The intersection of Lake Canyon Road at Fanita Parkway would be improved to install a traffic signal. In addition, the gated vehicular entrance south of Ganley Road currently used by the Santee Lakes Recreation Preserve as an entry/exit to their campground and RV storage areas would be abandoned and realigned to complete the west leg of the Fanita Parkway/Ganley Road intersection. This new four-way intersection would accommodate trips in and out of PDMWD facilities, including Santee Lakes Recreation Preserve, currently accessed via Sycamore Canyon Road. LOS A is calculated at the Fanita Parkway/Ganley Road intersection with a three-lane configuration.

From Ganley Road to the first on-site roundabout at Street “E,” Fanita Parkway would narrow to a two-lane parkway with a LOS E capacity of 15,000 ADT to accommodate future traffic volumes.

Off-Site Circulation

The project proposes to construct the northern extensions Cuyamaca Street and Magnolia Avenue to provide access to the project site as project design features. The extension of Cuyamaca Street is necessary to provide access to the site, while the construction of Magnolia Avenue would provide an additional north–south route to Cuyamaca Street. Analysis of these two roadways including design features and traffic volumes are discussed below.

Cuyamaca Street

Cuyamaca Street is forecasted to serve 53 percent of proposed project trips prior to splitting off to Magnolia Avenue, where it would then carry 29 percent of proposed project trips to and from the City streets to the south. Cuyamaca Street currently terminates at Chaparral Drive. From Chaparral Drive to the first on-site roundabout with Street “Y,” the roadway would be constructed as a two-lane parkway with a LOS E capacity of 15,000 ADT to accommodate future traffic volumes.

Magnolia Avenue

Magnolia Avenue is forecasted to serve 24 percent of proposed project trips south of its future intersection at Cuyamaca Street. Magnolia Avenue currently terminates just north of Princess Joann Road. Magnolia Avenue is classified as a four-lane parkway per the adopted Santee General Plan Mobility Element. The traffic volumes forecasted on this future connection do not require the full construction of the roadway to four-lane standards. The Year 2035 traffic volumes both without and with the proposed project are less than 8,000 ADT. Therefore, from its current terminus to Cuyamaca Street, the roadway is proposed to be constructed as a two-lane collector with a LOS E capacity of 10,000 ADT, which would adequately accommodate future traffic volumes. The Magnolia Avenue extension would be implemented as a project design feature prior to the certificate of occupancy of the 1,500th equivalent dwelling unit.

Carlton Hills Boulevard

The Special Use area located in the southern portion of the project site would take access solely from the current terminus of Carlton Hills Boulevard north of Lake Canyon Road. Very few proposed project trips (approximately 50 ADT) are expected to use this access because the special uses allowed for the site, such as RV storage, aboveground agriculture, and solar panel operations, would be low trip generators. Therefore, no improvements to Carlton Hills Boulevard are necessary to accommodate future traffic volumes.

Construction Impacts

The proposed project is anticipated to be constructed over a 10- to 15-year timeframe beginning in 2021. Staging for all equipment and construction personnel would occur on the project site in designated areas. To minimize the impact of haul trucks on the off-site street network and to avoid the need to import or export dirt, grading for the proposed project has been designed to achieve an overall earthwork balance. Cut materials from the first phase of development would be placed as fill where required on the construction access streets. The grading operation would all occur on site. No outside dirt hauling would be necessary because the site, as designed, would balance cut and fill materials. Once mobilization is complete, heavy machinery traveling off the site would be limited until the completion of the grading operation.

The proposed project would be developed in four construction phases. The proposed phases are conceptual and non-sequential and may occur simultaneously. Phases may overlap or vary depending on market conditions. Each phase would take approximately 2 to 4 years to complete. The conceptual phases for the proposed project include the following:

- **Phase 1:** Fanita Commons and the easterly portion of Orchard Village, off-site and on-site partial improvements to Fanita Parkway and Cuyamaca Street; sewer infrastructure through the Phase 2 area and water infrastructure in the Special Use area

- **Phase 2:** Westerly portion of Orchard Village and dead-end street improvements
- **Phase 3:** Connections to and construction of the southerly half of Vineyard Village and water treatment infrastructure through the Phase 4 area, and off-site partial improvements to Magnolia Avenue
- **Phase 4:** Northerly half of Vineyard Village

Haul trucks used for site preparation and grading activities would operate on site only and not result in new trips to the City roadway network; therefore, they are not included in the trip generation calculations. There would be days when worker trips and vendor trips would access the site each day. Based on the anticipated construction schedule, a maximum of 1,411 daily trips (1,099 daily worker trips, 312 daily vendor trips, 0 haul trips) is estimated to occur.

The level of construction impacts would be minimized because earthwork would be balanced on site, reducing the need for haul trips to and from the site. The number of construction trips on local streets would be limited to construction workers and vendor trips. Further, the construction trips would be inbound to the City during the morning and outbound from the City in the afternoon, which is counter flow (opposite) to existing traffic patterns. Table 4.16-22 shows the percent of traffic on Mast Boulevard, Fanita Parkway, and Cuyamaca Street, which are counter flow to existing patterns. These percentages are much less than 50 percent. A maximum 35.8 percent of traffic occurs in the non-peak direction, which is the direction that construction trips would be using. In other words, the construction traffic would be added to the direction of traffic where excess capacity exists.

Table 4.16–22. Existing Travel Patterns

Mast Boulevard		Cuyamaca Street		Fanita Parkway	
AM Peak Eastbound	PM Peak Westbound	AM Peak Northbound	PM Peak Southbound	AM Peak Northbound	PM Peak Southbound
22.6%	22.8%	22.2%	32.9%	31.8%	35.8%

Source: Appendix N.

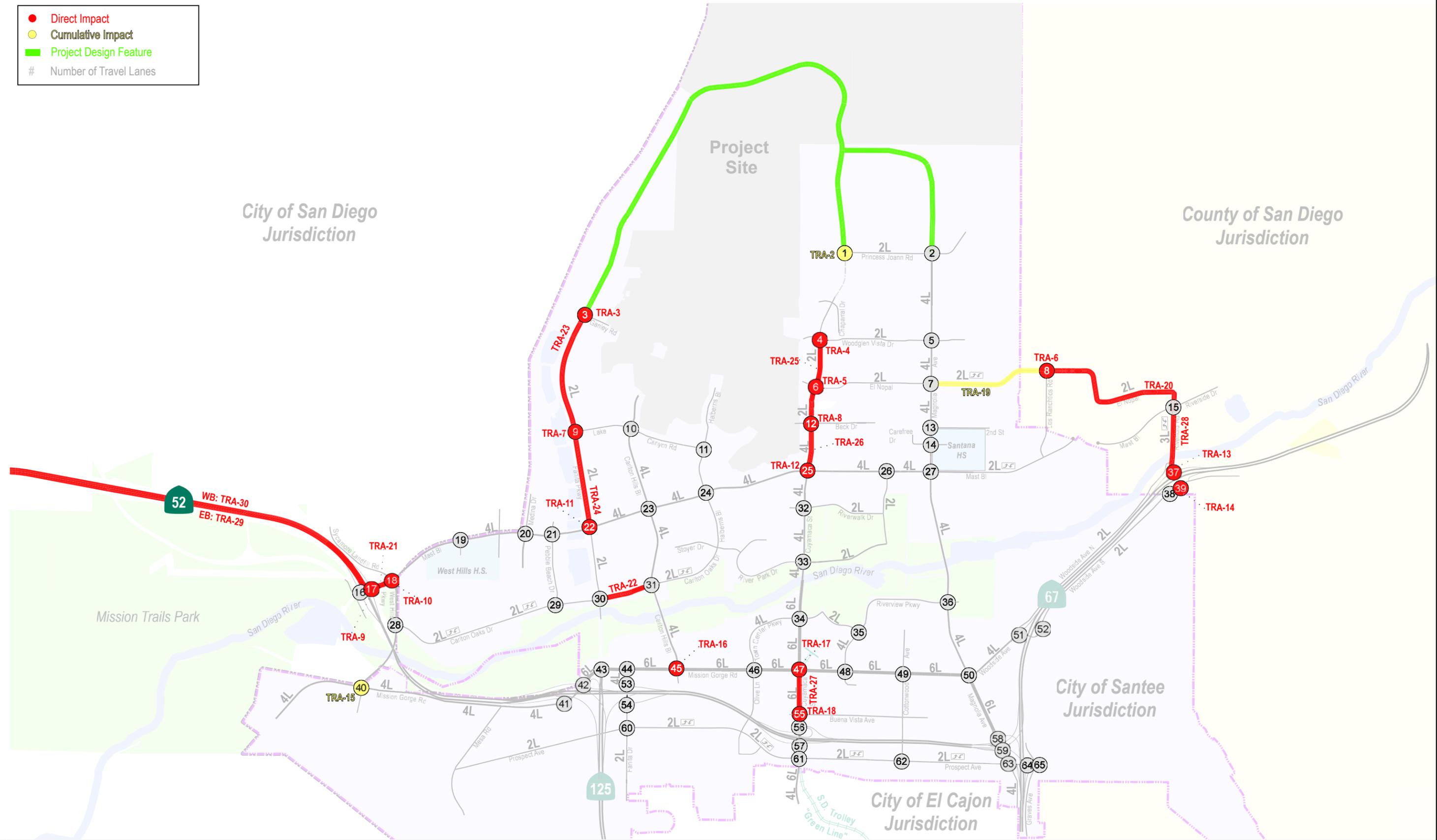
As demonstrated in Table 4.16-22, adequate capacity is available on existing streets to serve construction traffic. However, the temporary increase in construction traffic would have the potential to result in a significant impact if not properly managed. Therefore, project construction could result in a temporary significant construction traffic impact to local street facilities.

