LINSCOTT LAW & GREENSPAN engineers

LOCAL TRAFFIC ANALYSIS

SANTEE AUTO CENTER

Santee, California
July 5, 2023

LLG Ref. 3-22-3591

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SANTEE AUTO CENTER

Santee, California
July 5, 2023

1.0 INTRODUCTION

The Santee Auto Center is located on the southeast corner of the Mission Gorge Road / Cottonwood Avenue intersection in the City of Santee. It is proposed to develop two car dealerships, one body shop and a carwash.

A Level of service (LOS) analysis was conducted and various intersections and segments within the Project study area were analyzed to determine potential project related transportation effects, as set forth in the following sections.

This Project is located within a half-mile radius of an existing major transit stop and is therefore presumed to have a less-than-significant impact. Therefore, a Vehicle Miles Traveled (VMT) analysis is not required.

The following sections are included in this document.

- Project Description
- Existing Conditions Description
- Project Study Area, Analysis Approach and Methodology
- Substantial Effect
- Analysis of Existing Conditions
- Project Trip Generation, Distribution and Assignment
- Analysis of Existing + Project Conditions
- Cumulative Projects Description
- Analysis of Near-Term Conditions
- Vehicle Miles Travelled Description and Analysis
- Access
- Conclusions and Recommendations

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Project is located on the southeast corner of the Mission Gorge Road and Cottonwood Avenue intersection in the City of Santee. The project site is accessible via Cottonwood Avenue, Mission Gorge Road, and Railroad Avenue. The Project site is zoned General Commercial (GC) and is designated General Commercial (GC) within the City's General Plan. The proposed uses are permitted within the General Plan and zoning designations for the property.

Figure 2-1 depicts the Project vicinity, and ***Figure 2-2*** depicts the Project Area.

2.2 Project Description

The School Yard Project (project) site is located on a 13.1-acre vacant site. Land uses surrounding the project site include commercial uses to the north, multi-family residences and commercial uses to the east, single-family residences to the south, and multi-family residences to the west.

The project proposes to construct a 33,974 SF auto sales building with 2,549 SF of detail bays and a second 33,112 SF auto sales building. A 16,405 SF body shop and 5,400 SF carwash with one wash tunnel will also be part of this Project. Thus, the project consists of a total of 86,040 SF of auto sales and a 5,400 SF car wash. Site improvements to the 13.1-acre project area include a parking lot, landscaping, fencing, lighting, and associated accessory elements.

Figure 2-3 depicts the Site Plan.

2.3 Project Access

A total of six access driveways are proposed for the Project. This includes three access driveways on Mission Gorge Road, two access driveways on Cottonwood Avenue and one on Railroad Avenue, as described below:

- A right-in/right-out only driveway located the just east of Cottonwood Avenue on Mission Gorge Road
- A right-in/right-out only driveway located east of Project Driveway #1 on Mission Gorge Road
- A full access driveway forming the fourth (south) leg of the Mission Gorge Road / Edgemoor Drive intersection.
- A full access driveway located on Cottonwood Avenue, just south of Mission Gorge Road
- A full access driveway located Cottonwood Avenue, just south of Project Driveway #4
- A full access driveway located on Railroad Avenue, south of Mission Gorge Road.

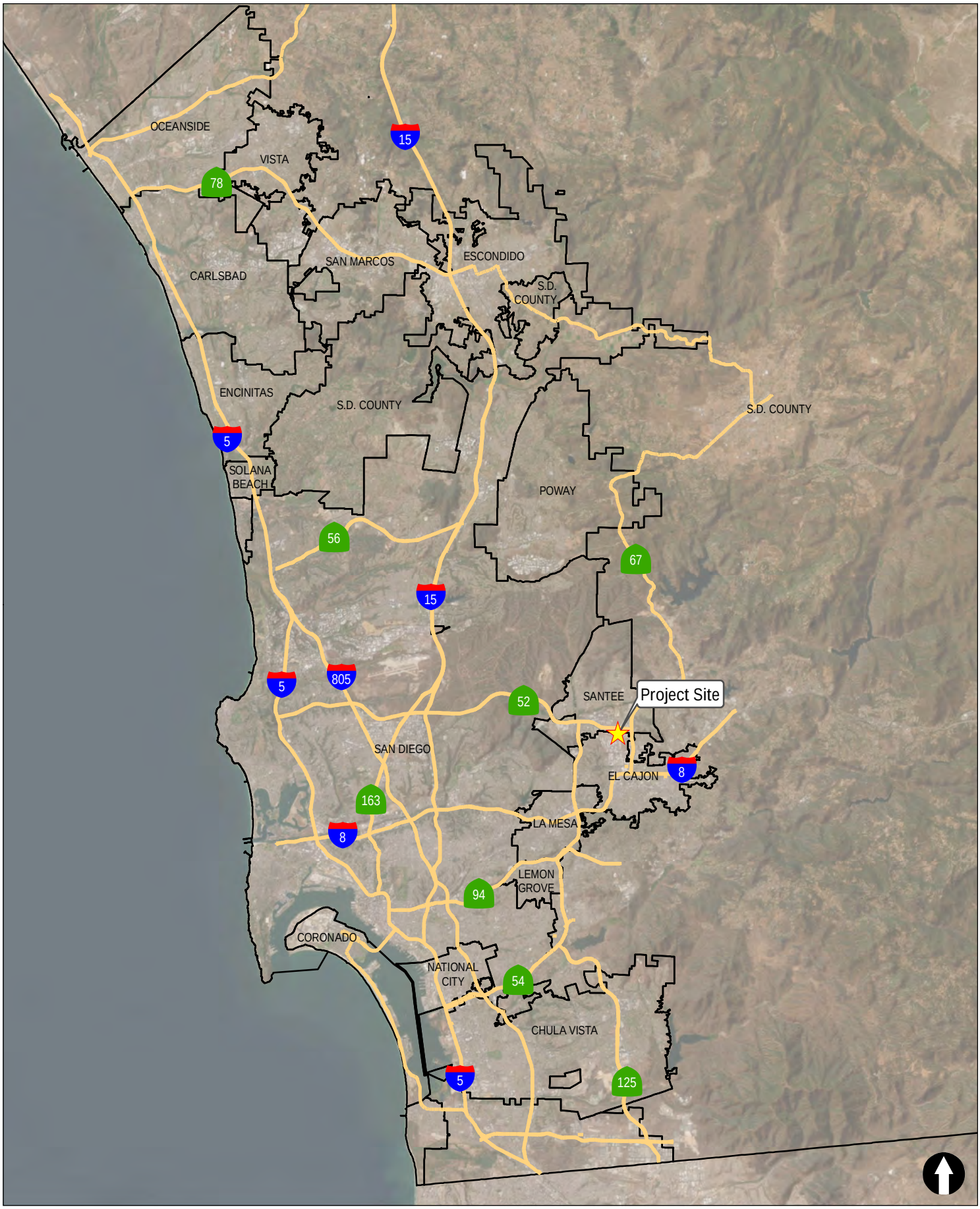

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Figure 2-1

Vicinity Map

SANTEE AUTO CENTER

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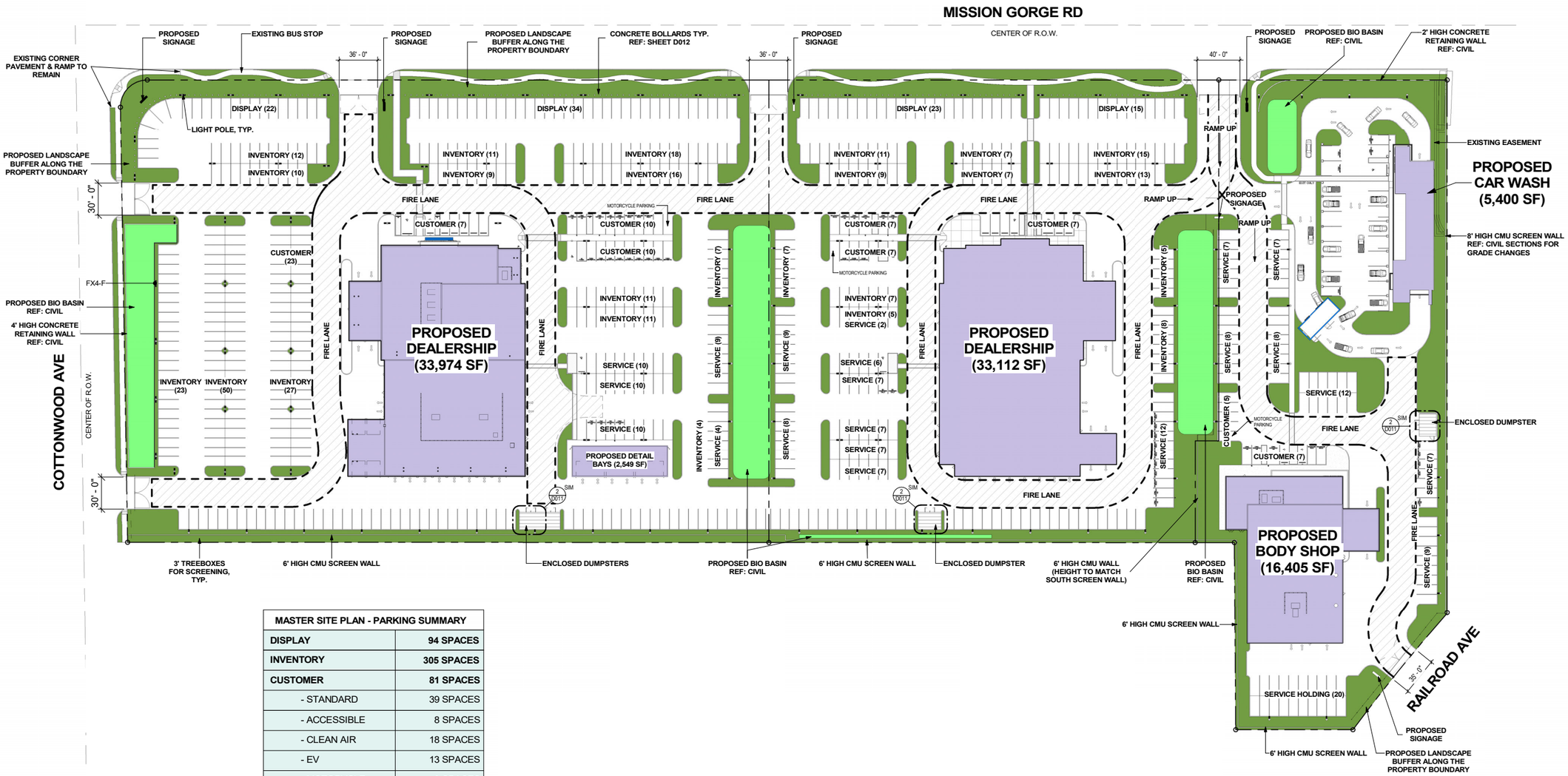
Figure 2-2

Project Area Map

Santee Auto Center



MASTER SITE PLAN - PARKING SUMMARY	
DISPLAY	**94 SPACES**
INVENTORY	**305 SPACES**
CUSTOMER	**81 SPACES**
- STANDARD	39 SPACES
- ACCESSIBLE	8 SPACES
- CLEAN AIR	18 SPACES
- EV	13 SPACES
- MOTORYCLE	3 SPACES
SERVICE / PARTS	**186 SPACES**
- STANDARD	131 SPACES
- ACCESSIBLE	2 SPACES
- CLEAN AIR	12 SPACES
- EV	9 SPACES
- TANDEM	32 SPACES
VACUUM	**22 SPACES**
- STANDARD	16 SPACES
- ACCESSIBLE	1 SPACES
- CLEAN AIR	3 SPACES
- EV	2 SPACES
TOTAL PARKING SPACES	**688 SPACES**

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Figure 2-3

Site Plan

SANTEE AUTO CENTER

3.0 EXISTING CONDITIONS

Effective evaluation of the traffic effects associated with the proposed Project requires an understanding of the existing transportation system within the project area. ***Figure 3–1*** shows an existing conditions diagram, including signalized intersections and lane configurations.

3.1 Existing Street Network

The following is a description of the existing street network in the Project study area.

Mast Boulevard

Mast Boulevard is a key east-west roadway in the City of Santee that is classified as a Four-Lane Major Arterial. Mast Boulevard is currently constructed as a four-lane divided roadway with a landscaped median within the Project study area. The posted speed limit on Mast Boulevard ranges between 35 mph and 40 mph and on-street parking is permitted intermittently. Class II bicycle lanes are provided on either side of the road.

