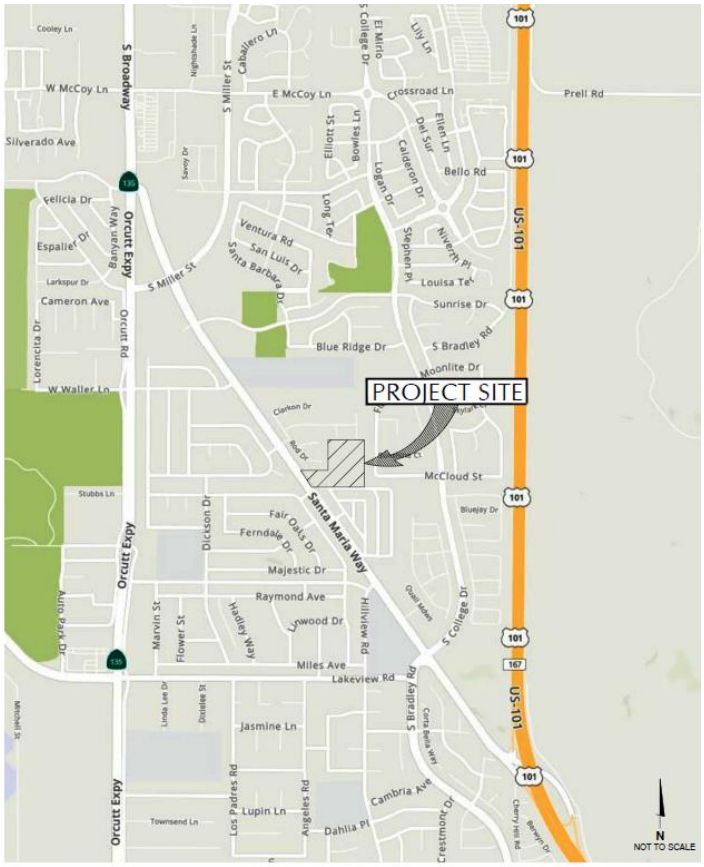
SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT
CITY OF SANTA MARIA, CALIFORNIA

TRAFFIC AND CIRCULATION STUDY



December 8, 2020 **ATE #20081**

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Since 1978

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TRAFFIC AND CIRCULATION STUDY
FOR THE SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT, CITY OF SANTA MARIA

Associated Transportation Engineers (ATE) has prepared the following traffic and circulation study for the Santa Maria Drive-In Residential Project, proposed in the City of Santa Maria. The study evaluates the Existing + Project and Cumulative + Project traffic conditions in order to determine the Project's consistency with the City's transportation policies. An evaluation of the Project's potential CEQA impacts is also provided based on the State's new CEQA requirements adopted under Senate Bill 743.

We appreciate the opportunity to assist you with the project.

Associated Transportation Engineers

Scott A. Schell
Principal Transportation Planner

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INTRODUCTION

The following report contains an analysis of the traffic and circulation issues associated with the Santa Maria Drive-In Residential Project (the "Project") proposed in the City of Santa Maria. The report evaluates existing and future traffic operations within the Project study area and evaluates the Project's consistency with the City's transportation policies. The roadways and intersections analyzed in the study were determined based on input provided by City of Santa Maria staff. An evaluation of the Project's potential CEQA impacts is also provided based on the State's new CEQA requirements adopted under Senate Bill 743.

PROJECT DESCRIPTION

The Project is proposed on the Hi-Way Drive-In Theater site located adjacent to Santa Maria Way in the southern area of the City of Santa Maria. Figure 1 shows the location of the Project site within the City. The Project is proposing demolish the drive-in theater and construct 49 affordable single-family residential units. Figure 2 shows the Project site plan. As shown, access is proposed via a roadway connection to Santa Maria Way at the location of the existing driveway that serves the drive-in theater. The existing driveway that serves the drive-in theater contains separate inbound and outbound legs divided by a median. The Project is proposing to modify the existing driveway to a 40-foot wide public road connection with no median.

EXISTING CONDITIONS

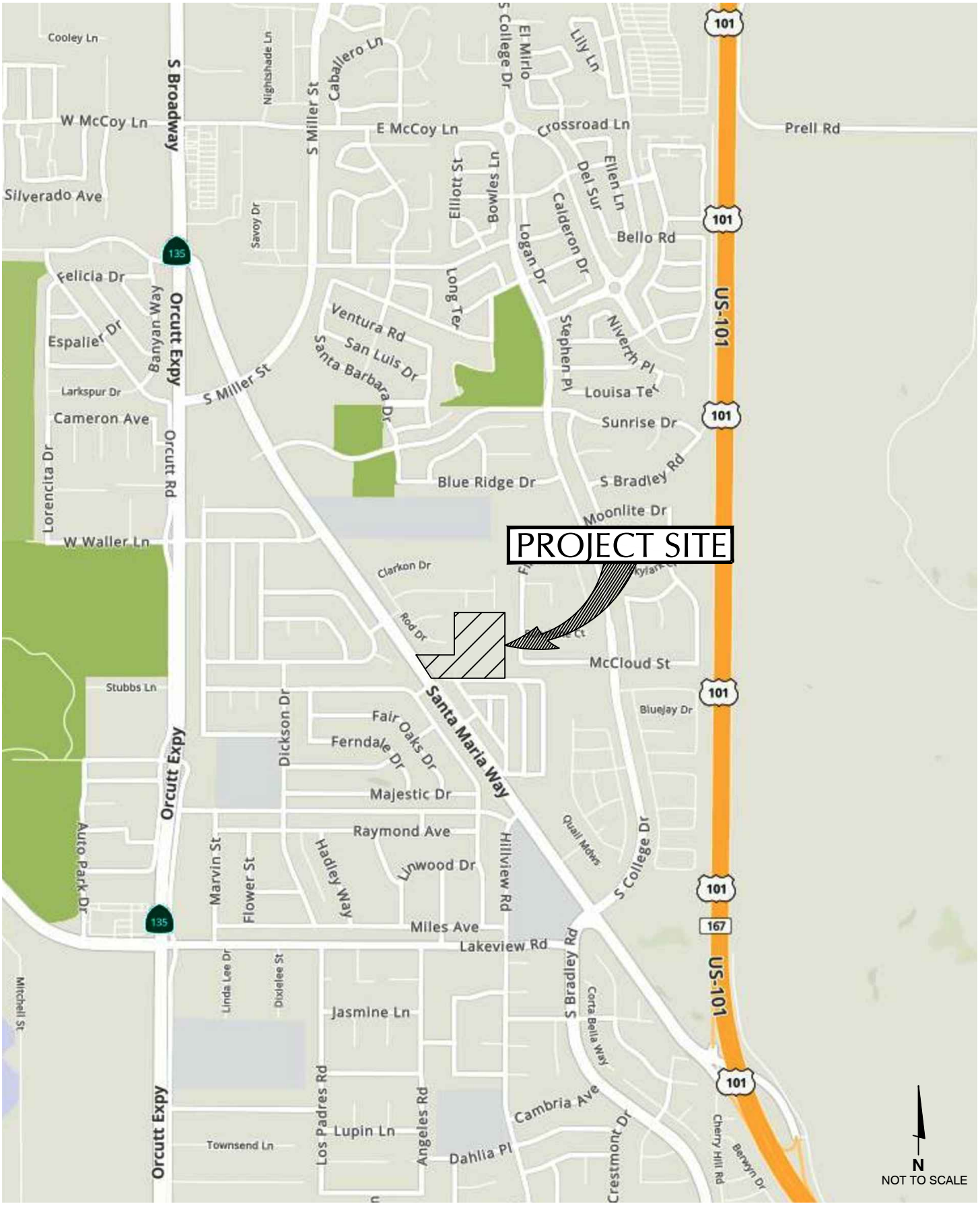
Street Network

The Project site is served by a network of highways, arterial, collector, and local streets. Figure 3 illustrates the study-area street network, including the traffic controls and lane geometries at the key study-area intersections identified for analysis. The following text provides a brief discussion of the existing street network.