It is recognized that there will be an interim scenario when construction of later phases is occurring simultaneously with occupancy and operation of earlier phases. However, implementation of Mitigation Measure TRA-1 would reduce temporary construction impacts to below a level of significance.

Mitigation Measures

The following section identifies mitigation measures to reduce the proposed project's construction, direct, and cumulative operational impacts under the preferred land use with school and the land use without school. Construction traffic impacts would be mitigated through the preparation and implementation of construction traffic control plans. Direct impacts were calculated under Existing + Project and Existing + Cumulative Projects + Project conditions where proposed project-added traffic would result in the degradation from acceptable LOS D or better operations to LOS E or F conditions or, for those locations currently operating at LOS E or F, in an increase greater than the allowable thresholds identified in Tables 4.16-6 through 4.16-9. Cumulative impacts were calculated where proposed project-added traffic would result in a significant increase in intersection delay or street segment volume-to-capacity ratios over the allowable thresholds mentioned above under Year 2035 + Project conditions. The equivalent dwelling unit triggers were developed in a mitigation phasing analysis in the Traffic Impact Analysis (see Appendix N). Refer to Figure 4.16-2, Project Design Features, Impacts, and Mitigation Measures, for an illustration of where the project design features and impacts would be distributed and where the mitigation measures would mitigate those impacts.

- Direct Impact
- Cumulative Impact
- Project Design Feature
- # Number of Travel Lanes



Source: Linscott Law & Greenspan 2020.

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Construction

TRA-1: Construction Traffic Control Plans. Prior to beginning construction, work zone traffic control plans and construction transportation management plans shall be prepared in accordance with all applicable requirements of the City of Santee and County of San Diego encroachment permits and applicable City of Santee and County of San Diego plans, ordinances, and policies. The plans shall include provisions for the following:

- The applicant shall comply at all times with the following work hour requirements:
 - No site work, building construction, or related activities, including equipment mobilization shall be permitted to start on the project prior to 7:00 a.m. and all work for the day shall be completed by 7:00 p.m., subject to the satisfaction of the City Engineer.
 - No work is permitted on Sundays or City holidays.
 - No deliveries, including equipment drop-off and pick-up, shall be made to the project except between the hours of 8:00 a.m. and 6:00 p.m., Monday through Saturday, excluding Sundays and City holidays, subject to the satisfaction of the City Engineer. Deliveries of emergency supplies or equipment necessary to secure the site or protect the public would be permitted.
 - If the applicant fails or is unable to enforce compliance with their contractors, subcontractors and materials suppliers regarding the specified work hours, additional reduction of work hours shall be imposed by the City Department of Development Services.
 - In addition to the above, the applicant shall erect one or more signs stating the work hour restrictions. Signs shall be installed as required, in the vicinity of the project construction trailer if a job site trailer is used, or at such other locations as may be deemed appropriate by the Department of Development Services. The sign shall be a minimum of 24 inches by 36 inches and shall be weatherproofed. The sign content shall be provided by the Department of Development Services.
- Coordinate with public transit providers (where necessary).
- Provide off-site construction worker parking areas and shuttles for workers to/from the job site, if necessary.
- Implement standard safety practices, including installing appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices.
- Coordinate with the jurisdictions prior to construction to determine specific traffic handling layouts.

- Protect traffic by using flaggers, warning signs, lights, and barricades to guide vehicles through or around construction zones.
- Restore roadway capacity to the extent feasible during hours when construction activities are not occurring, which could include the use of street plates or temporary paving.
- Clean and restore roadways upon completion of work.
- Limit the length of open trenches to the length allowed by County of San Diego and City of Santee encroachment permits.
- Implement construction schedules and techniques that minimize roadway closures, including the number of cross streets and side streets that may be blocked or otherwise impacted by construction activities.
- Detours for cyclists and pedestrians when bike lanes or sidewalks must be closed.
- Install steel plates over open trenches in inactive construction areas to maintain existing bicycle and pedestrian access after construction hours.
- Coordinate with local schools prior to construction within close proximity of school property to ensure entryways are not blocked during peak drop-off and pick-up times.
- Enforce speed limits of construction vehicles on all streets.
- Notify emergency response providers of street closures at least one week prior to closures and include the location, date, time and duration of the closure.
- Abide by encroachment permit conditions, which shall supersede conflicting provisions in the plans.
- In addition, vendor trip limitations shall be imposed, which would prohibit vendor truck trips on Cuyamaca Street and Magnolia Avenue and require all truck traffic to use Fanita Parkway for site access. Worker vehicle trips would be allowed on all roadways.

Operation

The phasing of the following operational mitigation measures is based on the mitigation phasing analysis included in the TIA (Appendix N).

Intersections

TRA-2: Princess Joann Road/Cuyamaca Street Intersection (Year 2035 Cumulative). As part of the proposed project, this intersection would be constructed as a project design feature. By year 2035, with ambient growth assumed from buildout of the Santee General Plan land uses, a cumulative impact would occur. Therefore, to mitigate the cumulative impact, prior to occupancy of the 890th equivalent dwelling unit the proposed project shall install a traffic signal, provide protected southbound left-turn phasing and provide the following lane geometry: southbound – 1 left lane, 1 thru lane; westbound – 1 shared left lane/right lane; and northbound – 1 thru, 1 right lane. Implementation of these improvements would mitigate the impact to below a level of significance.

- TRA-3: Ganley Road/Fanita Parkway Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 1,917th equivalent dwelling unit, the proposed project shall install a traffic signal at this intersection and provide southbound/northbound left-turn protected phasing. Provide the following lane geometry: southbound – 1 left lane, 1 shared thru/right-turn lane; northbound – 1 left lane, 1 thru lane, 1 right lane; westbound – 1 left lane, 1 shared thru lane/right lane; and eastbound – 1 shared left lane/thru lane/right lane. Implementation of these improvements would mitigate the impact to below a level of significance.
- TRA-4: Woodglen Vista Drive/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 2,212th equivalent dwelling unit, the proposed project shall install a traffic signal at this intersection and provide north–south protected phasing and east–west permissive phasing. The following lane geometry shall be provided: southbound – 1 left lane, 1 thru lane; northbound – 1 left lane, 1 thru lane, 1 right lane; westbound – 1 shared left lane/thru lane/right lane; and eastbound – 1 shared left lane/thru lane/right lane. Implementation of these improvements would mitigate the impact to below a level of significance.
- TRA-5: El Nopal/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 1,327th equivalent dwelling unit, the proposed project shall install a traffic signal at this intersection and provide north–south protected phasing and east–west permissive phasing. The following lane geometry shall be provided: southbound – 1 left lane, 1 thru lane, 1 shared thru lane/right lane; northbound – 1 left lane, 1 thru lane, 1 shared thru lane/right lane; eastbound – 1 shared left lane/thru lane/right lane; westbound – 1 shared left lane/thru lane/right lane. Implementation of these improvements would mitigate the impact to below a level of significance.
- TRA-6: El Nopal/Los Ranchitos Road Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 2,654th equivalent dwelling unit, the project shall restripe the westbound approach at this intersection to provide the following lane geometry: 1 left lane, 1 thru lane. However, since this intersection is located within the County of San Diego’s jurisdiction, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact would be considered significant and unavoidable.
- TRA-7: Lake Canyon Road/Fanita Parkway Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 1,828th equivalent dwelling unit, the proposed project shall install a traffic signal at this intersection and provide northbound–southbound protected phasing. The following lane geometry shall be provided: southbound – 1 left lane, 2 thru lanes; northbound – 1 thru lane, 1 shared thru lane/right lane; and westbound – 1 left lane, 1 shared left lane/right lane. Implementation of these improvements would mitigate the impact to below a level of significance.