Mission Gorge Road

Mission Gorge Road is a 6-lane roadway west of the Santee City Limit, then it drops to a 4-lane roadway until the SR-52 westbound ramps, where it reverts to 6-lanes (with the exception of the portion between Old Cliffs Road and Katelyn Court which is currently constructed as a 4-lane/5-lane roadway). The posted speed limit on Mission Gorge Road varies from 55 mph west of West Hills Parkway, to 50 mph west of Mesa Road, 40 mph west of Carlton Hills Boulevard, and 40 mph east of Cottonwood Avenue. There are bike lanes west of the SR-52 westbound ramps. On-street parking is prohibited. Class II bicycle lanes are provided east of Magnolia Avenue.

Carlton Hills Boulevard

Carlton Hills Boulevard is classified as a north-south Major Arterial, north of Mission Gorge Road within the Project study area. Between Lake Canyon Road and Mission Gorge Road, it is currently built as a four-lane divided roadway with a raised median. The posted speed limit is 35 mph, curbside parking is allowed north of Carlton Oaks Drive, and Class II bicycle lanes are provided between Lake Canyon Road and Mission Gorge Road.

Cuyamaca Street

Cuyamaca Street is classified as a north-south Prime Arterial. Between Mast Boulevard and Town Center Drive, this road is built as a Four-Lane divided road with curb and gutter and a sidewalk. Bike lanes and a pedestrian path are provided between Mast Boulevard and Riverwalk Drive. Sidewalks are provided between Riverwalk Drive and Town Center Drive.

Between town Center Drive and Prospect Avenue, this road is built as a six-lane divided roadway divided by a raised median, with a single set of trolley tracks dividing the street South of Mission Gorge Road. Curb, gutter and sidewalks are provided as follows:

- Curb, gutter and sidewalks are generally not provided on the east curb between Riverwalk Drive and Town Center Drive.

- Curb, gutter and a pedestrian path are provided on the west curb between Riverwalk Drive and Town Center Drive.

- Curb and gutter and a pedestrian path are provided on the east and west curbs between Town Center Drive and Mission Gorge Road.

- Curb gutter and sidewalks are provided on both curbs between Mission Gorge Road and Prospect Avenue.

The roadway has a posted speed limit of 35 mph. Curbside parking is prohibited, and no bicycle facilities are provided along the road near the project area.

Cottonwood Avenue

Cottonwood Avenue is a 2-lane roadway with a posted speed limit of 25 mph north of Mission Gorge Road, and 30 mph south of Mission Gorge Road. No bicycle facilities are located along Cottonwood Avenue within the Project study area.

Edgemoor Drive

Edgemoor Drive is a 2-lane roadway terminating just north of Mission Gorge Road and has a posted speed limit of 25 mph. No bicycle facilities are located along Edgemoor Drive within the Project study area.

Magnolia Avenue

Between Mission Gorge Road and City of Santee southern limits, Magnolia Avenue is classified and currently built as a Six-Lane Prime Arterial roadway. South of the Santee City limits Magnolia Avenue narrows to a two-lane undivided roadway. Between Mast Boulevard and Mission Gorge Road, it is divided by a two-way left-turn lane (TWLTL) while maintaining a Major Arterial cross-section. A raised median with landscaping is provided in a couple of sections. Class II bike lanes are provided, and on-street parking is permitted intermittently. The posted speed limit is 40 mph.

SR 67

SR-67 is a north-south highway east of the project area. It is currently built as a four-lane divided roadway that becomes undivided in the northern part of the roadway. Bike facilities are not provided anywhere along the highway. Parking on the shoulders of the highway is prohibited. The posted speed limit is 65 mph.

SR 52

SR-52 is an east-west freeway that exists south of the project area, and the East end of the freeway directly turns into the SR-67. It is currently built as a six-lane divided roadway. Bike facilities are not provided anywhere along the highway. Parking on the shoulders of the highway is prohibited. The posted speed limit is 65 mph.

3.2 Existing Bicycle Network

A bicycle network inventory was conducted for the Project study area. Class II bike lanes are provided along Mission Gorge Road, Magnolia Avenue, Riverview Parkway, Town Center Parkway, Cuyamaca Street, Carlton Hills Boulevard, Carlton Oaks Drive, and Mast Boulevard. There are no bike lanes or bike routes provided on Cottonwood Avenue and Edgemoor Drive within the Project study area.

3.3 Existing Pedestrian Conditions

Continuous sidewalks are provided along both sides of Mast Boulevard, Carlton Oaks Drive, Mission Gorge Road and Town Center Parkway within the Project study area. Sidewalks are missing on Cuyamaca Street south of Prospect Avenue, Cottonwood Avenue, and the west side of Magnolia Avenue between Chubb Lane and Park Avenue.

3.4 Existing Transit Conditions

This section presents the existing transit conditions in the Project study area.

3.4.1 *Bus Services*

Bus service is provided by the Metropolitan Transit System (MTS). The bus routes serving the immediate Project area include MTS Routes 832, 833 and 834. A description of each route is provided below. ***Appendix A*** includes the timetable of these bus routes.

Route 832 runs between Santee Town Center and North Santee. The route runs along Cuyamaca Street, Woodglen Vista Drive, Magnolia Avenue, Mission Gorge Road, Riverview Parkway, and Town Center Parkway. There are twenty-one (21) stops along this route. Weekday service begins at 6:05 AM with 45-minute headways until 8:20 AM, 60-minute headways until 1:20 PM, 45-minute headways until 4:23 PM, and 60-minute headways until 7:21 PM, and ends at 7:40 PM. Weekend service begins at 8:21 AM with 60-minute headways and ends at 4:41 PM.

Route 833 runs between El Cajon Transit Center and Santee Town Center. The route runs along Marshall Avenue, Arnele Avenue, Fletcher Parkway, Graves Avenue, Bradley Avenue, Mollison Avenue, Pepper Drive, Magnolia Avenue, Mission Gorge Road, Riverview Parkway, and Town Center Parkway. There are twenty-two (22) stops along this route. Weekday service begins at 5:44 AM with 60-minute headways until 7:59 AM, and 45-minute headways until 5:48 PM, and ends at 6:24 PM. Weekend service begins at 9:41 AM with 60-minute headways and ends at 5:14 PM.

Route 834 runs between Santee Town Center and West Santee. The route runs along Town Center Parkway, Mission Gorge Road, West Hills Parkway, Mast Boulevard, and Carlton Hills Boulevard. There are twenty-two (22) stops along this route. Weekday service begins at 6:36 AM with 60-minute headways and ends at 7:13 PM. This route does not operate on the weekend.

The bus stop closest to the Project site is less than 300 feet on Mission Gorge Road along the Project frontage.

3.4.2 *Trolley Service*

Trolley service is provided by the Metropolitan Transit System (MTS). The Green Line Trolley serves in the immediate Project area. The Green Line Trolley runs between 12th & Imperial and Santee. There are twenty-seven (27) stops along this route. *Appendix A* includes the timetable of this train service.

The Trolley station closest to the Project is approximately a little over half-a-mile to the west of the Project site.

3.5 Existing Traffic Volumes

Table 3–1 summarizes the available average daily traffic volumes (ADTs) from LLG counts conducted previously in 2018 for the Fanita Project. Manual hand counts at the Project study area intersections, including bicycle and pedestrian counts, were also conducted.

Existing segment volume counts were conducted in January 2023 on two study area segments: Magnolia Avenue between Mast Boulevard and Mission Gorge Road and Mission Gorge Road between Cuyamaca Street and Cottonwood Avenue and compared to the counts on these segments from the Fanita Report. The 2023 counts are 3% and 12% less than the corresponding volumes in the Fanita Report. Hence it was decided to apply a nominal increase of 0.5% per year for 4 years (2018 to 2022), or a total of 2%, to the volumes from the Fanita Report.

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

TABLE 3–1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT[a]
Carlton Hills Boulevard	
Mast Blvd to Carlton Oaks Dr	10,230
Carlton Oaks Dr Mission Gorge Rd	25,460
Cuyamaca Street	
El Nopal to Mast Blvd	9,040
Mast Blvd to Mission Gorge Rd	27,220
Mission Gorge Rd to SR 52 Ramps	39,500
SR 52 Ramps to Prospect Ave	26,580
Magnolia Avenue	
El Nopal to Mast Blvd	13,960
Mast Blvd to Mission Gorge Rd	26,350
Mission Gorge Rd to SR 52 Ramps	34,550
Mast Boulevard	
Carlton Hills Blvd to Cuyamaca St	20,600
Cuyamaca St to Magnolia Ave	18,860
Magnolia Ave to Los Ranchitos	7,860
Mission Gorge Road	
Carlton Hills Rd to Cuyamaca St	38,720
Cuyamaca St to Cottonwood Ave	26,060
Cottonwood Ave to Edgemoor Dr	25,460
Edgemoor Dr to Magnolia Ave	25,460
Woodside Avenue	
Magnolia Ave to SR 67 EB Ramps	27,750

Footnote:

a. 0.5% growth factor per year for four years applied to the volumes from the Fanita Project Traffic Study.