US 101, located east of the Project site, is a freeway that serves as the major north-south link through the Santa Maria Valley and is the principal inter-city route along the Pacific Coast. US 101 is a 6-lane freeway within the Santa Maria area, with 4 lanes provided north and south of the City.

State Route 135 (Broadway-Orcutt Expressway), located west of the Project site, is a classified as a Primary Arterial by the City. State Route 135 extends from US 101 at the north end of the City to its junction with State Route 1 south of the Orcutt community. State Route 135 is a 4- to 6-lane arterial road within the study area. The roadway is named "Broadway" north of Santa Maria Way and "Orcutt Expressway" south of Santa Maria Way.

Santa Maria Way, located along the western frontage of the Project site, is a four-lane Primary Arterial road that extends from Broadway on the north to US 101 on the south. Access to the Project site would be provided via the existing driveway that serves the Hi-Way Drive-In Theater.



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PROJECT SITE LOCATION

FIGURE 1

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Drive-In Conceptual SFR Lots

Santa Maria, CA 11.10.20 1" = 60'

Site Plan Concept 3

NOTES:

- Local Minor street section design used per city standard. Allowed for 50 or less residences. 36' wide roadway with 6' sidewalks each side. 10' utilities easement required at front property line. If site connects to adjacent neighborhood, confirm if larger street section will be required.
- Knuckle at road corners based on city standard. Layout to be confirmed.
- Typical lot is 50' wide and 5,200 SF unless noted otherwise. Lot frontage at Knuckle corners is 40' min.
- 20' front setbacks, 10' rear, 5' at one side and 10' on other side. Request setback reduction to 5' both sides? Corner lot has 15' on one street side.
- Project entrance near existing Drive-In entry.
- Stormwater basin area estimated. Actual size to be verified.
- 20' landscape buffer along Santa Maria Way at Lot 38.
- R-1 designation with an affordable housing incentive request to reduce minimum lot area and width (from 6,000 sf/60' wide to 5,200/50' wide; corner lot requirements are larger).
- 49 homes = 5.5 dwelling units per acre. Up to 8 DU/acre allowed for R-1 and RSL-1 zones. Density bonus not required.
- Building footprints are preliminary. All are 3-bedroom plans. A new plan with 4-bedrooms can be created to fit within the required setbacks.

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PROJECT SITE PLAN

FIGURE 2

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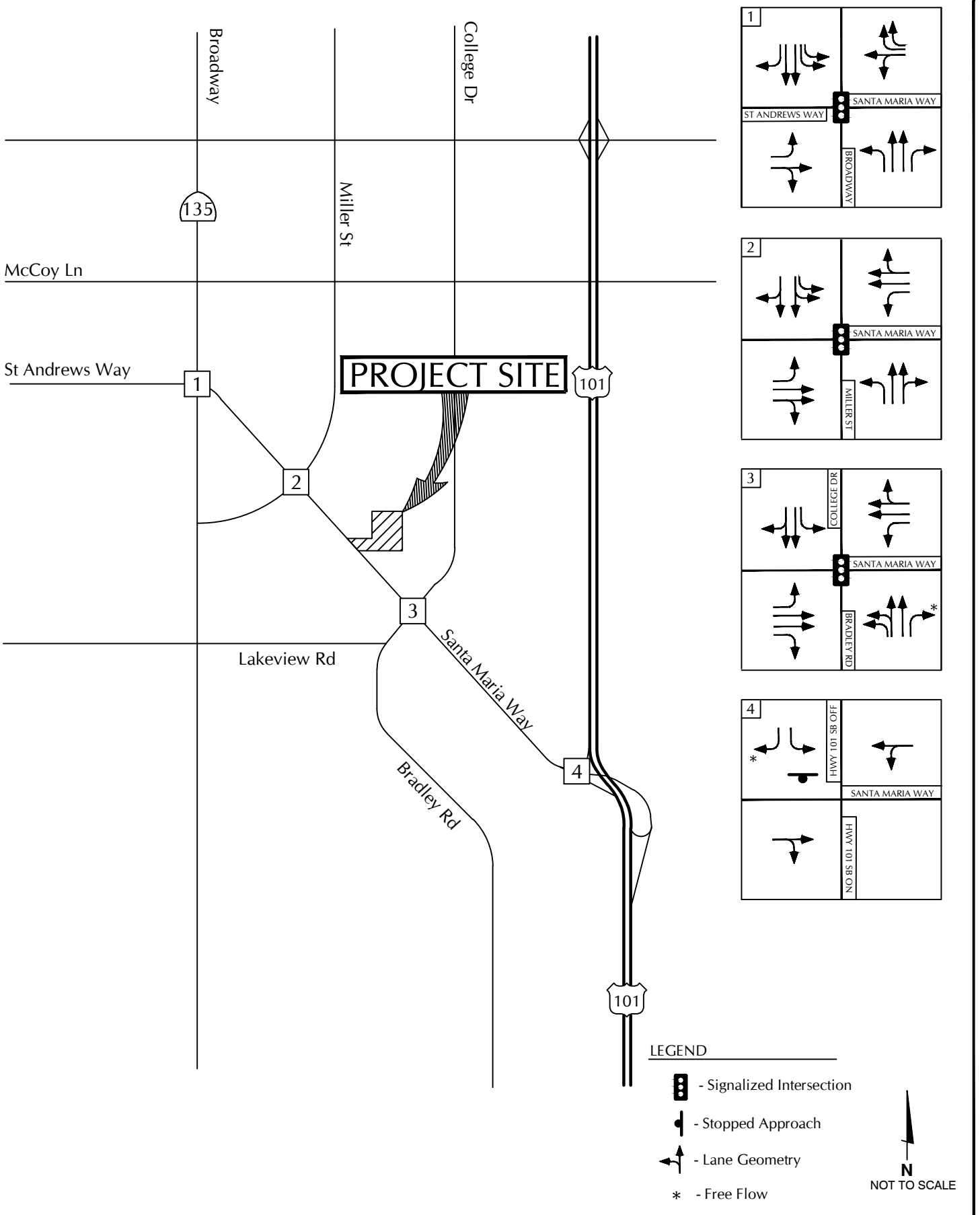

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EXISTING STREET NETWORK

FIGURE 3

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Miller Street, located north of the Project site, is classified as a Secondary Arterial road. Miller Street is a 4-lane arterial road that extends north of Santa Maria Way.

College Drive-Bradley Road, located east the Project site, is classified as a Secondary Arterial road. This street extends north and south of Santa Maria Way as a 4-lane arterial road. The segment north of Santa Maria Way is named College Drive and the segment south of Santa Maria Way is named Bradley Road.