- TRA-8: Beck Drive/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 265th equivalent dwelling unit, the proposed project shall install a traffic signal and provide northbound–southbound protected phasing. The following lane geometry shall be provided: southbound – 1 left lane, 1 thru lane, 1 shared thru lane/right lane; northbound – 1 left lane, 1 thru lane, 1 shared thru lane/right lane; eastbound – 1 shared left lane/thru lane/right lane; and westbound – 1 shared left lane/thru lane/right lane. Implementation of these improvements would mitigate the impact to below a level of significance.
- TRA-9: Mast Boulevard/State Route 52 Westbound Ramps Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 442nd equivalent dwelling unit, the proposed project shall widen the westbound approach at the intersection to provide the following lane geometry: westbound – 1 shared thru-right lane; and 2 right lanes, consistent with the improvements proposed in the Santee General Plan Mobility Element. However, since this intersection is within the City of San Diego’s and the California Department of Transportation’s jurisdictions, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact would be considered significant and unavoidable.
- TRA-10: Mast Boulevard/West Hills Parkway Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 88th equivalent dwelling unit, the proposed project shall widen the intersection to provide the following lane geometry: eastbound – 1 left lane, 3 thru lanes, 1 right lane; westbound – 2 left lanes, 2 thru lanes, 1 shared thru lane/right lane; northbound – 2 left lanes, 1 shared thru lane/right lane; and southbound – 1 shared thru lane/left lane, 1 right lane. However, since this intersection is within the City of San Diego’s and the California Department of Transportation’s jurisdictions, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact is considered significant and unavoidable.
- TRA-11: Mast Boulevard/Fanita Parkway Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 2,064th equivalent dwelling unit, the proposed project shall widen the intersection to provide dual southbound right-turn lanes and restripe the eastbound approach to provide dual eastbound left-turn lanes. Implementation of these improvements would mitigate the impact to below a level of significance.
- TRA-12: Mast Boulevard/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative).** Prior to occupancy of the 2,212th equivalent dwelling unit, the proposed project shall widen the intersection to provide the following lane geometry: southbound – 1 left lane, 2 thru lanes, 1 right lane; and eastbound – 2 left lanes, 2 thru lanes, 1 right lane. Implementation of these improvements would mitigate the impact to below a level of significance.

TRA-13: Riverford Road/State Route 67 Southbound Ramps Intersection (Direct and Year 2035 Cumulative). Prior to the occupancy of the 442nd equivalent dwelling unit, the proposed project shall install a traffic signal at this intersection. However, since this intersection is within the County of San Diego's and the California Department of Transportation's jurisdictions, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact would be considered significant and unavoidable.

TRA-14: Riverford Road/Woodside Avenue Intersection (Direct and Year 2035 Cumulative). Prior to occupancy of the 442nd equivalent dwelling unit, the proposed project shall restripe the westbound approach to provide the following lane geometry: 1 thru lane, 1 right lane. However, since this intersection is within the County of San Diego's jurisdiction, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact would be considered significant and unavoidable.

TRA-15: West Hills Parkway/Mission Gorge Road Intersection (Year 2035 Cumulative). Prior to occupancy of the 237th equivalent dwelling unit, the proposed project shall contribute an 18.5 percent fair share toward restriping the intersection to provide the following lane geometry: westbound – 1 left lane, 1 thru lane, 1 shared thru lane/right lane, 1 right lane, consistent with the improvements proposed in the Santee General Plan Mobility Element. This improvement is not currently identified in the City of Santee Proposed Capital Improvement Program Five-Year Budget, Fiscal Year 2017–2018 through Fiscal Year 2021–2022. Therefore, the applicant shall coordinate with the City to initiate a capital improvement program project for the proposed project and future development to pay into. This impact would be considered significant and unavoidable until a funding mechanism is established for the proposed improvement.

TRA-16: Mission Gorge Road/Carlton Hills Boulevard Intersection (Direct and Year 2035 Cumulative). The intersection of Mission Gorge Road/Carlton Hills Boulevard is currently built to its ultimate Santee General Plan Mobility Element configuration and extends to the limits of the existing right-of-way. To widen this intersection, sidewalks would need to be removed or reduced in width, which would result in impacts to non-vehicular modes of travel (pedestrians). Planning and environmental laws recognize the importance of planning for all modes of transportation, including pedestrians, bicyclists, transit riders, and motorists. As such, widening the roadway by removing sidewalks is considered infeasible due to policy considerations. Another option for intersection widening would involve the expansion of current rights-of-way through additional property acquisition. Property acquisitions, however, are considered environmentally, financially, and socially infeasible. In many cases, property acquisitions would require demolition of existing buildings, which would generate additional environmental impacts associated with

construction, such as air quality, noise, greenhouse gas emissions, solid waste, and traffic. Commercial buildings abutting the sidewalks would be displaced for additional rights-of-way, causing a direct impact to existing land owners and tenants. For these reasons, mitigation measures that do not require widening were evaluated.

Prior to occupancy of the 560th equivalent dwelling unit, the proposed project shall install an Adaptive Traffic Signal Control system along Mission Gorge Road between Fanita Drive and Town Center Parkway. Adaptive Traffic Signal Control is a traffic management strategy in which traffic signal timing changes, or adapts, based on actual traffic demand. It employs hardware and software to provide real-time adjustments to the signal timing plan based on actual traffic demand. Adaptive traffic signals or “smart” signals communicate with each other and dynamically adjust signal timings, memorize traffic patterns, improve traffic flow, and reduce vehicle stops. The improved conditions resulting from implementation of an Adaptive Traffic Signal Control system are evidenced by a decrease in overall travel time through the subject corridor. Therefore, implementation of an Adaptive Traffic Signal Control system would result in a decrease in overall travel time, similar to the benefit that physical widening of the street would provide from increased physical capacity. However, implementation of Adaptive Traffic Signal Control along Mission Gorge Road would not reduce impacts at this intersection to below significant levels. Therefore, this impact would be significant and unavoidable.

TRA-17: Mission Gorge Road/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative). Prior to occupancy of the 2,123rd equivalent dwelling unit, the proposed project shall widen the intersection to provide a dedicated northbound right-turn lane consistent with the improvements proposed in the Santee General Plan Mobility Element. This improvement is identified in the City of Santee Proposed Capital Improvement Program Five-Year Budget, Fiscal Year 2017–2018 through Fiscal Year 2021–2022, ensuring that it has a funding mechanism. Implementation of these improvements would mitigate the impact to below a level of significance.

TRA-18: Buena Vista Avenue/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative). Prior to occupancy of the 206th equivalent dwelling unit, the proposed project shall restripe the westbound approach to provide the following lane geometry: westbound – 1 left lane, 1 shared left lane/thru lane/right lane. The signal shall be modified to provide split phasing in the east–west direction. Implementation of these improvements would mitigate the impact to below a level of significance.

Street Segments

TRA-19: El Nopal: Magnolia Avenue to Los Ranchitos Road (Year 2035 Cumulative). This segment of El Nopal is currently built to its ultimate Santee General Plan Mobility Element classification. Widening along this roadway would be infeasible given the lack of available right-of-way and residential driveways that front this segment. However, “spot” improvements shall be implemented prior to occupancy of the 224th equivalent dwelling unit. A westbound left-turn lane at the Los Ranchitos Road intersection shall be provided to improve the through flow of vehicles along this segment. Dedicated turn pockets on El Nopal shall be provided to allow for turning vehicles to decelerate and queue outside of the thru lanes. The removal of turning vehicles from thru-traffic lanes have been identified in literature published by the Transportation Research Board as one of several principals that improve “the safety and operations of an arterial roadway” (2014 Transportation Research Board Report S2-C05-RW). However, even with the identified “spot” improvements, this impact would be significant and unavoidable.

TRA-20: El Nopal: Los Ranchitos to Riverford Road (Direct and Year 2035 Cumulative). This segment of El Nopal is in the County of San Diego and is currently built to its ultimate Mobility Element classification. Widening along this roadway would be infeasible given the lack of available right-of-way and residential driveways that front this segment. However, “spot” improvements shall be implemented prior to occupancy of the 864th equivalent dwelling unit. A westbound left-turn lane at the Los Ranchitos Road intersection shall be provided to improve the through flow of vehicles along this segment. Dedicated turn pockets shall be provided on El Nopal to allow for turning vehicles to decelerate and queue outside of the thru lanes. The removal of turning vehicles from thru-traffic lanes have been identified in literature published by the Transportation Research Board as one of several principals that improve “the safety and operations of an arterial roadway” (2014 Transportation Research Board Report S2-C05-RW). In addition, there is a cumulative development (Parkside, formerly Hillside Meadows) in the County of San Diego that proposes to construct a parallel route to Riverford Road, Hillside Meadows Drive, that would intersect El Nopal and connect to Mast Boulevard in the south. Completion of this roadway could relieve traffic congestion on this segment of El Nopal approaching Riverford Road by rerouting trips to Mast Boulevard. However, the timing of completion of this roadway network improvement is unknown, is proposed by a private development project, and cannot be assured. In addition, since this segment is located within the County of San Diego’s jurisdiction, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact would be significant and unavoidable.

TRA-21: Mast Boulevard: State Route 52 to West Hills Parkway (Direct). Implementation of Mitigation Measure TRA-9, Mast Boulevard/State Route 52 Westbound Ramps Intersection (Direct and Year 2035 Cumulative) , prior to occupancy of the 1,917th equivalent dwelling unit to improve the access to State Route 52 westbound by providing one shared thru lane/right lane and dual right lanes would mitigate the impact along this segment by facilitating the flow of vehicles from Mast Boulevard onto State Route 52 westbound. However, since this segment is located within the City of San Diego's jurisdiction, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact would be significant and unavoidable.