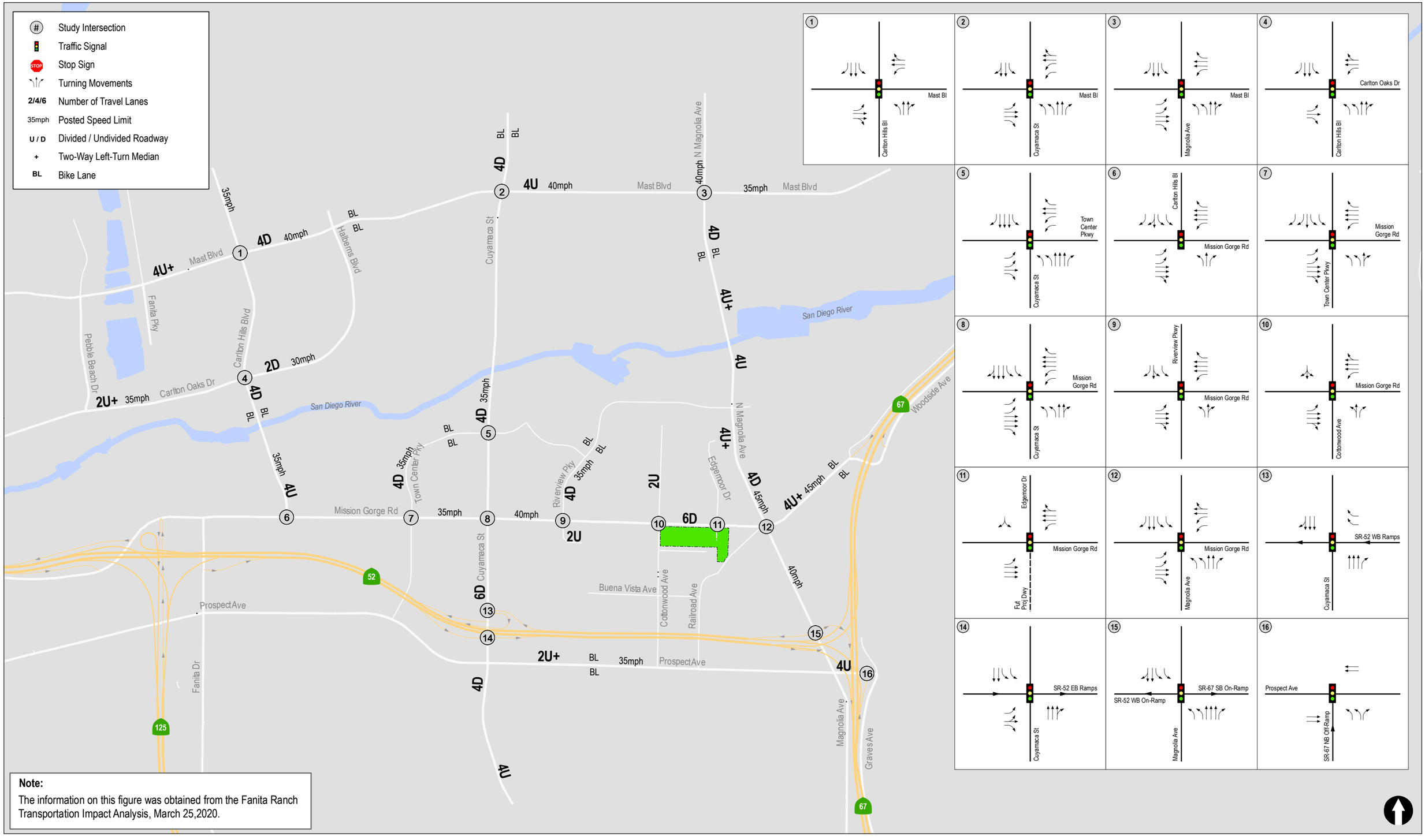

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Figure 3-1

Existing Conditions Diagram

SANTEE AUTO CENTER

Study Intersections

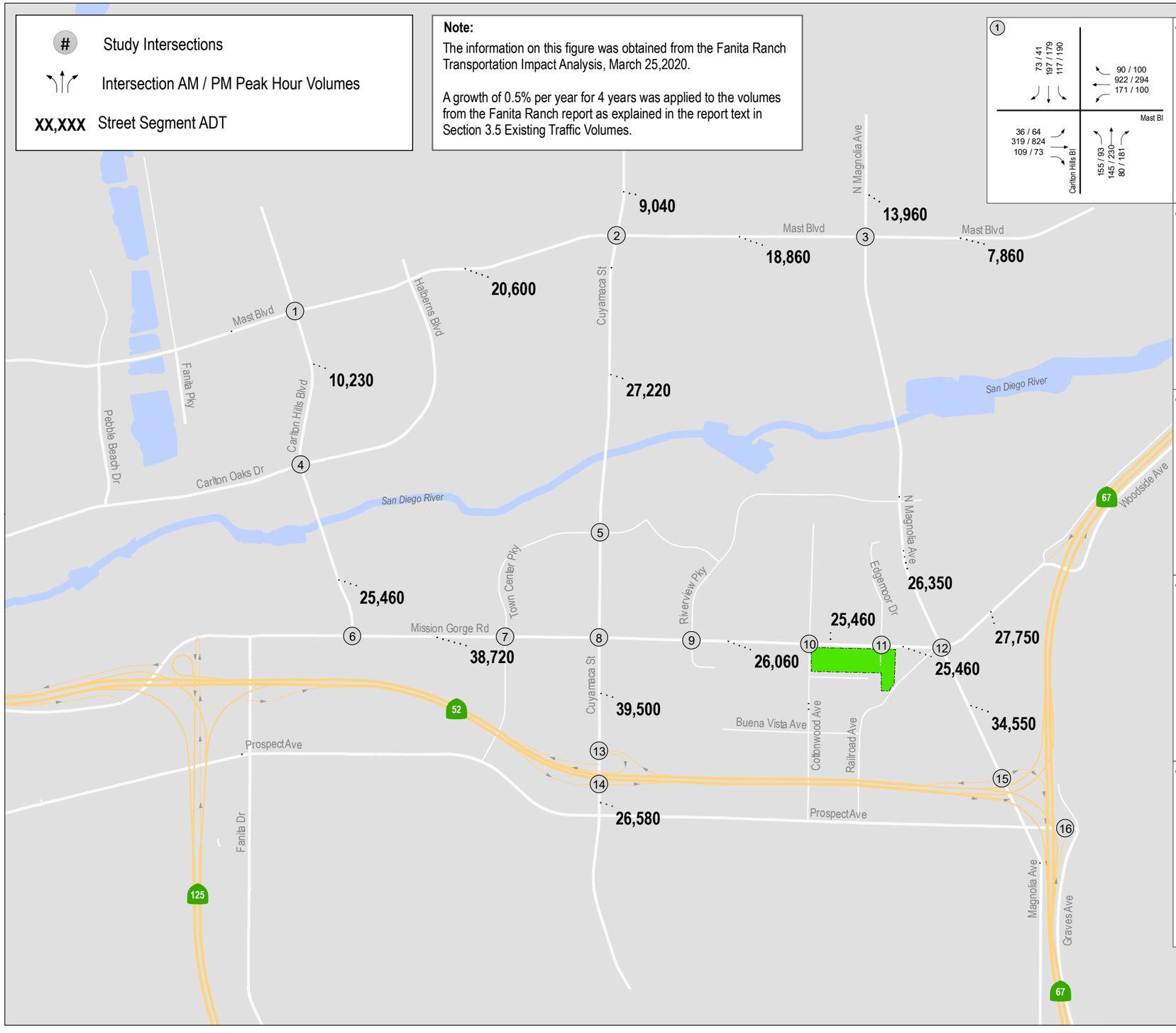
Intersection AM / PM Peak Hour Volumes

XX,XXX Street Segment ADT

Note:

The information on this figure was obtained from the Fanita Ranch Transportation Impact Analysis, March 25,2020.

A growth of 0.5% per year for 4 years was applied to the volumes from the Fanita Ranch report as explained in the report text in Section 3.5 Existing Traffic Volumes.



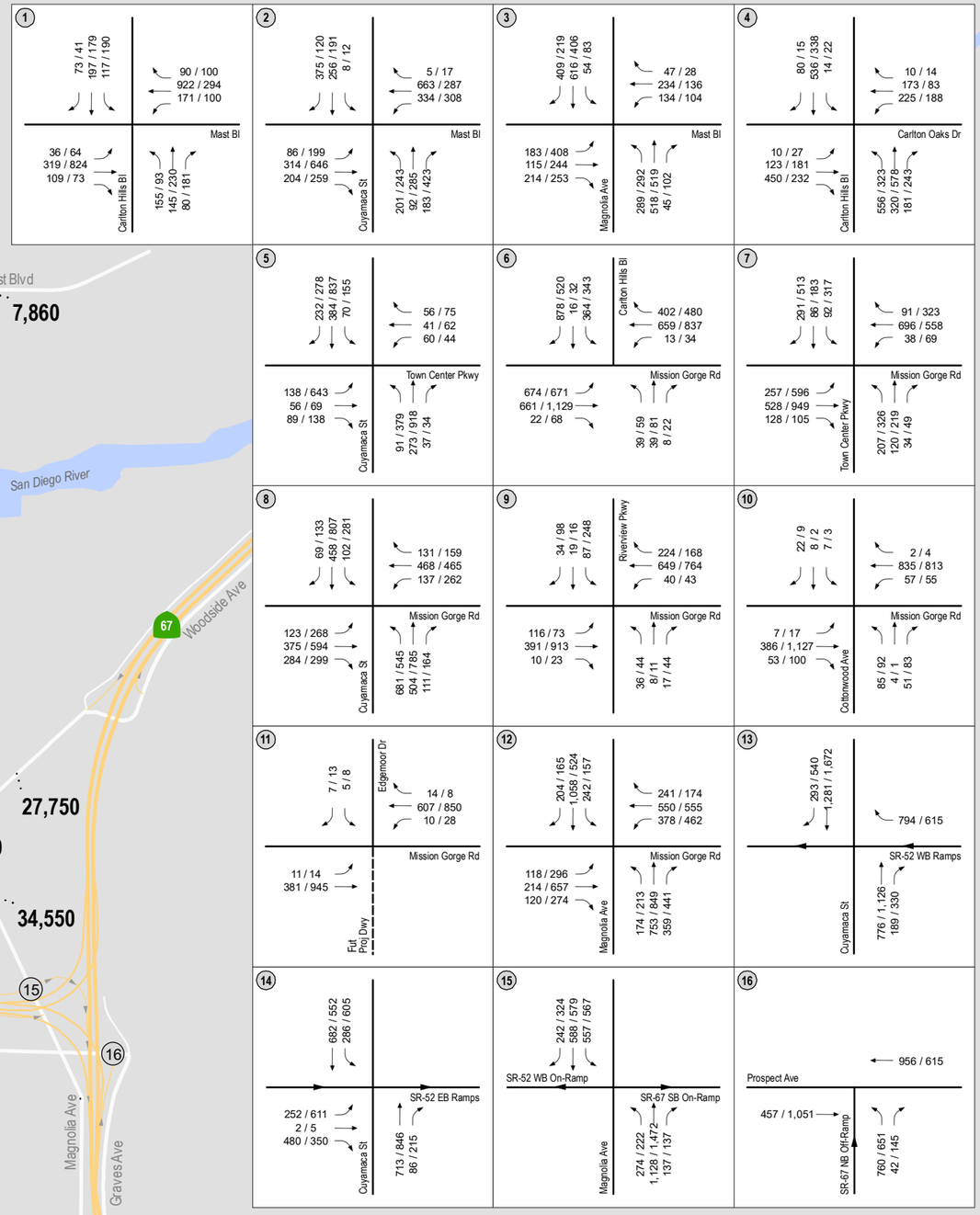


Figure 3-2

Existing Traffic Volumes

SANTEE AUTO CENTER

4.0 PROJECT STUDY AREA, ANALYSIS APPROACH AND METHODOLOGY

4.1 Project Study Area and Study Scenarios

4.1.1 *Project Study Area*

The Project study area was based on the criteria identified in the San Diego Traffic Engineering Council (SANTEC)/Institute of Traffic Engineers (ITE) Guidelines for Traffic Impact Studies in the San Diego Region, March 2, 2000, as well as collaboration with the City of Santee staff. The Project study area includes the following intersections and roadway segments:

Intersections

1. Mast Boulevard / Carlton Hills Boulevard
2. Mast Boulevard / Cuyamaca Street
3. Mast Boulevard / Magnolia Avenue
4. Carlton Oaks Drive / Carlton Hills Boulevard
5. Town Center Parkway / Cuyamaca Street
6. Mission Gorge Road / Carlton Hills Boulevard
7. Mission Gorge Road / Town Center Parkway
8. Mission Gorge Road / Cuyamaca Street
9. Mission Gorge Road / Riverview Parkway
10. Mission Gorge Road / Cottonwood Avenue
11. Mission Gorge Road / Edgemoor Drive (E. Project Driveway)
12. Mission Gorge Road / Magnolia Avenue
13. SR 52 WB Ramps / Cuyamaca Street
14. SR 52 EB Ramps / Cuyamaca Street
15. Magnolia Avenue / SR 52 WB On-Ramp / SR 67 On-Ramp
16. Prospect Avenue / SR 67 NB Off-Ramp

Segments

Carlton Hills Boulevard

Mast Boulevard to Carlton Oaks Drive

Carlton Oaks Drive Mission Gorge Road

Cuyamaca Street

El Nopal to Mast Boulevard

Mast Boulevard to Mission Gorge Road

Mission Gorge Road to SR 52 Ramps

SR 52 Ramps to Prospect Avenue

Magnolia Avenue

El Nopal to Mast Boulevard

Mast Boulevard to Mission Gorge Road

Mission Gorge Road to Prospect Avenue

Mast Boulevard

Carlton Hills Boulevard to Cuyamaca Street

Cuyamaca Street to Magnolia Avenue

Magnolia Avenue to Los Ranchitos

Mission Gorge Road

Carlton Hills Road to Cuyamaca Street

Cuyamaca Street to Cottonwood Avenue

Cottonwood Avenue to W. Project Driveway

W. Project Driveway to Edgemoor Drive (E. Project Driveway)

Edgemoor Drive (E. Project Driveway) to Magnolia Avenue

Woodside Avenue

Magnolia Avenue to SR 67 EB Ramps

4.1.2 *Study Scenarios*

The following study scenarios are included in this report:

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

As mentioned in Section 2 Project Description section, the Project site is zoned General Commercial (GC) and is designated General Commercial (GC) within the City's General Plan. The proposed uses are permitted within the existing general plan and zoning designations for the property. Therefore, a long-term Horizon Year analysis is not required for this Project.

4.2 Analysis Approach and Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis considering factors such as roadway geometries, signal phasing, speed, travel

delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized intersections, unsignalized intersections and roadway segments.

In the Highway Capacity Manual (HCM) 6th Edition, LOS for signalized intersections is defined in terms of delay. The LOS analysis provides results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. ***Table 4–1*** summarizes the signalized intersections levels of service descriptions.

4.2.1 *Signalized Intersections*

Table 4–2 depicts the criteria, which are based on the average control delay for any particular minor movement (unsignalized intersections) and overall intersection (signalized intersections).

For signalized intersections, LOS criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delays include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

LOS A describes operations with very low delay, (i.e., less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of Average delay.

LOS C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

LOS D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are frequent.

LOS E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

TABLE 4–1
INTERSECTION LEVEL OF SERVICE DESCRIPTIONS

LOS	Description
A	Occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Generally, occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	Generally, results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Generally, results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.
F	Considered to be unacceptable to most drivers. This condition often occurs with over saturation i.e. when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume-to-capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels

TABLE 4–2
INTERSECTION LEVEL OF SERVICE (LOS) & DELAY RANGES

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

Source: Highway Capacity Manual 6.

LOS F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

4.2.2 *Unsignalized Intersections*

For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement. For All-Way-Stop-controlled (AWSC) intersections, the overall intersection delay is reported. For two-way-stop-controlled (TWSC) intersections, LOS is not defined for the intersection as a whole, but the worst-case movement (typically the minor street left-turn) delay and LOS are reported.