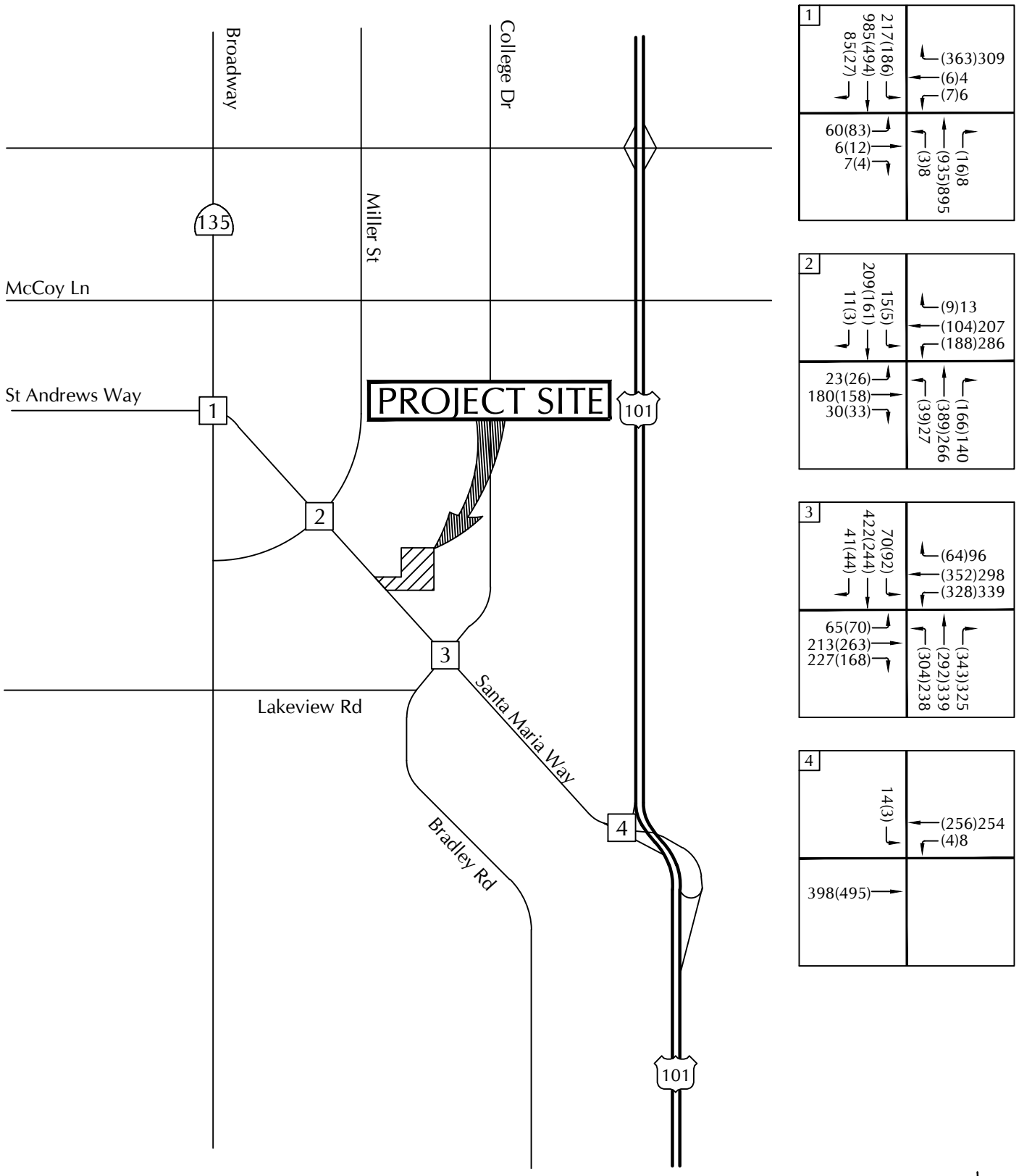
Intersection Operations

Because traffic flow on urban arterials is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. "Levels of Service" (LOS) A through F are used to rate intersection operations, with LOS A indicating very good operation and LOS F indicating poor operation (more complete definitions are contained in the Technical Appendix for reference). The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better).

Existing peak hour traffic volumes were obtained from traffic counts collected in September 2018 and January 2019 (see Technical Appendix for count data). Counts were conducted during the AM peak commuter period (7:00-9:00 AM) and PM peak commuter period (4:00-6:00 PM). The peak 1-hour volumes were then identified for the analysis. Figure 4 presents the existing AM and PM peak hour traffic volumes for the study-area intersections.

Levels of service were calculated for the signalized intersections using the "Intersection Capacity Utilization" (ICU) methodology, which is the level of service method adopted by the City for signalized intersections. Levels of service for stop-sign controlled intersections were calculated using the methodology outlined in the Highway Capacity Manual (HCM)[1], which is also the level of service method adopted by the City for intersections controlled by stop signs. Each movement required to stop or yield has a level of service rating and there is an overall level of service rating presented for the intersection. Pursuant to the HCM methods, levels of service were calculated and reported based on the average seconds of delay per vehicle for the stop and yield movements. Existing levels of service for the study-area intersections are listed in Table 1.

[1] Highway Capacity Manual, Transportation Research Board, 2016.



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EXISTING TRAFFIC VOLUMES

FIGURE 4

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Table 1
Existing Levels of Service

Intersection	Control	AM Peak Hour		PM Peak Hour	
		ICU or Delay	LOS	ICU or Delay	LOS
Santa Maria Way/Broadway	Signal	0.51	LOS A	0.49	LOS A
Santa Maria Way/Miller St	Signal	0.39	LOS A	0.39	LOS A
Santa Maria Way/College Dr-Bradley Rd	Signal	0.59	LOS A	0.64	LOS B
Santa Maria Way/US 101 SB Ramps(a)	Stop Signs	12.2 Sec.	LOS B	13.5 Sec.	LOS B

(a) Stop controlled intersection. LOS based on average delay per vehicle in seconds.

The data presented in Table 1 show that the study-area intersections currently operate at LOS A or LOS B during the AM and PM peak hours, which meet the City's LOS D operating standard.

CITY OF SANTA MARIA TRANSPORTATION POLICIES

The City of Santa Maria considers LOS D acceptable for roadway and intersection operations, with improvements required for LOS E and F.

PROJECT-SPECIFIC ANALYSIS

Project Trip Generation

Trip generation estimates were calculated for the Project using rates presented in the Institute of Transportation Engineers (ITE) Trip Generation manual.[2] The ITE rates for Single Family Detached Housing (Land Use #210) were applied in the trip generation calculations. Traffic credits for the existing drive-in theatre were not calculated since the theatre is generally not open during the 7-9 AM and 4-6 PM peak commuter periods. Table 2 shows the trip generation estimates developed for the Project (a detailed calculation worksheet is contained in the Technical Appendix for reference).

Table 2
Project Trip Generation

Land Use	Size	Average Daily Trips		AM Peak Hour Trips		PM Peak Hour Trips	
		Rate	Trips	Rate	Trips	Rate	Trips
Single Family Residential	49 Units	9.44	463	0.74	36	0.99	49

As shown in Table 2, the Project is forecast to generate 463 average daily trips (ADT), with 36 trips occurring during the AM peak hour and 49 trips occurring during the PM peak hour.

[2] Trip Generation Manual, Institute of Transportation Engineers, 10th Edition, 2017.

Project Trip Distribution

Trip distribution percentages were developed for the Project based on data derived from the City's traffic model, existing traffic patterns in the study area, and consideration of the land uses in the surrounding area. Table 3 presents the trip distribution percentages developed for the Project. Figure 5 illustrates the trip distribution and assignment of Project traffic at the study-area intersections.