TRA-22: Carlton Oaks Drive: Fanita Parkway to Carlton Hills Boulevard (Direct and Year 2035 Cumulative). This segment of Carlton Oaks Drive is currently built to its ultimate Santee General Plan Mobility Element classification and extends to the limits of the existing right-of-way. To widen the roadway prior to occupancy of the 1,843rd equivalent dwelling unit, sidewalks or bicycle facilities would need to be removed or reduced in width, which would result in impacts to non-vehicular modes of travel (pedestrians and bicyclists). Planning and environmental laws recognize the importance of planning for all modes of transportation, including pedestrians, bicyclists, transit riders, and motorists. As such, widening the roadway by removing sidewalks and bicycle facilities is considered infeasible due to policy considerations. Another option for roadway widening would involve the expansion of current right-of-way through additional property acquisition. In many cases, property acquisitions would require demolition of existing buildings, which would generate additional environmental impacts associated with construction such as air quality, noise, greenhouse gas emissions, solid waste, and traffic. Residences would be displaced for additional right-of-way causing a direct impact to existing residents. For these reasons, mitigation measures for the impacted roadway segments along Carlton Oaks Drive are considered infeasible. Therefore, no additional improvements are recommended and the impact to the roadway would remain significant and unavoidable.

TRA-23: Fanita Parkway: Ganley Road to Lake Canyon Road (Direct and Year 2035 Cumulative). Prior to occupancy of the 1,485th equivalent dwelling unit, the proposed project shall widen this segment of Fanita Parkway to a three-lane parkway with a raised median with one northbound lane and two southbound lanes. The information presented in the Fanita Ranch Traffic Impact Analysis (LLG 2020) indicates that this mitigation to construct Fanita Parkway to three lanes would result in acceptable level of service conditions based on peak-hour intersection, arterial, and queueing analyses between the signalized intersections of Ganley Road and Lake Canyon Road. Nonetheless, in the abundance of caution, a monitoring program consistent with Section 21.3.2, Fanita Parkway Monitoring Program, in the Traffic Impact Analysis, shall be established to

identify the need for a fourth lane along this segment should certain traffic thresholds be met. The monitoring program shall be implemented by collecting various data metrics along the roadway based on the following three thresholds: (1) average daily volumes regularly exceed 13,000 average daily traffic, as defined in the monitoring program; (2) the PM peak-hour intersection delay in the northbound direction at the Fanita Parkway/Ganley Road intersection regularly exceeds 20 seconds, as defined in the monitoring program; and (3) peak-hour arterial operations along this segment of Fanita Parkway are equal to or lower than 28 miles per hour taking into account intersection delay at Ganley Road, as defined in the monitoring program. Once the 13,000 average daily traffic threshold 1 is met and the monitoring program commences, if one of the two remaining thresholds (i.e., thresholds 2 and 3) are met, the fourth lane shall be constructed to the satisfaction of the City Engineer. Implementation of these improvements would mitigate the impact to below a level of significance.

TRA-24: Fanita Parkway: Lake Canyon Road to Mast Boulevard (Direct and Year 2035 Cumulative). Prior to occupancy of the 1,264th equivalent dwelling unit, the proposed project shall widen this section of Fanita Parkway as a four-lane parkway with a raised median with two northbound lanes and two southbound lanes. Implementation of these improvements would mitigate the impact to below a level of significance.

TRA-25: Cuyamaca Street: Woodglen Vista Drive to El Nopal (Year 2035 Cumulative). Prior to occupancy of the 155th equivalent dwelling unit, the proposed project shall improve this street segment to its ultimate Santee General Plan Mobility Element classification of a four-lane major street. Implementation of these improvements would mitigate the impact to below a level of significance.

TRA-26: Cuyamaca Street: El Nopal to Mast Boulevard (Direct and Year 2035 Cumulative). Prior to occupancy of the 1,481st equivalent dwelling unit, the proposed project shall reconstruct the median and restripe Cuyamaca Street from El Nopal to Mast Boulevard to four-lane major street standards consistent with the Santee General Plan Mobility Element. Implementation of these improvements would mitigate the impact to below a level of significance.

TRA-27: Cuyamaca Street: Mission Gorge Road to State Route 52 Ramps (Direct and Year 2035 Cumulative). Implementation of Mitigation Measure TRA-17, Mission Gorge Road/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative), at the intersection of Mission Gorge Road/Cuyamaca Street and Mitigation Measure TRA-18, Buena Vista Avenue/Cuyamaca Street Intersection (Direct and Year 2035 Cumulative), at the intersection of Cuyamaca Street/Buena Vista Avenue prior to occupancy of the 2,650th residential unit would mitigate this segment impact by improving traffic flow at

the key signalized intersections along the segment. Implementation of these improvements would mitigate the impact to below a level of significance.

TRA-28: Riverford Road: Riverside Drive to State Route 67 Ramps (Direct and Year 2035 Cumulative). The existing section of Riverford Road between Riverside Drive and the San Diego River bridge is primarily a three-lane roadway (two northbound lanes and one southbound lane) with a two-way left-turn lane. South of the bridge at North Woodside Avenue, it is a two-lane roadway. To mitigate the proposed project's impact, prior to occupancy of the 673rd equivalent dwelling unit the proposed project shall restripe Riverford Road to provide a second southbound lane between Riverside Drive and the San Diego River. Currently, there are two southbound lanes on Riverford Road south of the Riverside Drive intersection for approximately 480 feet after which it merges into one lane. The two southbound lanes are proposed to be extended by an additional 320 feet to create additional segment capacity. The current on-street parking and the Class II bike lane in the southbound direction are proposed to be maintained. The proposed 320 feet of widening on the 1,780-foot segment amounts to approximately 18 percent of the roadway. The Year 2035 Project volume of 530 average daily trips compared to the total Year 2035 volume of 25,430 is approximately 2 percent of the future traffic on this segment. Thus, the proposed project's contribution to widen 18 percent of the roadway more than exceeds the proposed project's contribution to the future traffic volumes of 2 percent. However, since this segment is within the County of San Diego's jurisdiction, the City of Santee is without jurisdiction to ensure the construction of the recommended improvements. Therefore, the impact would be significant and unavoidable.

Freeway Mainline Segments

SR-52 is a major east–west freeway providing East County San Diego communities with access to and from the City of San Diego and locations north and south. Current levels of congestion in the AM and PM peak periods affect the reliability of service on this freeway and delay travel times. Heavy congestion on SR-52 has a ripple effect on surrounding roadways, degrading conditions and increasing overall congestion in the region. Future traffic projections indicate that these conditions will worsen unless improvements are implemented on SR-52.

The applicant has privately funded a Caltrans Project Study Report – Project Development Support (PSR-PDS), dated January 2020, for the evaluation of potential improvements to the SR-52 corridor by Caltrans intended to relieve congestion. The PSR-PDS project limits are along SR-52 from the Mission Gorge Road undercrossing to the I-15 connector and includes the SR-52/Mast Boulevard interchange. The two build alternatives generally include converting the existing westbound freeway shoulder into a truck-climbing lane/auxiliary lane and converting the existing concrete barrier separated two-way bike path to the eastbound freeway shoulder. Both alternatives would increase capacity and improve freeway operations along SR-52.

A Class IV Bikeway (Separated Bikeway) facility would be constructed on the eastbound side of the freeway to replace the existing two-way bike path. Over the existing Oak Canyon and Spring Canyon Bridges, the separated bikeway would be cantilevered from the bridge deck.

At the SR-52/Mast Boulevard interchange, ramp improvements and freeway restriping are proposed to improve freeway operations in the westbound and eastbound directions. Freeway restriping would include the eastbound San Diego River Bridge where the number of lanes would be increased from two to three lanes. The build alternatives also include the addition of an auxiliary lane along eastbound SR-52 between I-15 and Santo Road. The proposed auxiliary lane would begin at the connector from southbound I-15 onto eastbound SR-52 and end at the off-ramp from eastbound SR-52 to Santo Road. An additional segment of new lane would also be constructed on westbound SR-52 between the off- and on-ramps of Santo Road to allow for through movements. Constructing this lane segment would require a retaining wall beneath the Santo Road overcrossing.

The second build alternative would include restriping the westbound San Diego River Bridge to three lanes. In this configuration, the lane-drop west of the SR-52/Mission Gorge Road interchange would be removed, and the three existing mainline lanes at the SR-52/Mission Gorge Road interchange would be extended to connect to the SR-52/Mast Boulevard interchange, where the proposed truck-climbing lane would begin.

The applicant is working in close coordination with the Caltrans District 11. It is anticipated that funding for the Project Approval/Environmental Document (PA&ED), final design, and construction phases would be a combination of developer contributions and grants from federal, state, or local agencies and programs. If the proposed project is included in a future Federal Transportation Improvement Program, a Supplemental PSR or Project Report could serve as the programming document for the remaining support and capital components of the project. A Project Report would serve as approval of the “selected” alternative.

Local agency involvement includes the City, who sponsored the SR-52 Corridor Study in 2016 to explore potential solutions to address congestion issues on SR-52. The Technical Working Group for this study included the Cities of El Cajon, La Mesa, San Diego, and Santee. Regional agency involvement included Caltrans, SANDAG, and MTS.

The following mitigation measures are consistent with Mobility Element Policy 2.7 which encourages the City to coordinate with Caltrans to identify, plan and implement needed transportation improvements.

TRA-29: State Route 52: Santo Road to Mast Boulevard: Eastbound PM Peak Hour (Direct and Year 2035 Cumulative). The applicant has privately funded a Caltrans Project Study Report – Project Development Support (PSR-PDS) for the evaluation of potential improvements to the SR-52 corridor by Caltrans intended to relieve congestion. Caltrans can and should complete its evaluation and implement all feasible improvements along the impacted corridor. Insofar as SR-52 is within the exclusive jurisdiction of Caltrans, the City of Santee is without jurisdiction to implement any such improvements. Therefore, the impact is considered significant and unavoidable.