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This LOS is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits.

LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

4.2.3 *Street Segments*

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Santee's Level of Threshold Volumes for Various Roadway Types (ADT) table (***Table 4-3***). This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics.

TABLE 4-3
CITY OF SANTEE ROADWAY CLASSIFICATIONS AND STANDARDS

Street Classification	Description/ Sub-classification	# 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*	—	—

Notes:

1. TWLTL = Two-way left-turn lane.
2. "*" Represents design capacity of non-CE road. LOS does not apply to non-CE roads.

Source: City of Santee Mobility Element

5.0 SUBSTANTIAL EFFECT

A project is considered to have a substantial effect if the new project traffic has decreased the operations of surrounding roadways by a defined threshold. The defined thresholds shown in ***Table 5–1*** below 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 City of Santee General Plan. If the project exceeds the thresholds in *Table 5–1*, then the project may be considered to have a substantial project effect. A feasible improvement will need to be identified to return the effect to within the thresholds (pre-project + allowable increase).

If project traffic causes the location to degrade from an acceptable LOS D or better to LOS E or LOS F, or exceeds the allowable thresholds as shown in *Table 5–1* below for currently LOS E or F operating locations, a substantial effect occurs.

Under Existing and Near-Term conditions, effects are considered to be *direct*.

TABLE 5–1
CITY OF SANTEE
TRAFFIC EFFECT SIGNIFICANCE THRESHOLDS

Level of Service with Project [a]	Allowable Increase Due to Project Effects [b]				
	Freeways		Roadway Segments		Intersections
	V/C	Speed (mph)	V/C [c]	Speed (mph)	Delay (sec.)
E & F	0.01	1.0	0.02	1.0	2.0

Footnotes:

a. All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using *Table 3–3* or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D".

b. If a proposed project's traffic causes the values shown in the table to be exceeded, the effects are deemed to be substantial. These effect changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigations (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a above), or if the project adds a substantial amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating substantial effects.

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 in every two 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.

General Notes:

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

6.0 ANALYSIS OF EXISTING CONDITIONS

The following sections describe the existing peak hour intersection and daily segment operations.

6.1 Peak Hour Intersection Levels of Service

Table 6-1 summarizes the existing Project study area peak hour intersection operations. As seen in *Table 6-1*, the following intersections are calculated to operate at LOS E or worse conditions. The remaining Project study area intersections are calculated to operate at LOS D or better.

- Mission Gorge Road / Carlton Hills Boulevard – LOS E during the AM peak hour
- Mission Gorge Road / Magnolia Avenue – LOS E during the AM and PM peak hours
- SR 52 Eastbound Ramps / Cuyamaca Street – LOS E during the AM peak hour

Appendix C includes the Existing peak hour intersection analysis worksheets.

6.2 Daily Street Segment Levels of Service

Table 6-2 summarizes the existing Project study area daily segment operations. As seen in *Table 6-2*, all Project study area segments are calculated to operate at LOS D or better.

TABLE 6–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay[a]	LOS[b]
1. Mast Blvd / Carlton Hills Blvd	Signal	AM	44.8	D
		PM	41.1	D
2. Mast Blvd / Cuyamaca St	Signal	AM	42.3	D
		PM	35.5	D
3. Mast Blvd / Magnolia Ave	Signal	AM	42.1	D
		PM	28.9	C
4. Carlton Oaks Dr / Carlton Hills Blvd	Signal	AM	35.7	D
		PM	26.0	C
5. Town Center Pkwy / Cuyamaca St	Signal	AM	17.5	B
		PM	44.3	D
6. Mission Gorge Rd / Carlton Hills Blvd	Signal	AM	**70.8**	**E**
		PM	40.4	D
7. Mission Gorge Rd / Town Center Pkwy	Signal	AM	27.8	C
		PM	46.3	D
8. Mission Gorge Rd / Cuyamaca St	Signal	AM	38.9	D
		PM	49.2	D
9. Mission Gorge Rd / Riverview Pkwy	Signal	AM	21.0	C
		PM	18.6	B
10. Mission Gorge Rd / Cottonwood Ave	Signal	AM	47.3	D
		PM	30.9	C
11. Mission Gorge Rd / Edgemoor Dr (E. Project Dwy)	Signal	AM	2.2	A
		PM	11.7	B

Continued on the Next Page

TABLE 6–1 (CONTINUED)
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay[a]	LOS[b]
Continued From the Previous Page				
12. Mission Gorge Rd / Magnolia Ave	Signal	AM	**67.0**	**E**
		PM	**55.6**	**E**
13. SR 52 WB Ramps / Cuyamaca St	Signal	AM	21.4	C
		PM	15.7	B
14. SR 52 EB Ramps / Cuyamaca St	Signal	AM	**64.3**	**E**
		PM	35.5	D
15. Magnolia Ave / SR 52 WB On-Ramp / SR 67 On-Ramp	Signal	AM	9.3	A
		PM	9.9	A
16. Prospect Ave / SR 67 NB Off Ramp	Signal	AM	10.2	B
		PM	8.7	A

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

General Note:
Bold indicates LOS E or F operations.

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

TABLE 6–2
EXISTING STREET SEGMENT OPERATIONS

Street Segment	Classification	Capacity (LOS E) [a]	ADT [b]	LOS [c]	V/C [d]
Carlton Hills Boulevard					
Mast Blvd to Carlton Oaks Dr	Major Arterial	40,000	10,230	A	0.256
Carlton Oaks Dr Mission Gorge Rd	Major Arterial	40,000	25,460	C	0.637
Cuyamaca Street					
El Nopal to Mast Blvd	Major Arterial	40,000	9,040	A	0.226
Mast Blvd to Mission Gorge Rd	Major Arterial	40,000	27,220	C	0.681
Mission Gorge Rd to SR 52 Ramps	Major Arterial	50,000	39,500	C	0.790
SR 52 Ramps to Prospect Ave	Major Arterial	50,000	26,580	C	0.532
Magnolia Avenue					
El Nopal to Mast Blvd	Major Arterial	40,000	13,960	A	0.349
Mast Blvd to Mission Gorge Rd	Major Arterial	40,000	26,350	C	0.659
Mission Gorge Rd to Prospect Ave	Prime Arterial	60,000	34,550	B	0.576
Mast Boulevard					
Carlton Hills Blvd to Cuyamaca St	Major Arterial	40,000	20,600	B	0.515
Cuyamaca St to Magnolia Ave	Major Arterial	40,000	18,860	B	0.472
Magnolia Ave to Los Ranchitos	Major Arterial	40,000	7,860	A	0.197
Mission Gorge Road					
Carlton Hills Rd to Cuyamaca St	Prime Arterial	60,000	38,720	C	0.645
Cuyamaca St to Cottonwood Ave	Prime Arterial	60,000	26,060	B	0.434
Cottonwood Ave to Edgemoor Dr	Prime Arterial	60,000	25,460	B	0.424
Edgemoor Dr to Magnolia Ave	Prime Arterial	60,000	25,460	B	0.424
Woodside Avenue					
Magnolia Ave to SR 67 EB Ramps	4-Ln Collector w TWLTL	40,000	27,750	C	0.694

Footnotes:

a. Capacities based on City of Santee Roadway Classification Table.

b. Average Daily Traffic Volumes.

c. Level of Service.

d. Volume to Capacity.

7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

7.1 Trip Generation

The Project includes the following:

Auto Dealership:	33,974	SF
Detail Bays:	2,549	SF
Auto Dealership:	33,112	SF
Body Shop:	16,405	SF
Subtotal Auto Dealership	*86,040*	*SF*
Car Wash (1 Tunnel):	5,400	SF

The detail bays are part of the car dealership and trip rates for body shop are not available. Therefore, the auto dealership trip rates were applied to these buildings. The two auto dealerships, the detail bays and the body shop total 86,040 SF.

Trip rates from the 11th Edition of the *Trip Generation*, Institute of Transportation Engineers and SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002 were used to estimate the trip generation for the Project.

- For the Auto dealership, detail bays and body shop, the trip rates for Land Use 840 Automobile Sales (New) from the ITE *Trip Generation* were used.

- For the Car Wash, the trip rates for Land Use 948 Automated Car Wash from the ITE *Trip Generation* were used to estimate the trip generation for this project. However, the ITE Trip Generation only provides the PM peak hour rates. Therefore, the rate per Car Wash from the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002 was used to estimate the trip generation.

Table 7–1 summarizes the total project traffic generation. The total project is calculated to generate approximately 3,336 ADT with 196 AM peak hour trips (135 inbound and 61 outbound) during the and 254 PM peak hour trips (110 inbound / 144 outbound).

7.2 Trip Distribution/Assignment

Project trip distribution was developed based on the existing roadway network, the location of residential neighborhoods and access to the regional freeway network. It is assumed that 10% of the Project traffic is oriented to the east, 30% to the north, 20% to the south and 40% to the west, while the remaining 10% is assumed to be local traffic. The project traffic was assigned to the Project study area intersections and segments based on the distribution described above. ***Figure 7-1*** depicts the Project traffic distribution and ***Figure 7-2*** depicts the Project traffic volumes. ***Figure 7-3*** depicts the Existing + Project traffic volumes.

TABLE 7–1
PROJECT TRIP GENERATION

Land Use	Size		Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
			Rate [a]	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
							In	Out	Total			In	Out	Total
Auto Dealership [b]	86.040	KSF	T = 28.65(X) - 29.45	2,436	1.86 /KSF	73%:27%	117	43	160	T = 1.81(X) + 20.91	40%:60%	71	106	177
Car Wash [c]	5.4	KSF	900/Car Wash	900	4%	50%:50%	18	18	36	36/ KSF	50%:50%	39	38	77
Total				**3,336**			**135**	**61**	**196**			**110**	**144**	**254**

Footnotes:

a. Rates are based on the 11th Edition of *Trip Generation*, Institute of Transportation Engineers, unless otherwise specified.
b. The Auto dealership SF includes the two auto deal dealerships, the detail bays attached to the auto dealership and the body shop. Rates for Land Use 840, Automobiles Sales (New) from the 11th Edition of Trip Generation, Institute of Transportation Engineers
c. Daily and AM rates not available in the ITE Trip Generation. Therefore, the rate per Car Wash from the *SANDAG (Not) so Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* was used. PM peak hour trip rate for Land Use 948 Automated Car Wash from the ITE *Trip Generation* 11th Edition was used.