Table 3
Project Trip Distribution

Origin/Destination	Direction	Distribution %
US 101	North	15%
US 101	South	5%
State Route 135	North	15%
State Route 135	South	4%
Miller Street	North	20%
College Drive	North	20%
Bradley Road	South	18%
McCoy Lane	West	3%
Total		**100%**

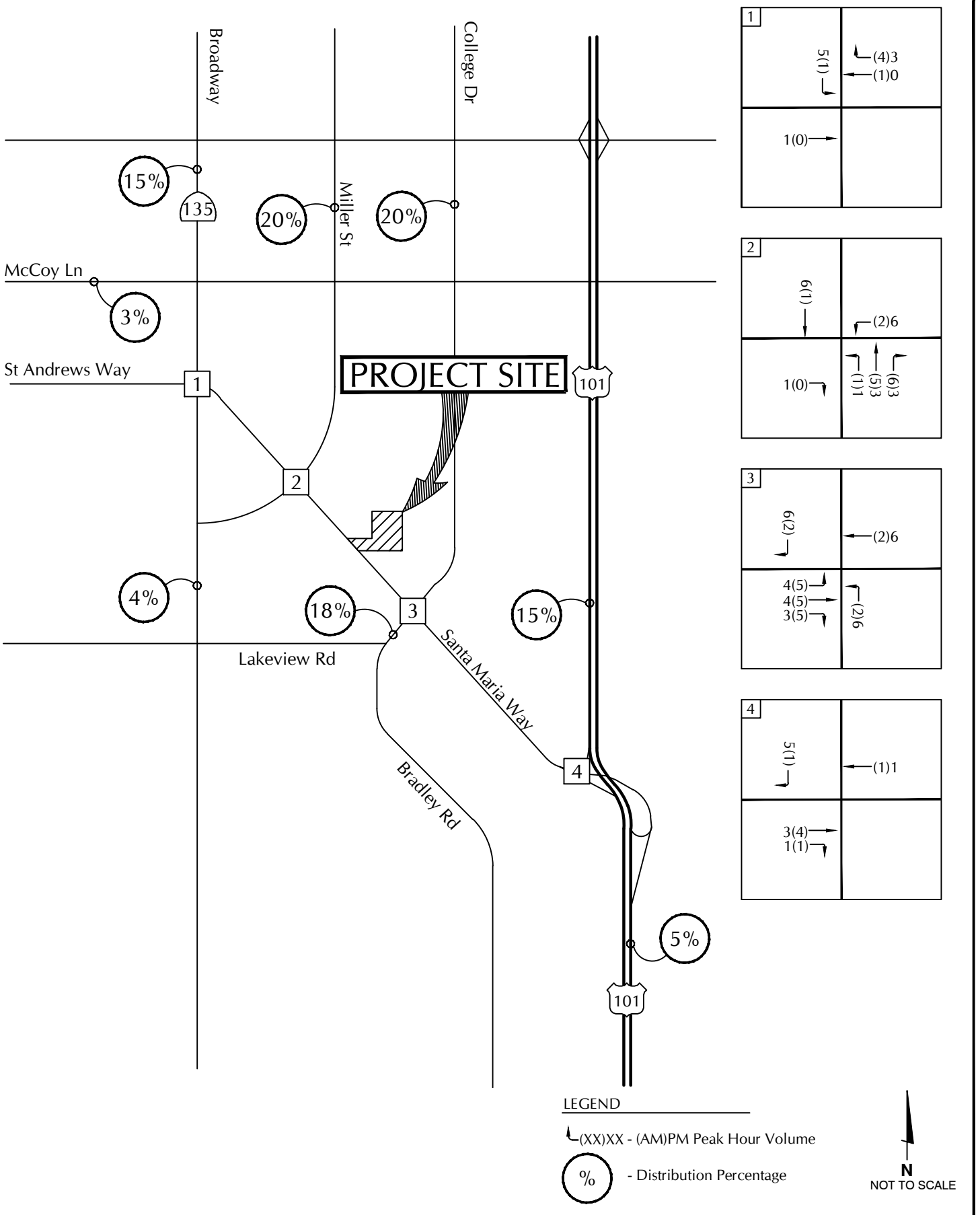
Existing + Project Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes shown on Figure 6. Tables 4 and 5 compare the Existing and Existing + Project levels of service and identify locations that are forecast to exceed the City's LOS D standard.

Table 4
Existing + Project Levels of Service – AM Peak Hour

Intersection	ICU or Delay / LOS		Project Added	
	Existing	Existing + Project	Trips	Exceed LOS D Standard?
Santa Maria Way/Broadway	0.51/LOS A	0.51/LOS A	6	No
Santa Maria Way/Miller St	0.39/LOS A	0.39/LOS A	15	No
Santa Maria Way/College Dr-Bradley Rd	0.59/LOS A	0.60/LOS A	21	No
Santa Maria Way/US 101 SB Ramps(a)	12.2 Sec./LOS B	12.2 Sec./LOS B	7	No

(a) Stop controlled intersection. LOS based on average delay per vehicle in seconds.



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PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

FIGURE 5

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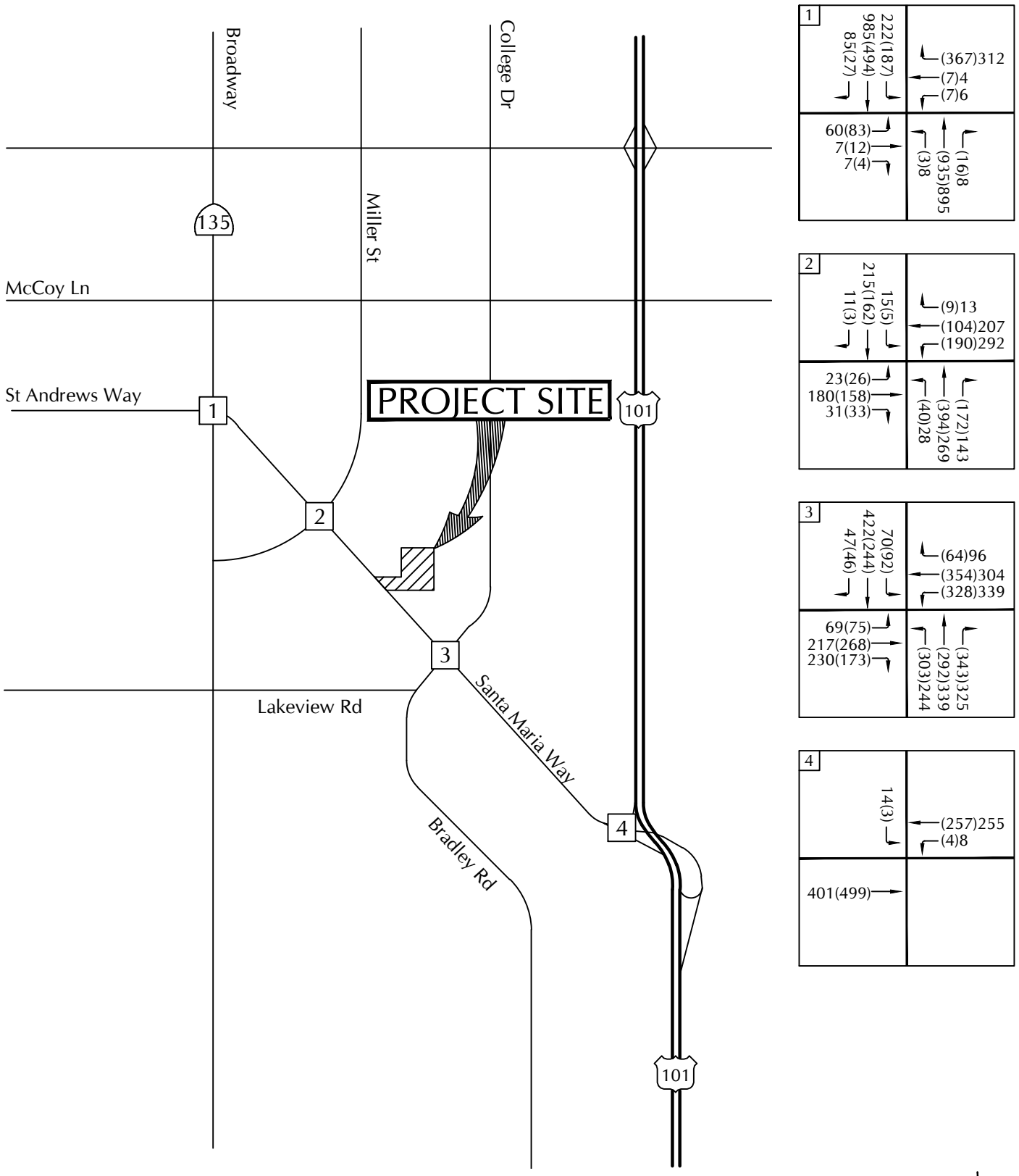