TRA-30: State Route 52: Santo Road to Mast Boulevard: Westbound AM Peak Hour (Direct and Year 2035 Cumulative). The applicant has privately funded a Caltrans Project Study Report – Project Development Support (PSR-PDS) for the evaluation of potential improvements to the SR-52 corridor by Caltrans intended to relieve congestion. Caltrans can and should complete its evaluation and implement all feasible improvements along the impacted corridor. Insofar as SR-52 is within the exclusive jurisdiction of Caltrans, the City of Santee is without jurisdiction to implement any such improvements. Therefore, the impact is considered significant and unavoidable.

Implementation of Mitigation Measure TRA-1 would reduce traffic impacts during construction to a less than significant level. Implementation of Mitigation Measures TRA-2, TRA-3, TRA-4, TRA-5, TRA-7, TRA-8, TRA-11, TRA-12, TRA-17, TRA-18, TRA-23, TRA-24, TRA-25, TRA-26, and TRA-27 would reduce impacts to the aforementioned intersections and street segments to less than significant.

Implementation of Mitigation Measures TRA-6, TRA-9, TRA-10, TRA-13, TRA-14, TRA-19, TRA-20, TRA-21, TRA-22, TRA-28, TRA-29, and TRA-30 would reduce operational traffic impacts but not to a level less than significant. These intersections, street segments, and freeway mainline segments lie within one of the following jurisdictions: Caltrans, County of San Diego, or City of San Diego. Therefore, the City of Santee is without jurisdiction to ensure implementation of the recommended improvements. Mitigation Measure TRA-15 would reduce the impact at the West Hills Parkway/Mission Gorge Road intersection but not to a less than significant level until a proper funding mechanism is established for the improvement. Mitigation Measure TRA-16 would not be expected to reduce the impact to Mission Gorge Road at Carlton Hills Boulevard because Adaptive Traffic Signal Controls along this corridor may not reduce delays to below pre-project levels. Mitigation Measures TRA-19 and TRA-22 would reduce the impacts on El Nopal from Magnolia Avenue to Los Ranchitos Road and Carlton Oaks Drive from Fanita Parkway to Carlton Hills Boulevard, respectively, but not to less than significant as widening of these segments is considered infeasible. Therefore, impacts to these intersections, street segments, and freeway mainline segments would remain significant and unavoidable.

4.16.5.2 Threshold 2: Induce Substantial Vehicle Miles Traveled

Would the proposed project conflict or be inconsistent with CEQA Guidelines, Section 15064.3, subdivision (b)?

Impact: The proposed project would cause substantial additional VMT that exceeds the Citywide average.

Mitigation: Transportation Demand Management (AIR-6).

Significance Before Mitigation: Potentially significant.

Significance After Mitigation: Significant and unavoidable.

Impact Analysis

Per SB 743, on July 1, 2020, VMT will replace LOS as the standard performance metric for analyzing transportation impacts in CEQA documents statewide. Until that time, and for the purposes of this EIR, the proposed project has elected to analyze transportation both under the traditional measures-of-effectiveness approach (Threshold 1) and VMT (Threshold 2).

To assess if the proposed project would induce substantial VMT, the proposed project was evaluated individually against the significance thresholds identified in Section 4.16.4. The proposed project would be inconsistent with the Santee General Plan and generate greater than 500 ADT. Therefore, a full VMT analysis was completed. The proposed project would also generate greater than 2,400 ADT; thus, a SANDAG project-specific traffic model was run for the long-term VMT analysis.

Vehicle Miles Traveled Project Context Screening

Prior to any detailed VMT analysis, the OPR’s Guidelines and the San Diego ITE SB 743 Subcommittee’s Guidelines recommend “screening thresholds” to help identify if a project is expected to result in a less than significant impact. To that end, the proposed project was reviewed. Specifically, the surrounding land uses, population density, transportation infrastructure, and project-specific design were considered. These elements, collectively, shape mobility behavior and provide a strong indication of expected project VMT. In general, higher density and mix of land uses with access to mobility options are expected to generate lower VMT.

Table 4.16-23 summarizes the key elements of the of the VMT context screening relative to the proposed project.

Table 4.16-23. VMT Project Context Screening

Project Context Elements	Evaluation
Surrounding Area Land Use Mix	Nearby retail and employment centers provide good land use mix and may promote a lower VMT than the regional average.
Surrounding Area Population Density	The County has an average density of 793 people per square mile. The City has a density of 3,441 people per square mile. A higher density in the City may promote a lower VMT than the region.
Mobility Options	Transit service is not provided within 0.5 mile from the proposed project boundary. The proposed project would provide pedestrian and bicycle facilities. Overall, the proposed project would provide enhanced mobility options.
Project-Specific Design Elements	The proposed project would introduce local serving retail, a potential K–8 school, a farm, parks, and a recreation center, which would increase the land use mix and density. These project-specific design elements would promote lower VMT.

Source: Appendix N.

Notes: City = City of Santee; County = County of San Diego; TDM = Transportation Demand Management; VMT = vehicle miles traveled

Proximity to Transit

Per the significance criteria, if a project is within 0.5 mile of a major transit stop or a stop along a high-quality transit corridor, it should be presumed to have a less than significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project would still generate significant levels of VMT. A transit stop can include a planned and funded stop that is included in an adopted RTIP.

Bus service is provided by the MTS, though not within 0.5 mile of the project site boundary. Route 832 provides northern Santee with direct access to the Santee Town Center, extending to Woodglen Vista Drive. Route 832 provides 45- to 60-minute headways during the peak commute hours.

Vehicle Miles Traveled Per Capita

A detailed VMT analysis was conducted based on a combination of both the OPR’s Guidelines and the San Diego ITE SB 743 Subcommittee Guidelines. To calculate the existing baseline VMT per capita, the VMT average trip lengths were determined using navigation/GPS data analytics.

City of Santee Vehicle Miles Traveled

The City baseline VMT was developed through population data obtained from U.S. Census Bureau – American Community Survey (2017). The average trip lengths were GPS based and represent a data size of approximately 42,000 people over the course of 1 year between September 1, 2017, and August 31, 2018.

Table 4.16-24 summarizes the existing baseline Citywide average VMT per capita. For the purposes of determining the significance of VMT impacts, the proposed project VMT per capita would need to be 85 percent below the Citywide average, which would be equal to or less than 19.04 VMT per capita.

Table 4.16-24. City of Santee – Existing Baseline Vehicle Miles Traveled/Capita

Area	City Population	Regional Person Trip Rate per Capita (Daily)	Auto Mode Split Total	Daily Auto Trips (roundtrip)	Average Auto Trip Length (roundtrip, miles)	Total Daily VMT	City VMT per Capita	Significance Threshold (85% of Existing)
City of Santee	57,376	3.50	93.0%	177,120	14.5	1,284,118	22.4	19.04

Source: Appendix N.

Notes: VMT = vehicle miles traveled

- ¹ Populations and auto mode splits obtained from U.S. Census Bureau data – American Community Survey (2017).
- ² A person trip rate per capita of 3.5 was assumed based on a review of available information. The lower the trip rate directly translates to a lower City threshold and therefore represents a conservative approach. The SANDAG Series 12 Model Year 2030 calculated a person trip rate of 3.95 for the City. National Cooperative Highway Research Program Research Report 868 – Cell Phone Location Data for Travel Behavior Analysis (2018) reports Call Detail Records are estimated to generate 3.5 daily person trips per capita and the Federal Highway Administration Travel Model Validation and Reasonableness Checking Manual (2010) estimates 4 daily person trips per capita.
- ³ Mode splits (single-occupancy vehicle: drive alone and high-occupancy vehicle (HOV): carpool) obtained from U.S. Census Bureau data – American Community Survey (2017). Auto mode share calculated at 85 percent single-occupancy vehicle and 8 percent HOV for a total of 93 percent. Vehicle occupancy ratio (VOR) was assumed to be 1 person per vehicle for single-occupancy vehicle and 2.5 persons per vehicle for HOV. The 2.5 HOV VOR was assumed given a minimum of 2 persons per vehicle is the required number of passengers to use the HOV lane, and the expectancy that greater than 2 persons per vehicle would be traveling in the HOV lane as well.
- ⁴ Average trip lengths based on GPS data obtained from daily, weekday trip data for a 1-year time period between September 1, 2017, and August 31, 2018. The total data sample size is approximately 42,000. This represents trip-based travel patterns (and not tour-based travel patterns).
- ⁵ Total VMT = Daily Auto Trips (roundtrip) x Average Auto Trip Length (one-way)
- ⁶ VMT per Capita = Total VMT/Total Population
- ⁷ Significance threshold is 85 percent of the City VMT per capita (22.4 x 85 percent = 19.04).