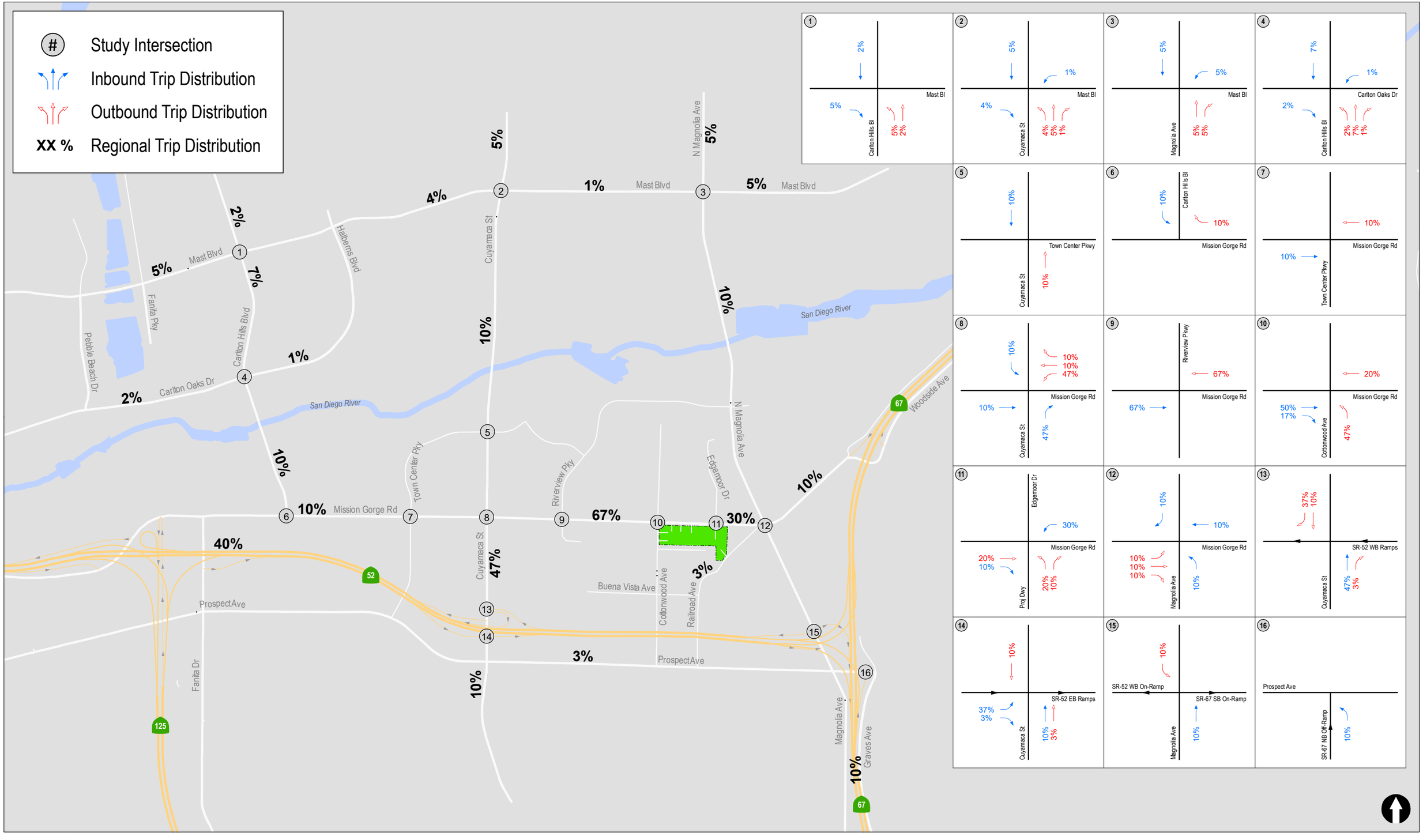


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Figure 7-1

Project Traffic Distribution

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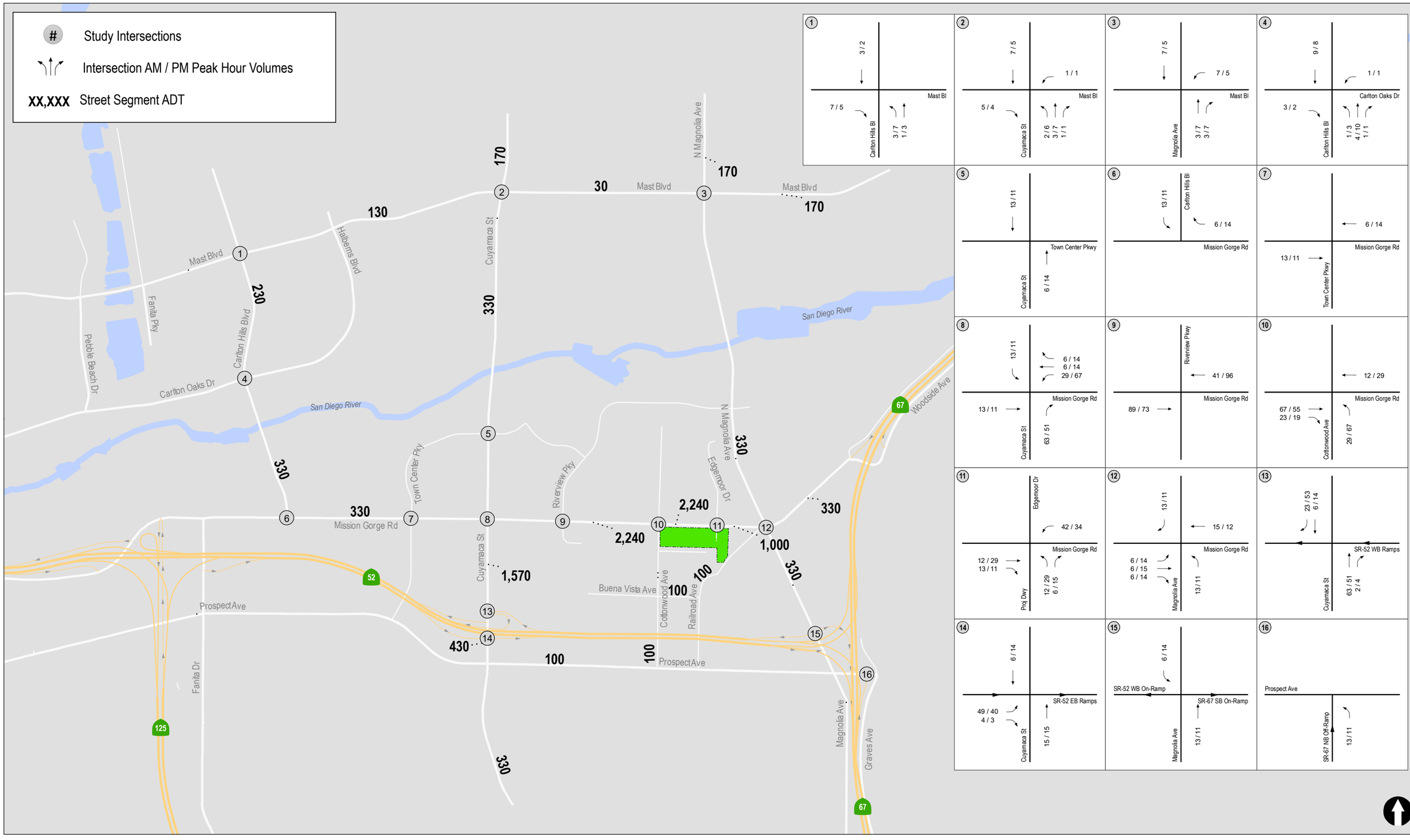

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Figure 7-2

Project Traffic Volumes

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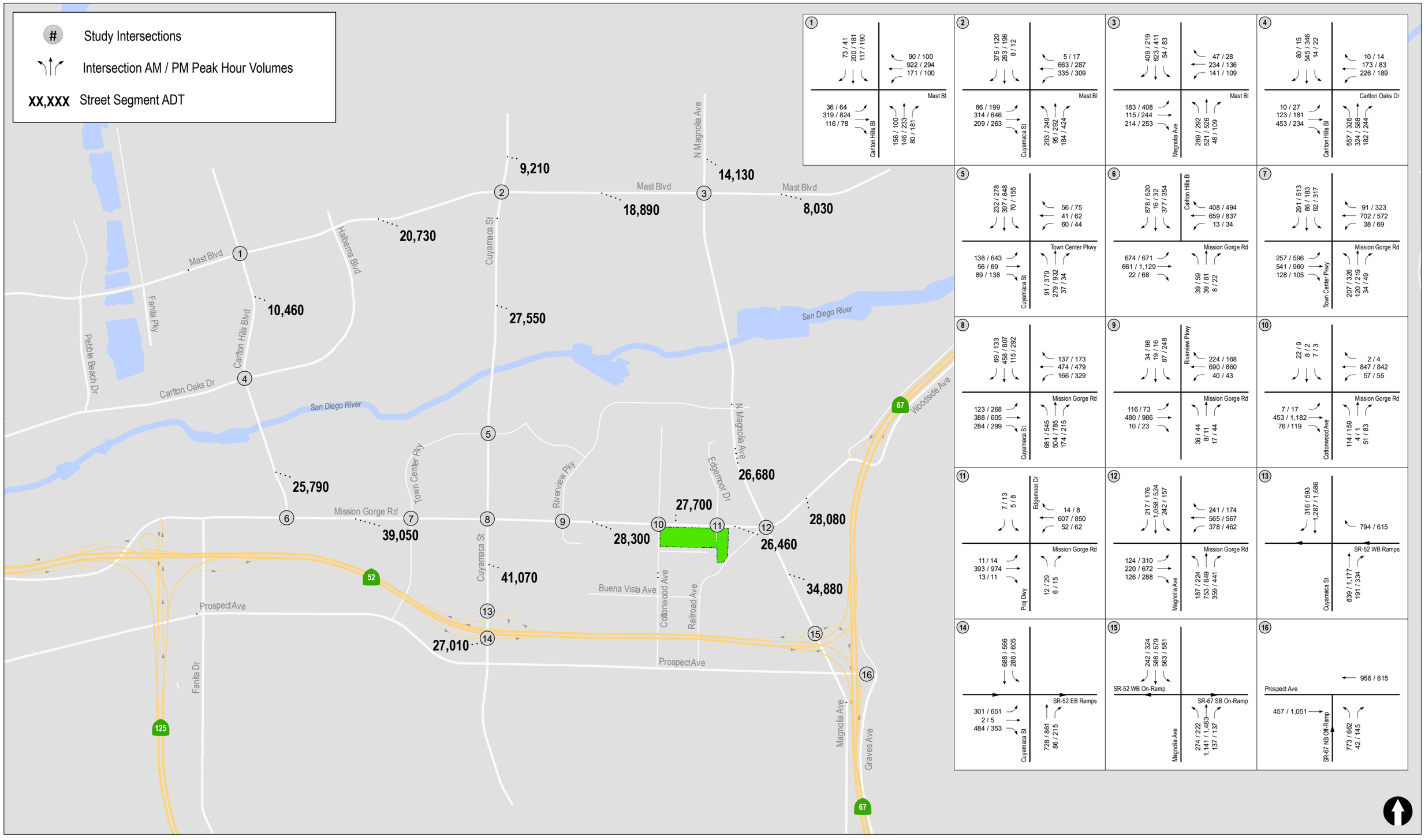

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Figure 7-3

Existing + Project Traffic Volumes

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8.0 ANALYSIS OF EXISTING + PROJECT CONDITION

8.1 Intersection Analysis

Table 8-1 summarizes the Existing + Project study area peak hour intersection operations. As seen in *Table 8-1*, with the addition of Project traffic, the following intersections are calculated to operate at LOS E or worse conditions. The remaining Project study area intersections are calculated to operate at LOS D or better.

- Mission Gorge Road / Carlton Hills Boulevard – LOS E during the AM peak hour
- Mission Gorge Road / Cottonwood Avenue – LOS E during the AM peak hour and LOS F during the PM peak hour
- Mission Gorge Road / Magnolia Avenue – LOS E during the AM and PM peak hours
- SR 52 Eastbound Ramps / Cuyamaca Street – LOS E during the AM peak hour

The project has a substantial effect and improvements are required at the Mission Gorge Road / Cottonwood Avenue intersection. The increase in delay due to the Project is less than 2 seconds at the remaining three intersections and thus, the Project does not have a substantial effect at these intersections and no improvements are required.

Appendix D includes the Existing + Project peak hour intersection analysis worksheets.

8.2 Daily Street Segment Levels of Service

Table 8-2 summarizes the Existing + Project study area daily segment operations. As seen in *Table 8-2*, with the addition of Project traffic, all Project study area segments are calculated to operate at LOS D or better.

TABLE 8–1
EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Δ[c]	Improvement Required?
			Delay[a]	LOS[b]	Delay	LOS		
1. Mast Blvd / Carlton Hills Blvd	Signal	AM	44.8	D	45.5	D	0.7	No
		PM	41.1	D	41.2	D	0.1	No
2. Mast Blvd / Cuyamaca St	Signal	AM	42.3	D	42.3	D	0.0	No
		PM	35.5	D	35.6	D	0.1	No
3. Mast Blvd / Magnolia Ave	Signal	AM	42.1	D	43.2	D	1.1	No
		PM	28.9	C	29.2	C	0.3	No
4. Carlton Oaks Dr / Carlton Hills Blvd	Signal	AM	35.7	D	36.2	D	0.5	No
		PM	26.0	C	26.4	C	0.4	No
5. Town Center Pkwy / Cuyamaca St	Signal	AM	17.5	B	17.5	B	0.0	No
		PM	44.3	D	44.5	D	0.2	No
6. Mission Gorge Rd / Carlton Hills Blvd	Signal	AM	70.8	E	72.0	E	1.2	No
		PM	40.4	D	40.6	D	0.2	No
7. Mission Gorge Rd / Town Center Pkwy	Signal	AM	27.8	C	28.0	C	0.2	No
		PM	46.3	D	46.3	D	0.0	No

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TABLE 8–1 (CONTINUED)
EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Δ[c]	Improvement Required?
			Delay[a]	LOS[b]	Delay	LOS		
Continued From the Previous Page								
8. Mission Gorge Rd / Cuyamaca St	Signal	AM	38.9	D	41.3	D	2.4	No
		PM	49.2	D	52.2	D	3.0	No
9. Mission Gorge Rd / Riverview Pkwy	Signal	AM	21.0	C	22.3	C	1.3	No
		PM	18.6	B	19.7	B	1.1	No
10. Mission Gorge Rd / Cottonwood Ave	Signal	AM	47.3	D	**69.5**	**E**	**22.2**	**Yes**
		PM	30.9	C	**84.2**	**F**	**53.3**	**Yes**
11. Mission Gorge Rd / Edgemoor Dr (E. Project Dwy)	Signal	AM	2.2	A	13.8	B	11.6	No
		PM	11.7	B	14.6	B	2.9	No
12. Mission Gorge Rd / Magnolia Ave	Signal	AM	67.0	E	67.1	E	0.1	No
		PM	55.6	E	55.7	E	0.1	No
13. SR 52 WB Ramps / Cuyamaca St	Signal	AM	21.4	C	23.6	C	2.2	No
		PM	15.7	B	17.6	B	1.9	No

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TABLE 8–1 (CONTINUED)
EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Δ[c]	Improvement Required?
			Delay[a]	LOS[b]	Delay	LOS		
Continued From the Previous Page								
14. SR 52 EB Ramps / Cuyamaca St	Signal	AM	64.3	E	65.9	E	1.6	No
		PM	35.5	D	36.4	D	0.9	No
15. Magnolia Ave / SR 52 WB On-Ramp / SR 67 On-Ramp	Signal	AM	9.3	A	9.7	A	0.4	No
		PM	9.9	A	10.0	A	0.1	No
16. Prospect Ave / SR 67 NB Off Ramp	Signal	AM	10.2	B	10.3	B	0.1	No
		PM	8.7	A	8.8	A	0.1	No

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes an increase in delay due to project.
d. AWSC – All-Way Stop Controlled intersection. Overall delay and LOS are reported.