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EXISTING + PROJECT TRAFFIC VOLUMES

FIGURE 6

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Table 5
Existing + Project Levels of Service – PM Peak Hour

Intersection	ICU or Delay / LOS		Project Added	
	Existing	Existing + Project	Trips	Exceed LOS D Standard?
Santa Maria Way/Broadway	0.49/LOS A	0.49/LOS A	9	No
Santa Maria Way/Miller St	0.39/LOS A	0.39/LOS A	20	No
Santa Maria Way/College Dr-Bradley Rd	0.64/LOS B	0.64/LOS B	29	No
Santa Maria Way/US 101 SB Ramps(a)	13.5 Sec./LOS B	13.6 Sec./LOS B	10	No

(a) Stop controlled intersection. LOS based on average delay per vehicle in seconds.

As shown in Tables 4 and 5, the study-area intersections are forecast to continue to operate at LOS A and LOS B under Existing + Project conditions, which meets the City's LOS D standard. Thus, the Project would be consistent with the City's adopted level of service standards.

CUMULATIVE ANALYSIS

Traffic Forecasts

Cumulative conditions were forecast assuming traffic generated by approved and pending development projects located in the Project study-area. The land uses for the approved and pending projects were incorporated into the Santa Maria Traffic Model to forecast Cumulative conditions. Cumulative traffic forecasts are shown in Figure 7 and Cumulative + Project forecasts are shown in Figure 8.

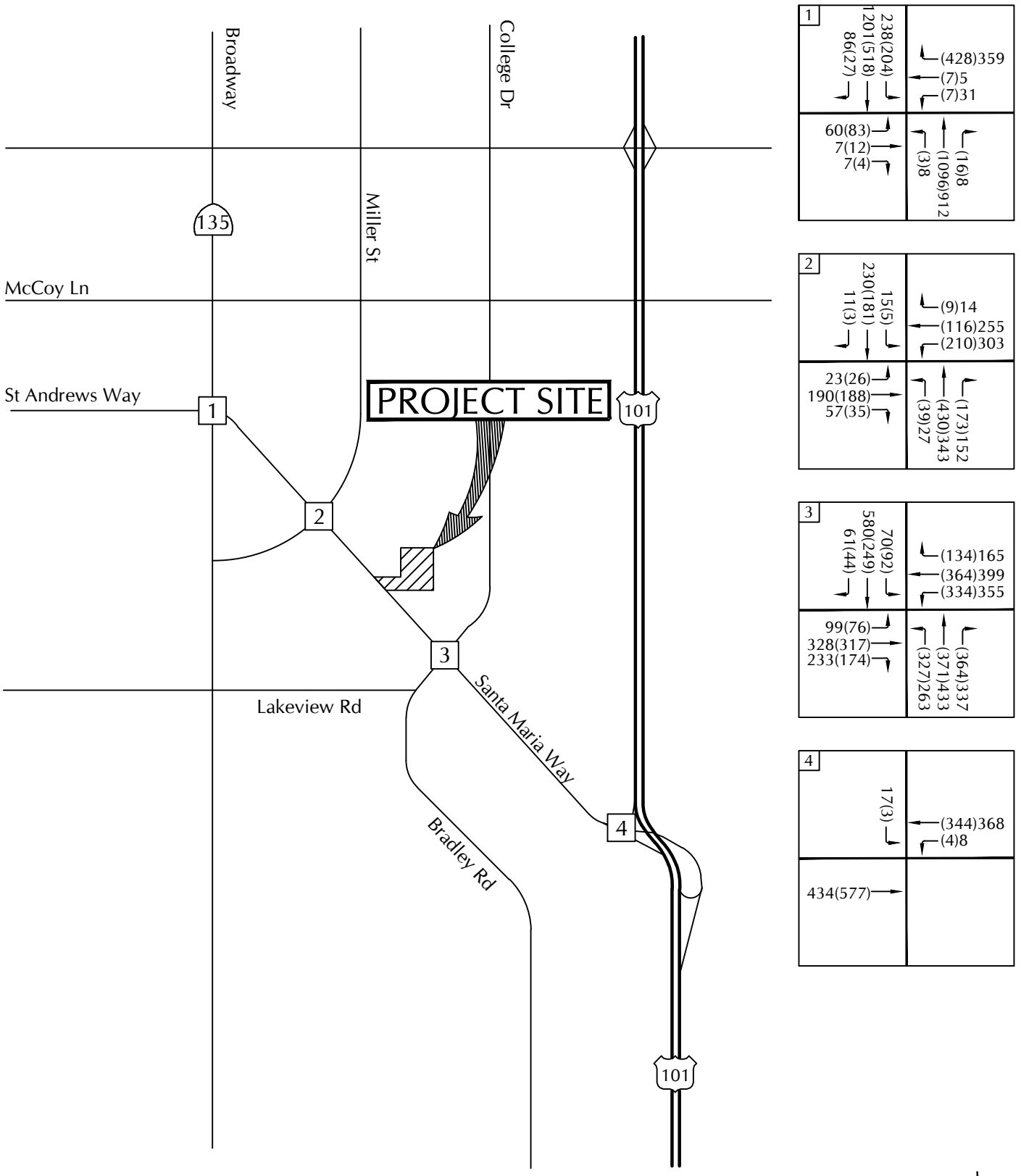
Cumulative Intersection Operations

Tables 6 and 7 compare the Cumulative and Cumulative + Project levels of service for the study-area intersections and identify locations that are forecast to exceed the City's LOS D standard.

Table 6
Cumulative + Project Levels of Service – AM Peak Hour

Intersection	ICU or Delay / LOS		Project Added	
	Cumulative	Cumulative + Project	Trips	Exceed LOS D Standard?
Santa Maria Way/Broadway	0.57/LOS A	0.57/LOS A	6	No
Santa Maria Way/Miller St	0.42/LOS A	0.42/LOS A	15	No
Santa Maria Way/College Dr-Bradley Rd	0.64/LOS B	0.64/LOS B	21	No
Santa Maria Way/US 101 SB Ramps(a)	14.3 Sec./LOS B	14.3 Sec./LOS B	7	No

(a) Stop controlled intersection. LOS based on average delay per vehicle in seconds.