Vehicle Miles Traveled for Preferred Land Use Plan with School

Using the same methodology that was done for the Citywide average VMT, the proposed project VMT per capita was determined. The first method uses data science to calculate the proposed project VMT under existing baseline conditions. The project site was categorized into land use types, which include Residential, Active Adult age-restricted living, Retail, K–8 Charter School, Recreation Center, Farm, Park and Trails, and RV Parking and Solar Farms. Given there is no existing development on the project site, proxy sites in the immediate vicinity with similar characteristics were used to determine average trip lengths using navigation GPS analytics. Average trip lengths were based on GPS data obtained from daily, weekday trip data for a 1-year time period between November 1, 2017, and October 31, 2018. The total data sample size for the proxy sites is approximately 35,000 devices.

The proposed project population estimates were used along with the trip generation estimates for auto mode splits and daily auto trips. As shown in Table 4.16-25, the preferred land use plan with school VMT per capita is calculated at 25.6 miles.

**Table 4.16-25. Preferred Land Use Plan With School Existing Baseline Project
VMT/Capita**

Land Use Type	Site Population Estimate	Daily Auto Trips (roundtrips)	Average Trip Length (roundtrip, miles)	Total VMT	VMT per Capita
Residential	7,262	20,670	20.4	210,911	29.0
Active Adult (55+)	712	1,739	12.8	11,091	15.6
Retail	724	1,318	9.6	6,318	8.7
K-8 Charter School	800	1,016	11.3	5,759	7.2
Recreation Center	132	264	12.6	1,660	12.6
Farm	33	66	11.9	391	11.9
Park/Trails	578	1,156	11.9	6,865	11.9
RV Parking/Solar Farms	23	46	11.9	272	11.8
Total	—	26,272	—	243,266	25.6

Source: Appendix N.

Notes: VMT = vehicle miles traveled

- ¹ Residential population was obtained from recent U.S. Census Data that states average occupancy of medium-density multi-family residences is 2.9 person per unit. Active Adult population was obtained using a density of 1.6 persons per unit. The 1.6 persons per unit is sourced to an active adult development in San Diego County proposing 536 units to house 900 residents = 1.7 persons per unit. Also, a 5,371-unit development in North Carolina, St. James Plantation, that has a projected population of 8,000 residents = 1.5 persons per unit. The average of 1.6 persons per unit was used in this analysis.
- ² The project site population used to calculate the VMT per capita assumes only primary trip-generating land uses, such as residential, Active Adult, retail, and school. This is a conservative approach, given a lower service population increases VMT per capita and is consistent with the approach to determine service population from U.S. Census data. Total employees under the preferred land use plan with school is 450.
- ³ Retail proxy site trip length was calibrated with a 20 percent increase to adjust for the distance from the project site.
- ⁴ Retail population was obtained from SANDAG population estimates: Code 5004 for Neighborhood Shopping Center (30,000 square feet or more). See Appendix U in EIR Appendix N for population estimate calculations.
- ⁵ K-8 Charter School population was obtained using TIA trip generation. In total, 1,000 students with 250 staff (assuming a ratio of 1 staff member per 4 students). Of the 1,000 students, per the trip generation breakdown, 45 percent are primary trips with an 8 percent mixed-use reduction. This amounts to 55 percent of the students being external to the site. $1,000 \times 0.55 = 550$ students + 250 staff = 800 service population.
- ⁶ Average VOR for this area is calculated to be 1.3 persons per vehicle. LLG used a conservative VOR of 1.25 for land uses described as Recreation Center and Park/Trails. A VOR of 1 was used for land uses described as Farms and RV Parking/Solar Farms.
- ⁷ Population estimates that were derived from trip generation assumes one full trip includes and inbound and an outbound trip.
- ⁸ Daily auto trips assumes an 8.5 percent internal/mixed-use reduction.
- ⁹ Pass-by/diverted trips were not included in daily auto trips. Pass-by trips are not adding additional VMT to the project.
- ¹⁰ Land Uses for Recreation Center, Farms, Park/Trails, and RV Parking/Solar Farms were not analyzed using data science due to lack of proxy sites within the immediate vicinity of the project – a conservative assumption of 11.9 miles for an average full trip length was assumed with the exception of Recreation Center that assumes a 12.6-mile average trip length.
- ¹¹ Average trip lengths based on GPS data obtained from daily, weekday trip data for a 1-year time period between November 1, 2017, and October 31, 2018. The total data sample size is approximately 35,000 devices. Residential and retail proxy sites in close proximity to the project site were also obtained.
- ¹² Total SB 743 VMT = Daily Auto Trips (roundtrip) x Average Auto Trip Length (one-way)
- ¹³ VMT per capita = Total VMT/Total Population

As shown in Table 4.16-25, the preferred land use plan with school existing baseline VMT per capita of 25.6 miles is greater than the Citywide average VMT per capita threshold of 19.04 miles. Therefore, the preferred land use plan with school project VMT is calculated to result in a significant transportation impact.

For the forecast Year 2035, VMT calculations for the proposed project were taken from the SANDAG Series 12 Santee General Plan Mobility Element model, customized for trip distribution of the proposed project. The model is a valuable tool for the region, however, some parameters or strategies are not fully captured and require post-processing such as carshare, vanpool, carpool, and TDM programs. To remain conservative, no further adjustments for these strategies were taken beyond the proposed project land use and trip generation inputs. The model generates a project-specific average trip length as well as an average daily volume, which ultimately calculates the total proposed project VMT (combined for all proposed project land uses). The population for the site is the same as the existing baseline population discussed previously.

Table 4.16-26 summarizes the data used and resulting proposed project VMT per capita in Year 2035. The trip-based preferred land use plan with school project VMT per capita in 2035 was calculated as 23.45 miles.

Table 4.16-26. Preferred Land Use Plan with School Year 2035 Vehicle Miles Traveled/Capita

Area	Site Population	Average Daily Volume	Average Daily VMT Per Trip (one-trip end, miles)	Total Daily VMT	Project VMT per Capita
Fanita Ranch	9,498	26,272	8.48	222,740	23.45

Source: Appendix N.

Notes: VMT = vehicle miles traveled

- ¹ Residential population was obtained from recent U.S. Census Data that states average occupancy of medium-density multi-family residences is 2.9 person per unit. Active Adult population was obtained using a density of 1.6 persons per unit. The 1.6 persons per unit is sourced to an active adult development in San Diego County proposing 536 units to house 900 residents = 1.7 persons per unit. Also, a 5,371-unit development in North Carolina, St. James Plantation, that has a projected population of 8,000 residents = 1.5 persons per unit. The average of 1.6 persons per unit was used in this analysis.
- ² Retail population was obtained from SANDAG population estimates: Code 5004 for Neighborhood Shopping Center (30,000 square feet or more). See Appendix U in EIR Appendix N for population estimate calculations.
- ³ K-8 Charter School population was obtained using TIA trip generation. 1,000 students with 250 staff (assuming a ratio of 1 staff member per 4 students). Of the 1,000 students, per the trip generation breakdown, 45 percent are primary trips with an 8 percent mixed-use reduction. This amounts to 55 percent of the students being external to the site. $1,000 \times 0.55 = 550$ students + 250 staff = 800 service population.
- ⁴ Population estimates that were derived from trip generation assumes one full trip includes and inbound and an outbound trip.
- ⁵ The project site population used to calculate the VMT per capita assumes only primary trip generating land uses such as residential, Active Adult, retail, and school. This is a conservative approach since a lower service population increases VMT per capita and is consistent with the approach to determining service population from U.S. Census Data. Total employees under the preferred land use plan with school would be 450.
- ⁶ All trip data sourced to SANDAG Series 12 Year 2035 Custom Fanita Ranch Traffic Model Run.
- ⁷ Total VMT = Daily Auto Trips (roundtrip) x Average Auto Trip Length (one-way)
- ⁸ VMT per capita = Total VMT/Total Population

As shown in Table 4.16- 26, the preferred land use plan with school project Year 2035 VMT per capita of 23.45 miles is greater than the Citywide average VMT per capita threshold of 19.04 miles. Therefore, the preferred land use plan with school project VMT in 2035 is calculated to result in a significant transportation impact.

Vehicle Miles Traveled for Land Use Plan Without School

A separate VMT per capita assessment was conducted for the proposed project without the inclusion of the school. Under the land use plan without school, the proposed project would have the potential to develop an additional 59 single-family units, or approximately 2 percent of the total residential units of the proposed project, increasing the total residential units from 2,949 units to 3,008 units. These changes in land use would result in changes in population and trip generation.

Both an existing baseline and year 2035 VMT per capita were calculated using the same methodologies described under the preferred land use plan with school project VMT. Table 4.16-27 shows the existing baseline land use plan without school project VMT per capita.

Table 4.16-27.Land Use Plan Without School – Existing Baseline Project VMT/Capita

Land Use Type	Site Population Estimate	Daily Auto Trips (roundtrips)	Average Trip Length (roundtrip, miles)	Total VMT	VMT per Capita
Residential	7,433	21,743	20.4	221,859	29.8
Active Adult (55+)	712	1,782	12.8	11,370	16.0
Retail	741	1,351	9.6	6,477	8.7
Recreation Center	135	270	12.6	1,702	12.6
Farm	34	68	11.9	401	11.8
Park/Trails	592	1,185	11.9	7,037	11.9
RV Parking/Solar Farms	23	47	11.9	279	12.1
Total	—	26,445	—	249,124	28.0

Source: Appendix N.