General Note:

Bold indicates improvement potentially required.

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

TABLE 8–2
EXISTING + PROJECT STREET SEGMENT OPERATIONS

Street Segment	Functional Capacity (LOS E) [a]	Existing			Existing + Project			Δ[e]	Improvement Required?
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C		
Carlton Hills Boulevard									
Mast Blvd to Carlton Oaks Dr	40,000	10,230	A	0.256	10,460	A	0.262	0.006	None
Carlton Oaks Dr Mission Gorge Rd	40,000	25,460	C	0.637	25,790	C	0.645	0.008	None
Cuyamaca Street									
El Nopal to Mast Blvd	40,000	9,040	A	0.226	9,210	A	0.230	0.004	None
Mast Blvd to Mission Gorge Rd	40,000	27,220	C	0.681	27,550	C	0.689	0.008	None
Mission Gorge Rd to SR 52 Ramps	50,000	39,500	C	0.790	41,070	D	0.821	0.031	None
SR 52 Ramps to Prospect Ave	50,000	26,580	C	0.532	27,010	C	0.540	0.008	None
Magnolia Avenue									
El Nopal to Mast Blvd	40,000	13,960	A	0.349	14,130	A	0.353	0.004	None
Mast Blvd to Mission Gorge Rd	40,000	26,350	C	0.659	26,680	C	0.667	0.008	None
Mission Gorge Rd to Prospect Ave	60,000	34,550	B	0.576	34,880	B	0.581	0.005	None
Mast Boulevard									
Carlton Hills Blvd to Cuyamaca St	40,000	20,600	B	0.515	20,730	B	0.518	0.003	None
Cuyamaca St to Magnolia Ave	40,000	18,860	B	0.472	18,890	B	0.472	0.000	None
Magnolia Ave to Los Ranchitos	40,000	7,860	A	0.197	8,030	A	0.201	0.004	None

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TABLE 8–2 (CONTINUED)
EXISTING + PROJECT STREET SEGMENT OPERATIONS

Street Segment	Functional Capacity (LOS E) [a]	Existing			Existing + Project			Δ[e]	Improvement Required?
		ADT [b]	LOS [c]	V/C[d]	ADT	LOS	V/C		
Continued from the Previous Page									
Mission Gorge Road									
Carlton Hills Rd to Cuyamaca St	60,000	38,720	C	0.645	39,050	C	0.651	0.006	None
Cuyamaca St to Cottonwood Ave	60,000	26,060	B	0.434	28,300	B	0.472	0.038	None
Cottonwood Ave to Edgemoor Dr	60,000	25,460	B	0.424	27,700	B	0.462	0.038	None
Edgemoor Dr to Magnolia Ave	60,000	25,460	B	0.424	26,460	B	0.441	0.017	None
Woodside Avenue									
Magnolia Ave to SR 67 EB Ramps	40,000	27,750	C	0.694	28,080	C	0.702	0.008	None

Footnotes:

a. Capacities based on City of Santee Roadway Classification & LOS table.
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.

9.0 CUMULATIVE PROJECTS

Cumulative projects are other projects in the Project study area that could be constructed and occupied between the date of existing data collection (January/February 2018) and the expected near-term timeframe for the Project, thus adding traffic to the local circulation system. LLG researched projects within the City of Santee, City of San Diego, City of El Cajon and County of San Diego to identify cumulative projects in the Project study area that could be constructed and generating traffic in the Project vicinity. The cumulative development projects identified in the Project vicinity in the near-term condition are listed in ***Table 9-1***.

For the purpose of this study, 500 units of the Fanita project were included in the cumulative condition due to the uncertainty of development of the Fanita Project at the time this study was prepared and the near-term nature of the cumulative analysis.

Figure 9–1 depicts the Cumulative Only traffic volumes, ***Figure 9–2*** depicts the Existing + Cumulative Projects traffic volumes, and ***Figure 9–3*** depicts the Existing + Cumulative Projects + Project traffic volumes.

TABLE 9–1
CUMULATIVE DEVELOPMENT PROJECTS SUMMARY

Name/Applicant	Description	ADT [a]	AM		PM		Status
			In	Out	In	Out	
1. GA Development LLC	6 Single Family DU	60	2	3	4	2	Approved – Not Built
2. Santee View Estates	27- Single Family DU	270	7	15	19	8	Approved – Not Built
3. Santee Townhomes	10 townhome units	80	1	5	6	2	Approved – Not Built
4. Village Run Homes, LLC	40 Single Family DU	400	10	22	28	12	Approved – Not Built
5. Karl Strauss	Brewery, warehouse, tasting room, & restaurant	1,509	80	21	74	93	Approved – Not Built
6. Hattie Davison Properties	113 condominiums	904[b]	14	58	63	27	Approved – Not Built
7. Prospect Estates II	53 Single Family DU	530	13	29	37	16	Approved – Not Built
8. Tyler Street Subdivision	14 Single Family DU	140	3	8	10	4	Pending Entitlement
9. Talwar	8 condominiums	64	1	4	4	2	Approved – Not Built
10. Lantern Crest Ridge Ph II	46-bed memory care facility	115	3	2	5	4	Pending Entitlement
11. Graves/Prospect Commercial	Convenience store, coffee shop	1,200	48	48	48	48	Pending Entitlement
12. Parkside (formerly Hillside Meadows)	63 Single Family DU & 62 condominiums	1,126	23	67	79	34	Pending Entitlement
13. Cuyamaca Service Station	Gas, retail, office, car wash	1,334	54	53	41	42	Approved – Not Built
14. Carlton Oaks Country Club	Single family, assisted living, hotel, and restaurant expansion	2,380	56	117	155	74	Pending Entitlement
15. Garmo Brothers	Gas station, restaurant	1,364	60	54	36	34	Approved –Not Built
16. Meng Subdivision	24 condominiums	192	3	12	13	6	Approved – Not Built
17. Woodspring Suites	120-room hotel	840	27	40	46	30	Approved – Not Built
18. Handel's Ice Cream	Commercial	68	1	1	3	3	Approved – Not Built
19. Apts. Inc	11 condominiums	88	1	6	6	3	Pending Entitlement
20. Tower Glass	Industrial	275	27	3	7	26	Approved –Not Built
21. Studio Movie Grill	Entertainment, restaurant	3,700	13	0	179	117	Pending Entitlement
22. County Property 2	365 condominiums	2,920	47	187	204	88	Pending Entitlement
23. County Property 1	130 condominiums	1,040	17	66	73	31	Pending Entitlement
24. KDS & Assoc.	Warehouse	37	4	1	2	4	Pending Entitlement
25. Cameron Bros	Commercial	12,883	309	206	644	644	Pending Entitlement

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TABLE 9–1
CUMULATIVE DEVELOPMENT PROJECTS SUMMARY

Name/Applicant	Description	ADT [a]	AM		PM		Status
			In	Out	In	Out	
CONTINUED FROM THE PREVIOUS PAGE							
26. Jacor	Office/warehouse	21	2	1	1	2	Approved – Not Built
27. Rockvill Residential	59 Single Family DU	590	14	33	41	18	Pending Entitlement
28. All Right Storage	87 KSF Storage	175	6	5	8	8	Pending Entitlement
29. Gondala Skate	28 KSF Industrial	229	23	2	5	22	Approved – Not Built
30. Lunar Lane	7 KSF Industrial	59	5	1	1	6	Pending Entitlement
31. Kalasho Gas Station	Gas Station	900	32	31	36	36	Pending Entitlement
32. Conejo Subdivision	5 Single Family DU	50	1	3	4	1	Pending Entitlement
33. Prospect Avenue Subdivision	14 Single Family DU	140	3	8	10	4	Pending Entitlement
34. Fanita Project [c]	500 Units	5,000	120	280	350	150	Approved – Not Built

Footnotes:

a. Average daily traffic.
b. Cumulative project #15 results in a net reduction of 327 daily trips when credit for the existing tenant is taken.
c. See text for explanation.