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CUMULATIVE TRAFFIC VOLUMES

FIGURE 7

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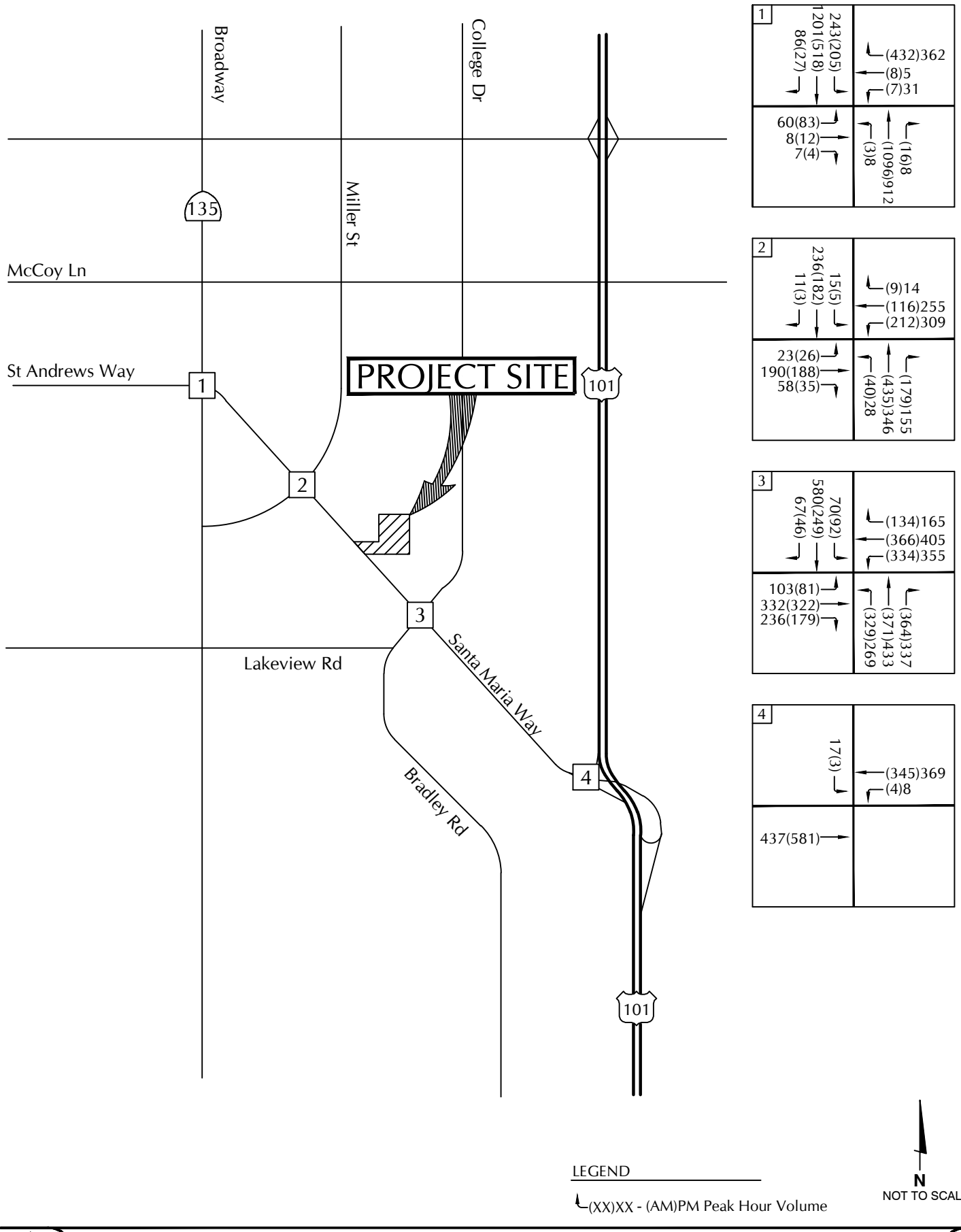

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CUMULATIVE + PROJECT TRAFFIC VOLUMES

FIGURE 8

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Table 7
Cumulative + Project Levels of Service – PM Peak Hour

Intersection	ICU or Delay / LOS		Project Added	
	Cumulative	Cumulative + Project	Trips	Exceed LOS D Standard?
Santa Maria Way/Broadway	0.54/LOS A	0.54/LOS A	9	No
Santa Maria Way/Miller St	0.44/LOS A	0.44/LOS A	20	No
Santa Maria Way/College Dr-Bradley Rd	0.76/LOS C	0.76/LOS A	29	No
Santa Maria Way/US 101 SB Ramps(a)	16.5 Sec./LOS C	16.6 Sec./LOS C	10	No

(a) Stop controlled intersection. LOS based on average delay per vehicle in seconds.

As shown in Tables 6 and 7, the study-area intersections are forecast to operate at LOS C or better during the AM and PM peak hours with Cumulative and Cumulative + Project traffic, which meets the City's LOS D standard. Thus, the Project would be consistent with the City's adopted level of service standards under cumulative conditions.