Notes: VMT = vehicle miles traveled

- ¹ Residential population was obtained from recent U.S. Census Data that states average occupancy of medium-density multi-family residences is 2.9 person per unit. Active Adult population was obtained using a staff-approved density of 1.6 persons per unit.
- ² The project site population used to calculate the VMT per capita assumes only primary trip generating land uses such as residential, Active Adult, and retail. This is a conservative approach since a lower service population increases VMT per capita and is consistent with the approach to determining service population from U.S. Census Data. Total employees under the land use plan without school would be 200.
- ³ Retail proxy site trip length was calibrated with a 20 percent increase to adjust for the distance from the project site.
- ⁴ Retail population was obtained from SANDAG population estimates: Code 5004 for Neighborhood Shopping Center (30,000 square feet or more). See Appendix U in EIR Appendix N for population estimate calculations.
- ⁵ Average VOR for this area is calculated to be 1.3 persons per vehicle. LLG used a conservative VOR of 1.25 for land uses described as Recreation Center and Park/Trails. A VOR of 1 was used for land uses described as Farms and RV Parking/Solar Farms.
- ⁶ Population estimates that were derived from trip generation assumes one full trip includes and inbound and an outbound trip.
- ⁷ Daily Auto Trips assumes a 6.2 percent internal/mixed-use reduction.
- ⁸ Pass-by/diverted trips were not included in daily auto trips. Pass-by trips are not adding additional VMT to the project.
- ⁹ Land uses for the Recreation Center, Farm, Park/Trails, and RV Parking/Solar Farms land uses were not analyzed using data science due to lack of proxy sites within the immediate vicinity of the project. A conservative assumption of 11.9 miles for an average full trip length was assumed, with the exception of the Recreation Center land use that assumes a 12.6-mile average trip length.
- ¹⁰ Average trip lengths based on GPS data obtained from daily, weekday trip data for a 1-year time period between November 1, 2017, and October 31, 2018. The total data sample size is approximately 35,000 devices. Residential and retail proxy sites in close proximity to the project site were also obtained.
- ¹¹ Total SB743 VMT = Daily Auto Trips (roundtrip) x Average Auto Trip Length (one-way)
- ¹² VMT per capita = Total VMT/Total Population

As shown in Table 4.16-27, the land use plan without school baseline VMT per capita is 28 miles, which is greater than the Citywide average baseline VMT per capita threshold of 19.04 miles. Therefore, the land use plan without school baseline VMT is calculated to result in a significant transportation impact.

Table 4.16-28 shows the land use plan without school Year 2035 VMT per capita.

Table 4.16-28. Land Use Plan Without School Year 2035 – Vehicle Miles Traveled/Capita

Area	Site Population	Average Daily Volume	Average Daily VMT Per Trip (one-trip end, miles)	Total Daily VMT	Project VMT per Capita
Fanita Ranch	8,886	26,445	8.64	228,375	25.70

Notes: VMT = vehicle miles traveled

- ¹ Residential population was obtained from recent U.S. Census Data that states average occupancy of medium-density multi-family residences is 2.9 person per unit. Active Adult population was obtained using a staff-approved density of 1.6 persons per unit. The 1.6 persons per unit is sourced to an active adult development in San Diego County proposing 536 units to house 900 residents = 1.7 persons per unit. Also, a massive 5,371-unit development in North Carolina, St. James Plantation, that has a projected population of 8,000 residents = 1.5 persons per unit. The average of 1.6 persons per unit was used in this analysis.
- ² Retail population was obtained from SANDAG population estimates: Code 5004 for Neighborhood Shopping Center (30,000 square feet or more). See Appendix U in EIR Appendix N for population estimate calculations.
- ³ Population estimates that were derived from trip generation assumes one full trip includes and inbound and an outbound trip.
- ⁴ The project site population used to calculate the VMT per capita assumes only primary trip generating land uses such as residential, Active Adult, and retail. This is a conservative approach since a lower service population increases VMT per capita and is consistent with the approach to determining service population from U.S. Census Data. Total employees under the land use plan without school is 200.
- ⁵ All trip data sourced to SANDAG Series 12 Year 2035 Custom Fanita Ranch Traffic Model Run.
- ⁶ Total VMT = Daily Auto Trips (roundtrip) x Average Auto Trip Length (one-way)
- ⁷ VMT per capita = Total VMT/Total Population

As shown in Table 4.16-28, the land use plan without school Year 2035 VMT per capita of 25.7 miles is greater than the Citywide average Year 2035 VMT per capita threshold of 19.04. Therefore, the land use plan without school Year 2035 VMT is calculated to result in a significant transportation impact.

In conclusion, based on the applied VMT significance criteria for the preferred land use plan with school and land use plan without school, a significant impact would occur under both land use plans.

Mitigation Measures

Mitigation Measure AIR-6, Transportation Demand Management, from Section 4.2, Air Quality, would be implemented to reduce project impacts associated with VMT. Mitigation Measure AIR-6 would require the implementation of the TDM Plan prepared for the proposed project. While this measure would lessen project VMT, it would not reduce impacts to a less than significant level. Therefore, this impact would remain significant and unavoidable after mitigation.

Table 4.16-29 illustrates the specific TDM measures from Mitigation Measure AIR-6 that the proposed project would employ and the calculated VMT reductions that would be achieved based

on the methodology set forth in the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (2010) resource manual, which provides measures and strategies aimed at reducing transportation impacts.

Table 4.16-29. Proposed Project TDM Measures and Strategies

Recommended TDM Measure and Strategy	CAPCOA ^a	
	Title ^f	VMT ^b Reduction
Land Use/Location		
Improve Design of Development	LUT-9	5.0%
Neighborhood/Site Enhancements		
Provide Pedestrian Network Improvements	SDT-1	2.0%
Provide Traffic Calming Measures	SDT-2	0.25%
Provide a Neighborhood Electric Vehicle Network	SDT-3	1.0%
Provide Bike Lane Street Design	SDT-5	c
Provide Bike Parking for Multi-Family Residential	SDT-6	0.625%
Implement Car-Sharing Program	TRT-9	0.37%
Commute Trip Reduction Program		
Provide Ride-Sharing Programs	TRT-3	2.43%
Implement Commute Trip Reduction Marketing	TRT-7	0.97%
Implement Car-Sharing Program	TRT-9	0% ^d
Implement a School Pool Program	TRT-10	1.98%
Multiplicative Total Reduction^e		13.7%

Source: Appendix N.

Notes:

^a Quantifying Greenhouse Gas Mitigation Measures report by CAPCOA (2010).

^b VMT = Vehicle Miles Traveled.

^c Reduction grouped with LUT-9.

^d Conservative 0 percent reduction taken.

^e The project's total VMT reduction is 13.7 percent. Each mitigation measure's percent reduction is combined multiplicatively in order to get the project's total VMT reduction. As discussed in Chapter 6 of the CAPCOA report, the equation is as follows:

$$\text{Combined Total Reduction} = 1 - [(1-A) \times (1-B) \times (1-C) \times \dots]$$

A,B,C, = each measure's percent reduction

Title refers to the category of which the specific measure fits under. Categories are as follows: LUT – Land Use/Location, SDT – Neighborhood/Site Enhancements, TRT – Commute Trips Reduction Programs

With the assistance and guidance of the CAPCOA Resource Manual (2010), the VMT reduction that would result from the strategies and measures set forth in the TDM Plan, considering the maximum allowable sub-category, category, and global reductions, has been calculated as 13.7 percent reduction in VMT with a school and 12 percent reduction without a school. After the proposed project occupancy, the implemented measures and strategies would be monitored for their usage and effectiveness. The TDM measures allow for a global maximum reduction in VMT of 15 percent. Thus, by default, any project exceeding the Citywide average VMT per capita would be significant and unmitigable as a reduction greater than 15 percent would be needed to fully mitigate the impact. The proposed project VMT of 25.6 miles (Project Baseline) and 23.45 miles (Year 2035) under the preferred land use plan with school and 28 miles (Project Baseline) and 25.7 miles (Year 2035) under the land use plan without school would exceed the Citywide VMT per

capita of 22.4 miles. Since the proposed project would only achieve a maximum 13.7 percent VMT reduction, the implementation of the TDM Plan would not fully mitigate the impact. It is therefore concluded that with implementation of Mitigation Measure AIR-6, VMT impacts would remain significant and unavoidable.

4.16.5.3 Threshold 3: Hazard Design Features

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

Impact: The proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses. **Mitigation:** No mitigation required.

Significance Before Mitigation: Less than significant. **Significance After Mitigation:** Less than significant.

Impact Analysis

Implementation of the proposed project would establish a network of streets of varying design capacities tailored to meet the needs of the three proposed villages. The Fanita Ranch Specific Plan has developed its own street design criteria intended to address safety, aesthetics, and functionality, as well as site constraints. The streets would be designed to meet or exceed Santee Fire Department (SFD) requirements. For a complete comparison of the Fanita Ranch Specific Plan streets with the City Public Works Standards related to the street right-of-way widths, curb-to-curb dimensions, and sidewalk and median configurations, refer to Appendix B of the Fanita Ranch Specific Plan. The project would design a system of complete streets that supports multiple user types, including motorists, pedestrians, bicyclists, and transit riders. On-site streets would generally be two lanes and would include a variety of design elements, including roundabouts, split streets, landscaped medians, and parkways.