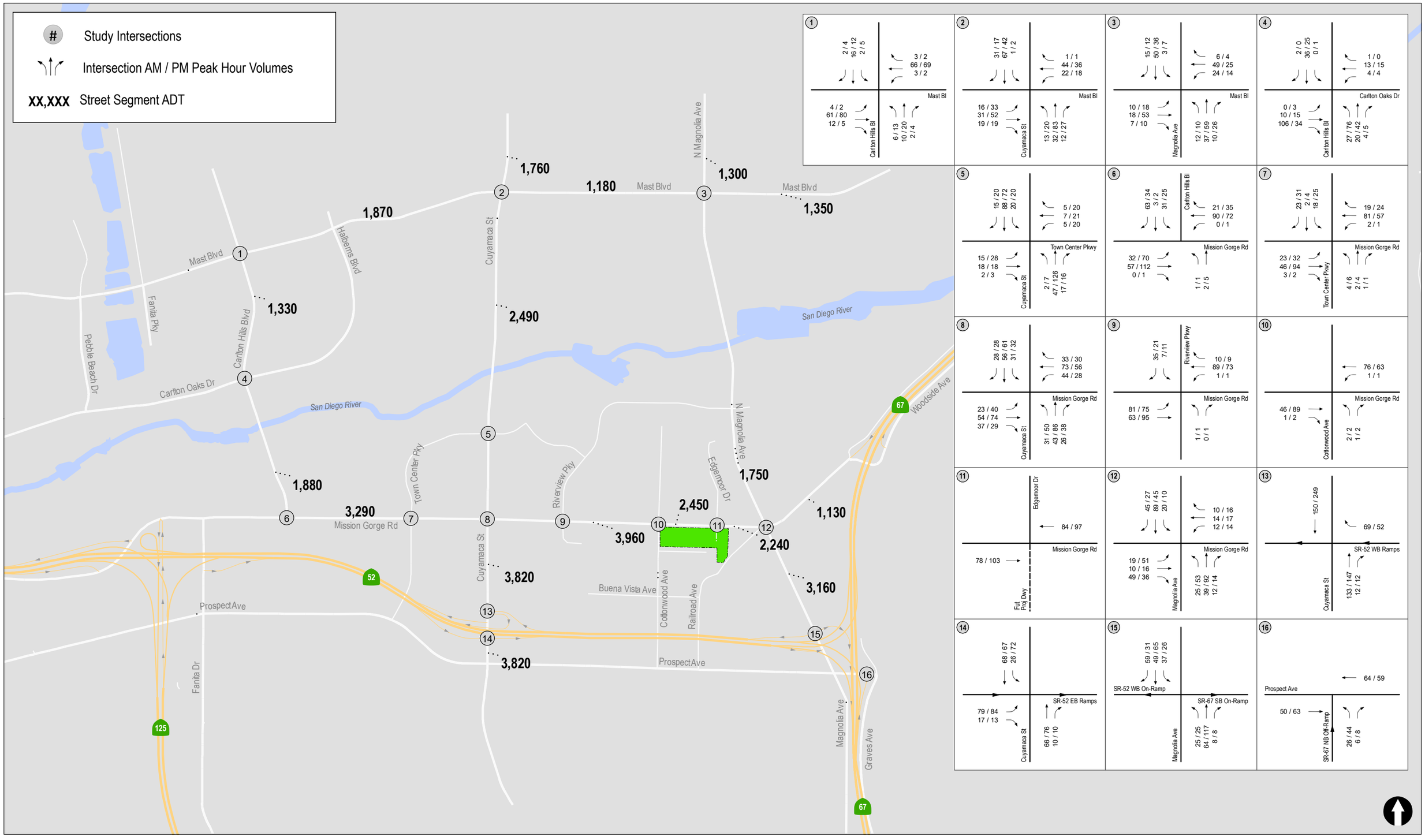

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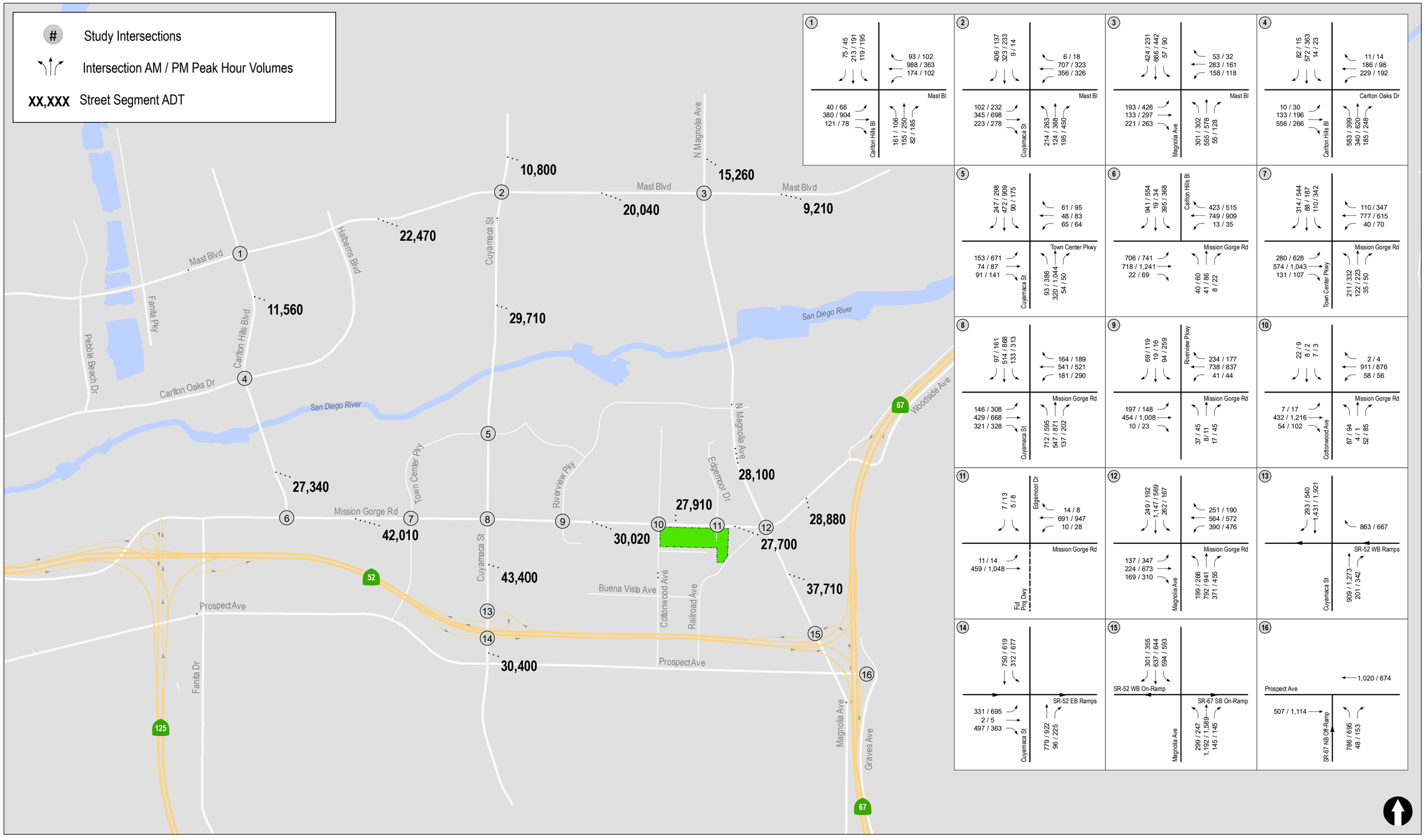
Figure 9-1

Cumulative Projects Traffic Volumes

SANTEE AUTO CENTER



LINSCOTT LAW & GREENSPAN engineers

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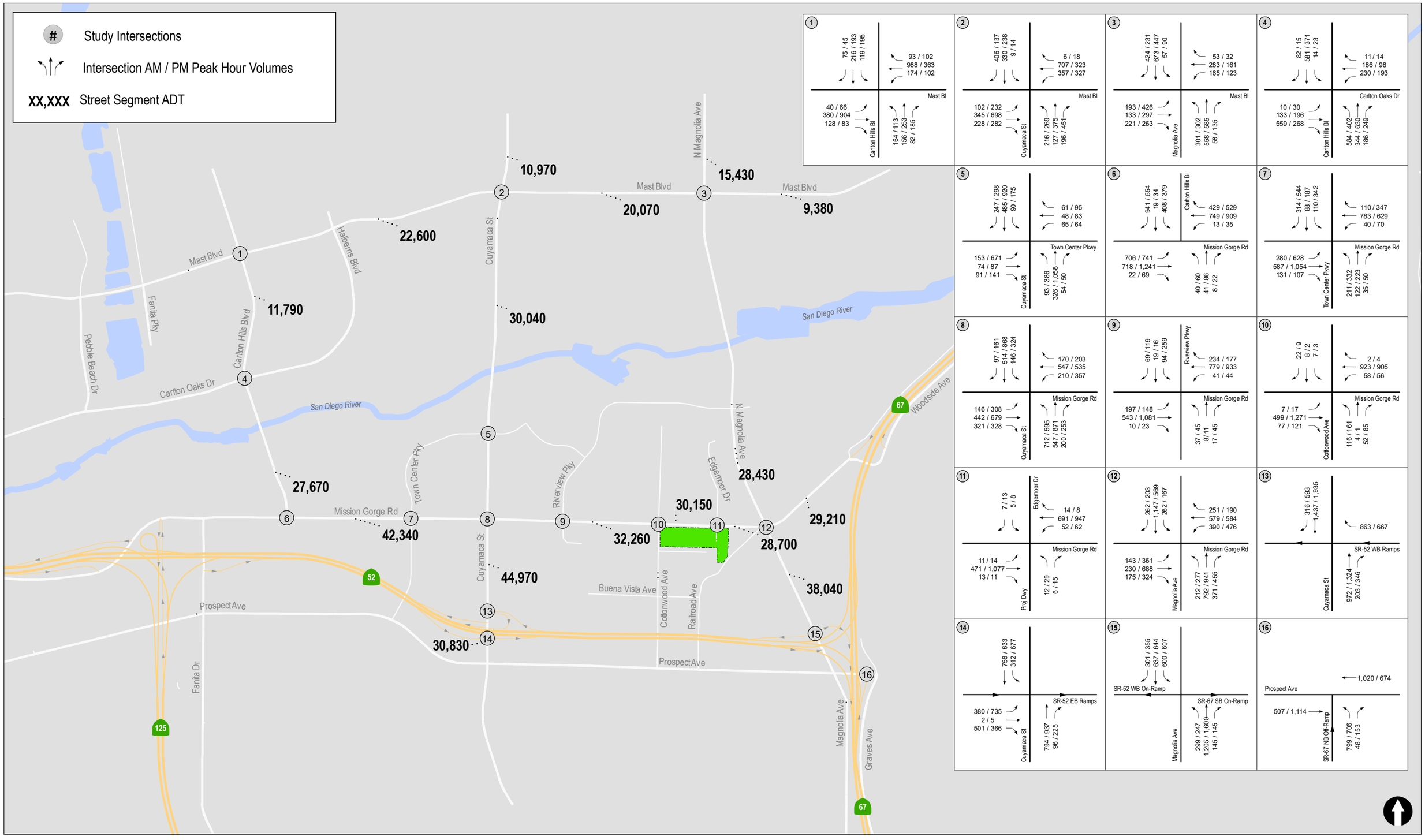
Time: 12:49 PM

Figure 9-2

Existing + Cumulative Projects Traffic Volumes

SANTEE AUTO CENTER



LINSCOTT LAW & GREENSPAN engineers

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Figure 9-3

Existing + Cumulative Projects + Project Traffic Volumes

SANTEE AUTO CENTER

10.0 ANALYSIS OF NEAR-TERM SCENARIOS

No intersection or segment improvements were assumed in the near term. The intersection and segment analyses assume the existing intersection geometry.

10.1 Existing + Cumulative Projects

10.1.1 *Intersection Analysis*

Table 10-1 summarizes the Existing + Cumulative projects peak hour intersection operations. As seen in *Table 10-1*, with the addition of Cumulative projects traffic, the following intersections are calculated to operate at LOS E or worse conditions. The remaining Project study area intersections are calculated to operate at LOS D or better.

- Mission Gorge Road / Carlton Hills Boulevard – LOS E during the AM peak hour
- Mission Gorge Road / Magnolia Avenue – LOS F during the AM and LOS E during the PM peak hours
- SR 52 Eastbound Ramps / Cuyamaca Street – LOS E during the AM peak hour

Appendix E includes the Existing + Cumulative projects peak hour intersection analysis worksheets.

10.2 Daily Street Segment Levels of Service

Table 10-2 summarizes the Existing + Cumulative projects daily segment operations. As seen in *Table 10-2*, with the addition of Cumulative projects traffic, all Project study area segments are calculated to operate at LOS D or better.

10.3 Existing + Cumulative Projects + Project

10.3.1 *Intersection Analysis*

Table 10-1 summarizes the Existing + Cumulative projects + Project peak hour intersection operations. As seen in *Table 10-1*, with the addition of Project traffic, the following intersections are calculated to operate at LOS E or worse conditions. The remaining Project study area intersections are calculated to operate at LOS D or better.

- Mission Gorge Road / Carlton Hills Boulevard – LOS E during the AM peak hour
- Mission Gorge Road / Cuyamaca Street – LOS E during the PM peak hour
- Mission Gorge Road / Cottonwood Avenue – LOS E during the AM peak hour and LOS F during the PM peak hour
- Mission Gorge Road / Magnolia Avenue – LOS F during the AM and LOS E during the PM peak hours
- SR 52 Eastbound Ramps / Cuyamaca Street – LOS E during the AM peak hour

The project has a substantial effect and improvements are required at the Mission Gorge Road / Cuyamaca Street and the Mission Gorge Road / Cottonwood Avenue intersections. The increase in

delay due to the Project is less than 2 seconds at the remaining three intersections and thus, the Project does not have a substantial effect at these intersections and no improvements are required.

Appendix F includes the Existing + Cumulative projects + Project peak hour intersection analysis worksheets.

10.3.2 *Daily Street Segment Levels of Service*

Table 10-2 summarizes the Existing + Cumulative projects + Project daily segment operations. As seen in *Table 10-2*, with the addition of Project traffic, all Project study area segments are calculated to operate at LOS D or better. Hence, no segment improvements are required.