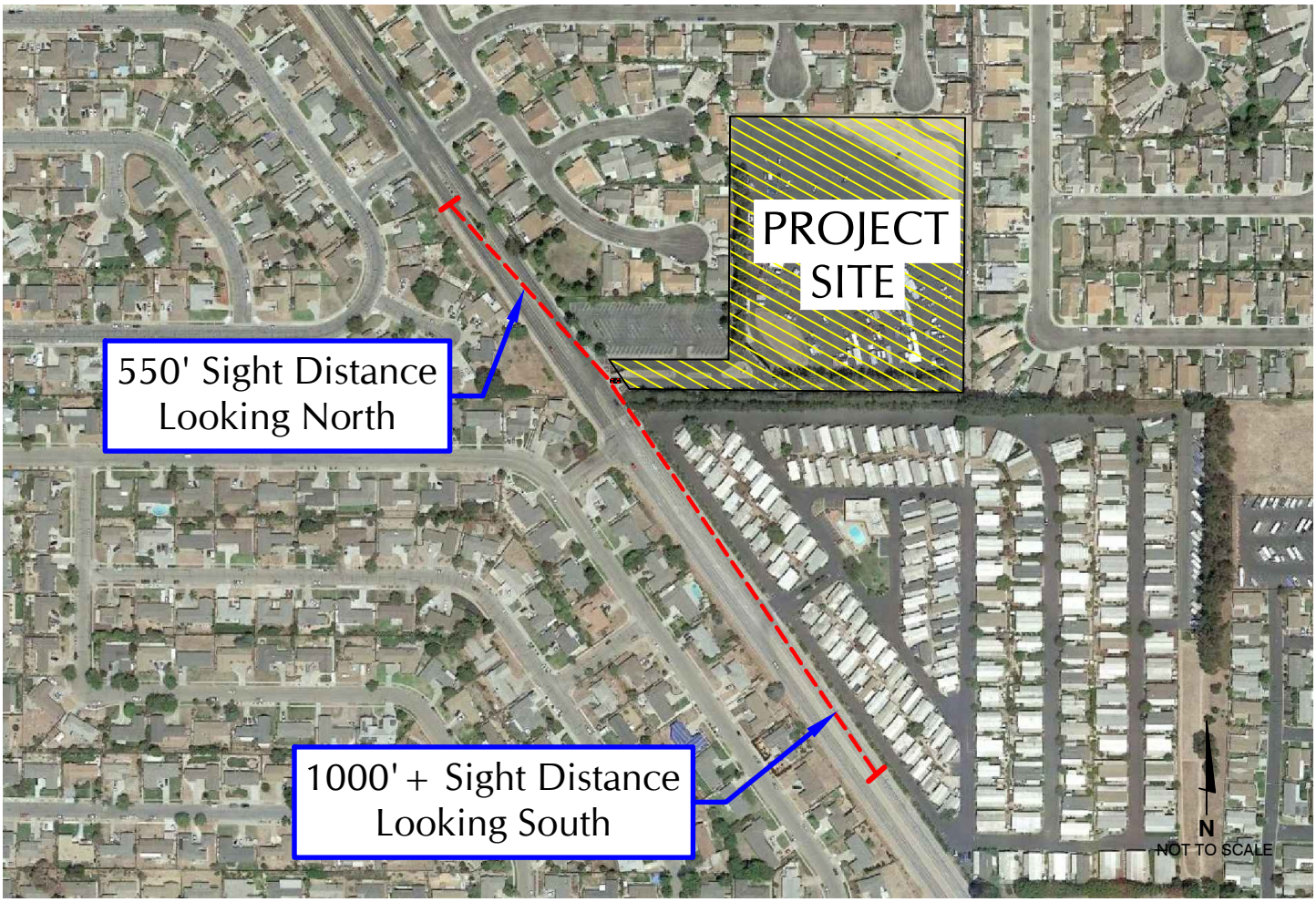
SITE ACCESS AND CIRCULATION

Access to the Project site is proposed via a roadway connection to Santa Maria Way at the location of the existing driveway that serves the existing Hi-Way Drive-In Theater (see Figure 2 – Project Site Plan). The operation of the Project's access connection is reviewed below.

Access Modifications. The existing driveway for the Hi-Way Drive-In Theater is about 95 feet wide and contains 2 inbound and 2 outbound lanes that are separated by a median divider. The Project is proposing a 40-foot wide roadway connection with no median divider. Santa Maria Way has been constructed to the City's 4-lane Secondary Arterial standards, which includes 2 travel lanes in each direction, a Class II bike lane in each direction (painted on-street bike lane), and a dedicated southbound left-turn lane that is approximately 240 feet long for turning into the Project site. The existing striping for the southbound left-turn lane on Santa Maria Way (turn lane striping and painted median south of the driveway) will need to be modified to accommodate the Project's proposed roadways connection.

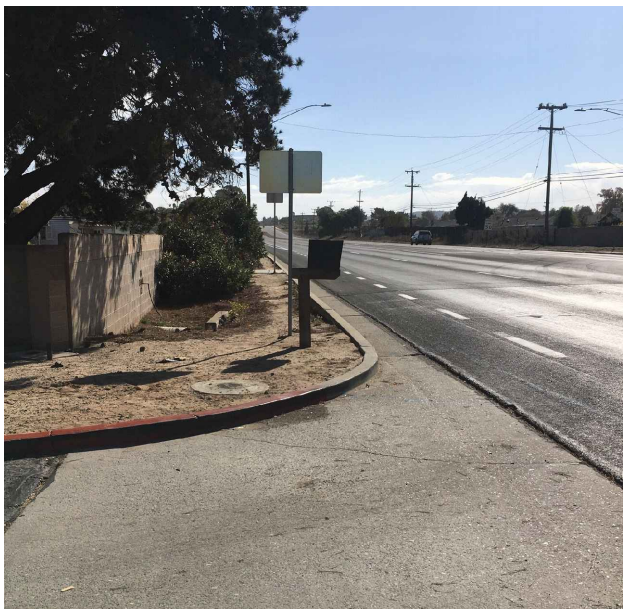
Sight Distances. Sight distances were measured at the Project's proposed roadway connection to determine if the sight lines along Santa Maria Way are sufficient in length for drivers to look for gaps in the oncoming traffic streams when turning from the Project site. The Caltrans Highway Design Manual sight distance standards were used to determine minimum sight distance requirements at the proposed roadway connection.[3] Santa Maria Way is posted with a speed limit of 45 MPH for vehicles approaching from the north and 50 MPH for vehicles approaching from the south. Based on Caltrans criteria, the minimum corner sight distance standard for a 45 MPH design speed is 495 feet and the standard for a 50 MPH design speed is 550 feet.

[3] Highway Design Manual, Chapter 400, California Department of Transportation, Updated July 2020.



Looking North

Looking South



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PROJECT ROADWAY CONNECTION - SIGHT DISTANCES

FIGURE 9

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The sight distance for drivers looking to the north from the Project's roadway connection was measured at about 550 feet (see Figure 9), which exceeds the Caltrans 495-foot minimum standard for 45 MPH vehicle speeds. The sight distance for drivers looking to the south from the roadway connection is somewhat obscured by a mailbox, signs, overhanging trees and a row of oleander shrubs located along the Del Cielo Mobile Estates development south of the site (see Figure 9). Relocation of these objects and/or trimming of the trees and shrubs from within the driver's sight triangle would provide over 1,000 feet of sight distances for drivers looking south, which would exceed the Caltrans 550-foot minimum standard for 50 MPH vehicle speeds.

Traffic Operations. Vehicle delays, levels of service, and queue forecasts were calculated for the Project's connection to Santa Maria Way assuming Cumulative + Project traffic conditions (level of service worksheets contained in the Technical Appendix). Table 8 summarizes the delay and level of service forecasts.

Table 8
Cumulative + Project Levels of Service – Project Access

Intersection	Delay / LOS			
	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
Santa Maria Way/Project Access				
Inbound Left Turn	9.2 Sec.	LOS A	8.7 Sec.	LOS A
Inbound Right Turn	0.0 Sec.	LOS A	0.0 Sec.	LOS A
Outbound Left+Right Turns	13.3 Sec.	LOS B	13.6 Sec.	LOS B
Overall Intersection	*12.9 Sec.*	LOS B	*11.6 Sec.*	LOS B

As shown in Table 8, vehicle delays for turning to and from the Project site equate to LOS A-B operations during the AM and PM peak commuter periods. For southbound vehicles turning left into the Project site from Santa Maria Way, the Project would generate 3 left turns during the AM peak period and 13 left turns during the PM peak period. As shown in Table 8, the delays for this movement equate to LOS A during the AM and PM peak periods (and would be lesser during other hours of the day). The queue model shows a queue of 1 vehicle or less for turning left from Santa Maria Way into the Project site during the AM and PM peak period. As noted, the existing southbound left-turn lane on Santa Maria Way is approximately 240 long and therefore is more than adequate to accommodate the Project's left-turn traffic without interfering with the through volumes on Santa Maria Way.

For vehicles turning left or right onto Santa Maria Way from the Project site, the Project would generate 27 outbound vehicles during the AM peak period and 18 outbound vehicles during the PM peak period. As shown in Table 8, the delays for the outbound movements equate to LOS B during the AM peak and PM peak periods (delays would be lesser during other hours of the day). The queue model shows a queue of 1 vehicle or less for the outbound movements during the AM and PM peak periods. As noted, Santa Maria Way is a 4-lane Secondary Arterial with 2 travel lanes in each direction and a median left-turn lane. The median left-turn lane would allow drivers that turn left from the Project site to use a "2-stage gap" – where the driver looks for a safe "gap" in the northbound traffic stream to cross the northbound lanes and then pause in the median left-turn lane until a gap is available to merge into the southbound traffic stream.

VEHICLE MILES TRAVELED ANALYSIS

Recent legislation, Senate Bill 743, is moving away from the Level of Service (LOS) metric to a Vehicle Miles Travelled (VMT) metric to evaluate whether a project results in a significant traffic impact. Cities and counties were required to implement Senate Bill 743 by July 1, 2020. It is anticipated that LOS will still remain as a policy consistency issue for the City, though not as an impact metric under CEQA environmental review.

Per the State's Natural Resource Agency Updated Guidelines for the Implementation of the CEQA adopted in 2018, VMT has been designated as the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. For land use projects, vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The City has not yet adopted VMT thresholds of significance.