A Traffic Calming Plan would be implemented throughout the proposed project in an effort to reduce traffic-related hazards by lowering vehicle speeds on neighboring streets without restricting access. The overall goals of the Traffic Calming Plan would be to improve the quality of life for residents, reduce impacts of motor vehicles on local and collector streets, create safe and attractive streets, and create a friendly environment for pedestrians and bicyclists. Several traffic calming measures would be implemented throughout the project site to assist in meeting these goals. Proposed project traffic calming measures would include the following:

- Gateways
- Roundabouts
- Chicanes
- Raised medians/split streets
- Intersection pop-outs
- Raised crosswalks

- Lane narrowing
- On-street bicycle facilities
- On-street parking
- Yellow flashing beacons with advisory speed signs

For a more detailed description of traffic calming measures to be implemented throughout the proposed project, refer to Table 3-6, Project Traffic Calming Measures, in Chapter 3.

To relieve potentially dangerous intersections, a series of roundabouts would be incorporated throughout the proposed project to eliminate the need for left-turn and U-turn movements, controlling vehicle speed, and providing a safer environment for pedestrians. Additional features include specialized wildlife crossing on Streets “V” and “W,” which traverse the Habitat Preserve. To create a safe corridor for automobiles, accommodate nocturnal wildlife movement, and enhance the viability of planned wildlife crossings, these streets would be marked with highly reflective pavement markers instead of standard City roadside lights. A wildlife crossing tunnel would be provided under the extension of Cuyamaca Street near the entrance to Orchard Village. It has been demonstrated that, from an animal’s perspective, the pavement markers mimic a small rock in the landscape and would not negatively impact wildlife movement. Retroreflective pavement markers (pursuant to the California Department of Transportation specifications) would be spaced 24 feet of center on these segments. Bollard-type lighting with touch-activated sensors would be located on the pedestrian walkway that runs along these streets to enhance pedestrian safety. In addition, there would be agricultural uses on the project site primarily within the central Farm. Outside materials storage would be provided for farming equipment and machinery. A tunnel would be constructed under Street “W” to allow for the movement of agriculture equipment to and from the Farm and avoid any potential conflicts with automobile traffic.

The proposed project would improve and construct new segments of three Santee General Plan Mobility Element streets: Fanita Parkway, Cuyamaca Street, and Magnolia Avenue. Improvements would also occur at the terminus of Carlton Hills Boulevard and at existing dead-end streets that terminate at the project site boundary. Fanita Parkway and Cuyamaca Street would be widened and include sidewalks, multi-purpose trails, emergency lanes and enhanced pedestrian crossings to encourage multimodal transportation and pedestrian safety.

The proposed project would include transportation design features to enhance public safety and would not result in changes to roadway design that would cause increased hazards. Therefore, impacts would be less than significant.

Mitigation Measures

The proposed project would have a less than significant impact related to increased hazards due to a geometric design feature or incompatible uses. No mitigation measures are required.

4.16.5.4 Threshold 4: Inadequate Emergency Access

Would the proposed project result in inadequate emergency access?

Impact: The proposed project would not result in inadequate emergency access. **Mitigation:** No mitigation required.

Significance Before Mitigation: Less than significant. **Significance After Mitigation:** Less than significant.

Impact Analysis

This impact is adequately addressed in Section 4.8, Hazards and Hazardous Materials, under Section 4.8.5.6. As discussed previously, the project site is currently undeveloped and there is no existing roadway infrastructure on site. The project proposes the extension of Fanita Parkway, Cuyamaca Street, and Magnolia Avenue to allow access to and from the project site with planned improvements on the existing segments and intersections to accommodate additional project traffic.

A Fire Protection Plan (Appendix P1) and Wildland Fire Evacuation Plan (Appendix P2) were prepared for the proposed project to address emergency access and evacuation in the case of an emergency. The proposed project would provide emergency access that meets current City requirements throughout the proposed development areas. The proposed internal looped roadways would be built to the currently adopted California Fire Code and City Ordinance 545 (Sections 503.2.1, 503.2.3) requirements and would provide travel lane widths consistent with the Fanita Ranch Specific Plan standards, adequate parking, 28-foot inside radius, grade maximums, signals at intersections, and extremely wide roadside fuel modification zones. Interior residential streets would be designed to accommodate a minimum of a 77,000-pound fire truck. All dead-end streets would meet SFD requirements. Additionally, the streets would provide residents the option to evacuate from at least two routes that lead to three main arteries.

The project site would have two points of primary access for emergency response and evacuation. Depending on the nature of the emergency, future residents would exit to the south on Fanita Parkway or Cuyamaca Street. It is anticipated that the majority of the community traffic would exit the project site via Cuyamaca Street, which would also connect to the extension of Magnolia Avenue. These are the most direct routes to the project site. Both streets would include bike lanes that could be used as an additional emergency lane for first responders. These streets would provide access to major traffic corridors including directly or indirectly to SR-52 to the south, SR-67 to the east, I-8 to the south, I-125 to the south, and I-15 to the west. Fanita Parkway would be used for emergency access by the western portion of the proposed project development. The planned extension and improvements to Fanita Parkway, Cuyamaca Street, and Magnolia Avenue south of the project site would be sized to provide adequate access for fire equipment and personnel. The proposed project would not result in inadequate emergency access. Therefore, impacts would be less than significant.

Mitigation Measures

The proposed project would have a less than significant impact associated with inadequate emergency access. No mitigation measures are required.

4.16.6 Cumulative Impacts and Mitigation Measures

Would implementation of the proposed project have a cumulatively considerable contribution to cumulative transportation impacts considering past, present, and probable future projects?

Cumulative Impact	Significance	Proposed Project Contribution
Threshold 1: Compliance with Measures of Effectiveness for Circulation System Performance	Potentially Significant	Cumulatively Considerable
Threshold 2: Induce Substantial Vehicle Miles Traveled	Potentially Significant	Cumulatively Considerable
Threshold 3: Increase Hazards Due to a Geometric Design Feature	Less than significant	Not Cumulatively Considerable
Threshold 4: Inadequate Emergency Access	Less than Significant	Not Cumulatively Considerable

4.16.6.1 Cumulative Threshold 1: Compliance with Measures of Effectiveness for Circulation System Performance

Cumulative impacts associated with increases in traffic and exceedance of LOS standards are discussed in Section 4.16.5.1 under the near-term cumulative scenarios. Significant impacts are identified and mitigation measures to reduce these impacts are discussed. Some of these impacts are significant and unavoidable due to infeasibility of mitigation measures. Therefore, the proposed project would result in a cumulatively considerable contribution to a significant cumulative LOS traffic impact after mitigation.

4.16.6.2 Cumulative Threshold 2: Induce Substantial Vehicle Miles Traveled

The geographic context for the analysis of cumulative impacts in regard to inducing substantial VMT is the list of projects in Table 4-2, Cumulative Projects, in Chapter 4. All but two of these projects are located within the Santee General Plan and would be generally consistent with the goals and objectives of the policies within this plan. A majority of these projects are located in an urban area with access to multimodal pedestrian, bicycle, and transit networks within the City. However as shown in Table 4.16-28, cumulative projects would still exceed the Citywide VMT per capita. Therefore, a significant cumulative impact could occur.

The proposed project would result in substantial additional VMT that would exceed the Citywide average under all scenarios. A TDM Plan (Mitigation Measure AIR-6) would be implemented to reduce the number of single-rider vehicle trips generated by the proposed project; however, it

would not reduce the project's impacts to a less than significant level. Therefore, in combination with other cumulative projects, the proposed project would contribute to a significant VMT impact. The project's contribution would be cumulatively considerable.

4.16.6.3 Cumulative Threshold 3: Increase Hazards Due to a Geometric Design Feature

The geographic context for the analysis of cumulative impacts in regard to transportation hazards due to a geometric design feature or incompatible uses consists of the projects listed in Table 4-2 in Chapter 4. Each project would be required to comply with all design guidelines and street requirements set forth by either the City or its overseeing jurisdiction to minimize exposure to street hazards. If necessary, it is assumed that the cumulative projects would be required to implement a Traffic Calming Plan to reduce traffic-related hazards similar to the proposed project. The proposed project's Traffic Calming Plan would include various traffic calming and safety measures such as roundabouts, raised crosswalks, and designated wildlife crossings. In addition, the proposed project would improve three Mobility Element streets and add multimodal capabilities, which would further service other cumulative projects within the City. Therefore, a significant cumulative impact would not occur and the proposed project's contribution would not be cumulatively considerable.

4.16.6.4 Cumulative Threshold 4: Inadequate Emergency Access

The geographic context for the analysis of cumulative impacts in regard to inadequate emergency access is the City and list of projects provided in Table 4-2 in Chapter 4. This impact is adequately addressed in Section 4.8 under Section 4.8.6.6. As discussed in this section, cumulative projects would be required to undergo separate CEQA review to implement measures necessary to mitigate any potential impacts to emergency access. Therefore, a significant cumulative impact would not occur. In addition, the proposed project would provide adequate emergency access that meets the City's and County's requirements and standards. Therefore, the proposed project's contribution would not be cumulatively considerable.

4.16.7 References

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