TABLE 10–1
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing + Cumulative Projects		Existing + Cumulative Projects + Project		Δ[c]	Improvement Required?
			Delay[a]	LOS[b]	Delay	LOS		
1. Mast Blvd / Carlton Hills Blvd	Signal	AM	54.4	D	54.9	D	0.5	No
		PM	43.8	D	44.0	D	0.2	No
2. Mast Blvd / Cuyamaca St	Signal	AM	48.2	D	48.3	D	0.1	No
		PM	37.1	D	37.4	D	0.3	No
3. Mast Blvd / Magnolia Ave	Signal	AM	52.3	D	53.2	D	0.9	No
		PM	30.9	C	31.3	C	0.4	No
4. Carlton Oaks Dr / Carlton Hills Blvd	Signal	AM	40.5	D	41.1	D	0.6	No
		PM	28.4	C	28.9	C	0.5	No
5. Town Center Pkwy / Cuyamaca St	Signal	AM	18.5	B	18.5	B	0.0	No
		PM	50.9	D	51.7	D	0.8	No
6. Mission Gorge Rd / Carlton Hills Blvd	Signal	AM	75.4	E	76.9	E	1.5	No
		PM	42.6	D	42.7	D	0.1	No
7. Mission Gorge Rd / Town Center Pkwy	Signal	AM	28.3	C	28.5	C	0.2	No
		PM	49.0	D	49.0	D	0.0	No

Continued on the Next Page

TABLE 10–1 (CONTINUED)
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing + Cumulative Projects		Existing + Cumulative Projects + Project		Δ[c]	Improvement Required?
			Delay[a]	LOS[b]	Delay	LOS		
Continued From the Previous Page								
8. Mission Gorge Rd / Cuyamaca St	Signal	AM	43.0	D	43.8	D	0.8	No
		PM	54.6	D	**59.9**	**E**	**5.3**	**Yes**
9. Mission Gorge Rd / Riverview Pkwy	Signal	AM	38.6	D	42.0	D	3.4	No
		PM	22.8	C	24.1	C	1.3	No
10. Mission Gorge Rd / Cottonwood Ave	Signal	AM	47.7	D	**70.7**	**E**	**23.0**	**Yes**
		PM	31.3	C	**85.2**	**F**	**53.9**	**Yes**
11. Mission Gorge Rd / Edgemoor Dr (E. Project Dwy)	Signal	AM	2.3	A	6.5	B	4.2	No
		PM	11.8	B	14.2	B	2.4	No
12. Mission Gorge Rd / Magnolia Ave	Signal	AM	81.8	F	82.7	F	0.9	No
		PM	59.4	E	59.7	E	0.3	No
13. SR 52 WB Ramps / Cuyamaca St	Signal	AM	31.1	C	33.0	C	1.9	No
		PM	23.9	C	26.0	C	2.1	No

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TABLE 10–1 (CONTINUED)
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing + Cumulative Projects		Existing + Cumulative Projects + Project		Δ[c]	Improvement Required?
			Delay[a]	LOS[b]	Delay	LOS		
Continued From the Previous Page								
14. SR 52 EB Ramps / Cuyamaca St	Signal	AM	65.3	E	65.6	E	0.3	No
		PM	43.2	D	44.9	D	1.7	No
15. SR 67 SB Ramps / Magnolia Ave	Signal	AM	11.1	B	11.2	B	0.1	No
		PM	10.1	B	10.3	B	0.2	No
16. SR 67 NB Ramps / Magnolia Ave	Signal	AM	10.8	B	11.0	B	0.2	No
		PM	9.3	A	9.4	A	0.1	No

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes an increase in delay due to project.
d. AWSC – All-Way Stop Controlled intersection. Overall delay and LOS are reported.

General Note:

Bold indicates improvement potentially required..

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

TABLE 10–2
NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Functional Capacity (LOS E) [a]	Existing + Cumulative Projects			Existing + Cumulative Projects + Project			Δ[e]	Improvement Required?
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C		
Carlton Hills Boulevard									
Mast Blvd to Carlton Oaks Dr	40,000	11,560	A	0.289	11,790	A	0.295	0.006	None
Carlton Oaks Dr Mission Gorge Rd	40,000	27,340	C	0.684	27,670	C	0.692	0.008	None
Cuyamaca Street									
El Nopal to Mast Blvd	40,000	10,800	A	0.270	10,970	A	0.274	0.004	None
Mast Blvd to Mission Gorge Rd	40,000	29,710	C	0.743	30,040	D	0.751	0.008	None
Mission Gorge Rd to SR 52 Ramps	50,000	43,400	D	0.868	44,970	D	0.899	0.031	None
SR 52 Ramps to Prospect Ave	50,000	30,400	D	0.608	30,830	D	0.617	0.009	None
Magnolia Avenue									
El Nopal to Mast Blvd	40,000	15,260	B	0.382	15,430	B	0.386	0.005	None
Mast Blvd to Mission Gorge Rd	40,000	28,100	C	0.703	28,430	C	0.711	0.008	None
Mission Gorge Rd to Prospect Ave	60,000	37,710	C	0.629	38,040	C	0.634	0.006	None
Mast Boulevard									
Carlton Hills Blvd to Cuyamaca St	40,000	22,470	C	0.562	22,600	C	0.565	0.003	None
Cuyamaca St to Magnolia Ave	40,000	20,040	B	0.501	20,070	B	0.502	0.001	None
Magnolia Ave to Los Ranchitos	40,000	9,210	A	0.230	9,380	A	0.235	0.005	None

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TABLE 10–2 (CONTINUED)
NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Functional Capacity (LOS E) [a]	Existing + Cumulative Projects			Existing + Cumulative Projects + Project			Δ[e]	Improvement Required?
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C		
Continued From the Previous Page									
Mission Gorge Road									
Carlton Hills Rd to Cuyamaca St	60,000	42,010	C	0.700	42,340	C	0.706	0.006	None
Cuyamaca St to Cottonwood Ave	60,000	30,020	B	0.500	32,260	B	0.538	0.038	None
Cottonwood Ave to Edgemoor Dr	60,000	27,910	B	0.465	30,150	B	0.503	0.038	None
Edgemoor Dr to Magnolia Ave	60,000	27,700	B	0.462	28,700	B	0.478	0.016	None
Woodside Avenue									
Magnolia Ave to SR 67 EB Ramps	40,000	28,880	C	0.722	29,210	C	0.730	0.008	None

Footnotes:

a. Capacities based on City of Santee Roadway Classification & LOS table.
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.

11.0 VEHICLE MILES TRAVELED (VMT) ANALYSIS

11.1 Background

In December 2018, the Natural Resources Agency adopted amendments to the CEQA Guidelines, including the incorporation of SB 743 modifications. OPR also published an update to its Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) to assist professional planners, land use officials, and CEQA practitioners. The Technical Advisory provides recommendations on how to evaluate transportation impacts under SB743 that agencies and other entities may use at their discretion. The Technical Advisory recommends the use of VMT as the preferred CEQA transportation metric. To comply with the new legislation, the City has identified VMT analysis methodology, established VMT thresholds for CEQA transportation impacts, and identified possible mitigation strategies. SB743 includes the following two legislative intent statements:

1. Ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns, continue to be properly addressed and mitigated through the California Environmental Quality Act.

2. More appropriately, balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions.

VMT is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. VMT does not directly measure traffic operations but instead is a measure of network use or efficiency, especially if expressed as a function of population or employment (e.g., VMT/capita). VMT tends to increase as land use density decreases and travel becomes more reliant on the use of the automobile due to the long distances between origins and destinations. VMT can also serve as a proxy for impacts related to energy use, air pollution emissions, GHG emissions, safety, and roadway maintenance. The relationship between VMT and energy or emissions is based on fuel consumption. The traditional use of VMT in environmental impact analysis is to estimate mobile air pollution emissions, GHGs, and energy consumption, and the type of VMT metric reported for these additional impact areas typically differs from the metrics used for the transportation analysis.

11.2 Screening Criteria for CEQA VMT Analysis

The requirements to prepare a detailed transportation VMT analysis apply to all discretionary land development projects that are not exempt from CEQA, except those that meet at least one of the transportation screening criteria described below. A project that meets at least one of the screening criteria below would be presumed to have a less than significant VMT impact due to project characteristics and/or location. If evidence suggests that the project might have a significant impact despite meeting the below screening criteria, City staff reserves the discretion to request VMT analysis.

11.2.1 *Projects Located in a Transit-Accessible Area*

Projects located within a half-mile radius of an existing major transit stop or an existing stop along a high-quality transit corridor may be presumed to have a less-than-significant impact absent substantial evidence to the contrary. A map of existing major transit stops, and existing stops along high-quality transit corridors are provided in Appendix D of the City of Santee VMT Analysis Guidelines, April 13, 2022.

The above referenced Map is provided in ***Appendix G*** of this report. As seen on the map, a portion of the Project is located within the Transit Priority Area (TPA). Therefore, the Project is presumed to have a less-than-significant VMT impact.

12.0 ACCESS

As described previously, a total of six access driveways are proposed for the Project. Analysis of right-in / right-out only driveways was not conducted. This includes three access driveways on Mission Gorge Road, two access driveways on Cottonwood Avenue and one on Railroad Avenue, as described below:

- The right-in/right-out only driveway located just east of Cottonwood Avenue on Mission Gorge Road provides direct access to the westernmost Auto sales building. Since this is a right-in / right-out only driveway, traffic from the west can enter at this driveway and traffic to the east can exit at this driveway.
- The second right-in/right-out only driveway located on Mission Gorge Road provides direct access to the Auto sales building both auto sales buildings. Since this is a right-in / right-out only driveway, traffic from the west can enter at this driveway and traffic to the east can exit at this driveway.
- The full access driveway forming the fourth (south) leg of the Mission Gorge Road / Edgemoor Drive provides access to traffic destined to the west from the site using this signalized intersection to turn left. Westbound traffic will be able to turn left at this intersection and access the two auto dealerships. The intersection analysis indicated this signalized intersection is expected to operate at LOS B or better under all analysis scenarios. **It is recommended that this driveway should be 40 feet wide to accommodate one inbound lane and two outbound lanes.**
- The driveway located on Cottonwood Avenue, just south of Mission Gorge Road is only 120 feet from Mission Gorge Road. **It is therefore recommended that all movements except the southbound left movement should be permitted at this driveway.**
- The second (southern) driveway located on Cottonwood Avenue will be a full access driveway.
- The full access driveway located on Railroad Avenue, south of Mission Gorge Road will provide access to local traffic from the area south of the site. It is expected that traffic utilizing this driveway is generally destined to the eastern section of the site.

As seen above, adequate signalized and other access options are available for the proposed site.

13.0 CONCLUSIONS AND RECOMMENDATIONS

13.1 VMT Analysis

The Project is located within a City Transit Priority Area (TPA). Therefore, this Project is presumed to have a less-than-significant VMT impact.

13.2 Substantial Effects

As mentioned previously, a Level of Service analysis was conducted and various intersections and segments within the Project study area were analyzed to determine potential project related transportation effects. Based on the intersection and segment analyses, the Project effects were determined at the following intersections:

- Mission Gorge Road / Cuyamaca Street
- Mission Gorge Road / Cottonwood Avenue

13.3 Recommended Improvements

The following improvements are recommended:

- **Mission Gorge Road / Cuyamaca Street**

  A northbound right-turn lane is needed to improve operations at this intersection. It shall be noted that *this improvement was a condition of the Fanita Project* and is consistent with the improvements proposed in the General Plan Mobility Element. This improvement is also identified in the City of Santee Capital Improvement Program, Fiscal Years 2022 – 2026, ensuring that it has a funding mechanism. The Project should contribute a fair share towards this improvement.

- **Mission Gorge Road / Cottonwood Avenue**

  Currently, this intersection operates with permissive north /south phasing. The Project should provide an exclusive left-turn lane at the northbound and southbound approaches on Cottonwood Avenue and modify the traffic signal to provide north/south protected phasing.

In addition to the above, the following improvements should be provided as part of the Project:

- **Mission Gorge Road / Edgemoor Drive**

  The Project should align the Project driveway opposite Edgemoor Drive, modify the existing traffic signal and provide a 40-foot-wide driveway with one left-turn lane and one shared through / right lane in the northbound direction (Project driveway) at this intersection.

- **Northerly Driveway on Cottonwood Avenue**

  It is recommended that all movements except the southbound left-turn movement should be permitted at this driveway.

- **Project Driveways**

  Stop signs should be installed at all unsignalized driveways for traffic exiting the driveways.

13.4 Post Improvement Operations

Table 13-1 summarizes the post mitigation analysis of the two intersections where improvements are recommended in section 13-2 above. As seen in *Table 13-1*, with the recommended improvements the two intersections are calculated to operate at LOS D or better.

TABLE 13–1
POST MITIGATION OPERATIONS

Intersection	Control Type	Peak Hour	Prior to Mitigation				Post Mitigation	
			Existing + Cumulative Projects		Existing + Cumulative Projects + Project		Existing + Cumulative Projects + Project	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
8. Mission Gorge Rd / Cuyamaca St	Signal	PM	54.6	D	59.7	E	50.4	D
10. Mission Gorge Rd / Cottonwood Ave	Signal	AM	47.7	D	72.3	E	15.5	B
		PM	31.3	C	82.8	F	13.3	B

13.5 Fair Share Calculations

The Project's fair share contribution was calculated using the following formula.

$$\text{Fair share} = \frac{\text{Project trips}}{\text{(Near-Term Without Project trips)}}$$

The fair share calculations were done based on the AM and PM peak hour entering volumes at the subject intersection. ***Table 13-2*** summarizes the results of fair share contribution calculations. As seen in *Table 13-2*, the fair share contribution by the Project is 23%

TABLE 13-2
FAIR SHARE CALCULATIONS

Intersection	Existing	Opening Day + Project	Increase in Traffic	Total Auto Center Project	Project's Fair Share (%)
	A	B	C = B-A	D	E=D/C
3. Mission Gorge Rd / Cuyamaca St	4,762	5,482	720	168	23%

Note: The substantial effect only occurs in the PM peak hour. The Fair Share calculations are based on the intersection PM peak hour volumes.