CEQA Guidelines. The California Governor's Office of Planning and Research (OPR) published a Technical Advisory on Transportation that includes recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. The Technical Advisory provides screening tools to determine when a project may have a significant VMT impact, as follows:

> "Many agencies use "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See e.g., CEQA Guidelines, §§ 15063(c)(3)(C), 15128, and Appendix G.) As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.

Presumption of Less Than Significant Impact for Affordable Residential Development

> Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT. Further, "… low-wage workers in particular would be more likely to choose a residential location close to their workplace, if one is available." In areas where existing jobs-housing match is closer to optimal, low income housing nevertheless generates less VMT than market-rate housing. Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100% affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed-use projects) containing a particular amount of affordable housing, based on local circumstances and evidence. Furthermore, a project which includes any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units."

The OPR Technical Advisory states that affordable housing generates lower VMT than market rate housing. Affordable housing units are homes that are set aside for very low income and low income households. Providing affordable housing in infill areas can shorten commutes by providing housing closer to where people work, thereby reducing the amount of travel in the area. Thus, OPR presumes that affordable housing units have a less than significant impact on VMT, absent substantial evidence to the contrary, and do not require further VMT analysis. The City may apply screening to projects containing all (100 percent) affordable housing units. If a project contains affordable housing along with other land uses, the non-affordable housing uses need to meet at least one of the other screening criteria presented in this chapter to avoid further VMT analysis.

All of the Project's residential units would be affordable. Thus, the Project would be eligible for a finding of less than significant based on the adopted State thresholds.

RECOMMENDED IMPROVEMENTS

The traffic analysis found that the study-area streets and intersection are forecast to operate at LOS A or LOS B with Existing + Project; and LOS C or better with Cumulative + Project traffic. Thus, improvements to the study-area street network are not required since the forecasts meet the City's LOS D standard. The Project would be required to contribute to the City's traffic mitigation fee program to offset its contribution to traffic within the Santa Maria region.

As identified in the Site Access and Circulation analysis, relocation of the mailbox and signs, and removal or trimming of the overhanging trees and oleander shrubs is recommended to provide adequate sight distances for drivers exiting the Project site.

REFERENCES AND PERSONS CONTACTED

Associated Transportation Engineers

Scott A. Schell, Principal Transportation Planner
Dan Dawson, Supervising Transportation Planner

References

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Persons Contacted

David Beas, City of Santa Maria
Mark Mueller, City of Santa Maria

TECHNICAL APPENDIX

CONTENTS:

LEVEL OF SERVICE DEFINITIONS

LEVELS OF SERVICE DISCUSSION FOR SIGNALIZED INTERSECTIONS

The capacity analyses performed by ATE included use of the Critical Movement Summations (CMS) technique. The following discussion describes the levels of service corresponding to the various traffic conditions and to specific critical lane volumes.

The ability of a highway system to carry traffic is expressed in terms of its "Service Level" at critical locations, usually intersections. Service levels are defined as follows:

"A" Conditions of free unobstructed flow, no delays and all signal phases sufficient in duration to clear all approaching vehicles.

"B" Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.

"C" Conditions of stable flow, delays are low to moderate, full use of peak direction signal phase(s) is experienced.

"D" Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.

"E" Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.

"F" Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal.

INTERSECTION TURNING MOVEMENT COUNTS

Prepared by National Data & Surveying Services

SR 135 & Santa Maria Way

Peak Hour Turning Movement Count

ID: 18-02093-004
City: Santa Maria

Day: Wednesday
Date: 09/05/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

SR 135 — SOUTHBOUND

AM	27	494	178	8	1389	AM
NOON	0	0	0	0	0	NOON
PM	85	985	190	27	1291	PM

Santa Maria Way — EASTBOUND

AM	NOON	PM	
36	0	97	
0	0	0	0
83	0	60	0
12	0	6	0
4	0	7	0
AM	NOON	PM	

WESTBOUND — Santa Maria Way

PM	NOON	AM	
309	0	363	0
4	0	6	0
6	0	5	0
0	0	2	0
204	0	208	
PM	NOON	AM	

CONTROL

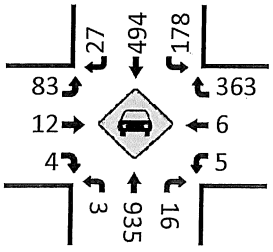
0

TEV	2136 AM	0 NOON	2590 PM
PHF	0.91		0.96

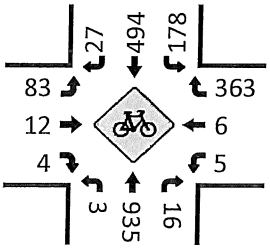
NORTHBOUND — SR 135

PM	998	0	8	895	8	PM
NOON	0	0	0	0	0	NOON
AM	503	0	3	935	16	AM

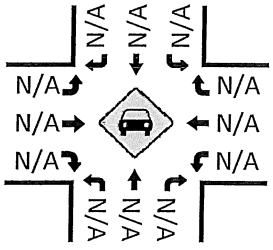
Total Vehicles (AM)



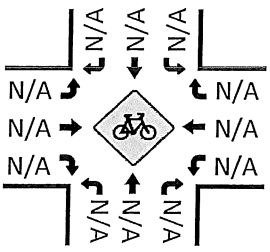
(AM)



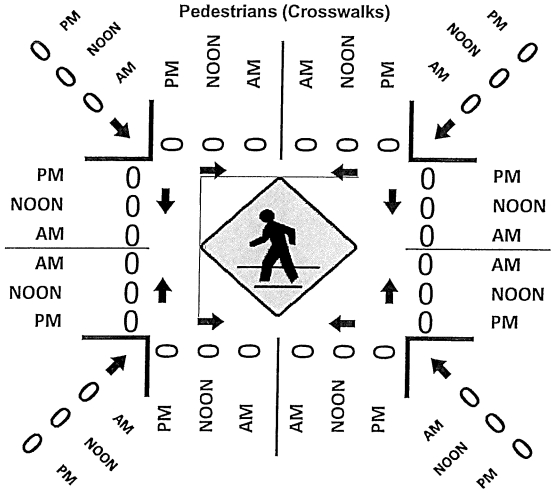
Total Vehicles (Noon)



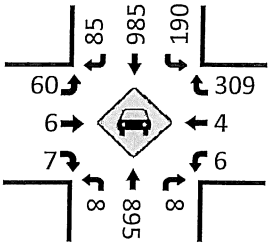
(NOON)



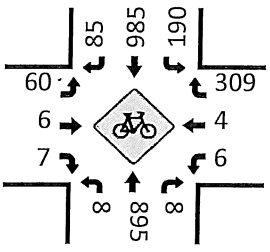
Pedestrians (Crosswalks)



Total Vehicles (PM)



(PM)



Prepared by National Data & Surveying Services

Santa Maria Way & Miller St

Peak Hour Turning Movement Count

ID: 19-02007-002
City: Santa Maria

Day: Wednesday
Date: 01/23/2019

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Santa Maria Way — SOUTHBOUND

AM	3	161	5	0	414	AM
NOON	0	0	0	0	0	NOON
PM	11	209	14	1	300	PM

0 0 0 0

Miller St — EASTBOUND

AM	NOON	PM	
145	0	239	
10	0	3	0
16	0	20	0
158	0	180	0
33	0	30	0
AM	NOON	PM	

CONTROL

0

TEV	1281	0	1407
	AM	NOON	PM
PHF	0.86		0.88

Miller St — WESTBOUND

	PM	NOON	AM
0	13	0	9
0	207	0	104
0	280	0	186
0	6	0	2
	340	0	331
	PM	NOON	AM

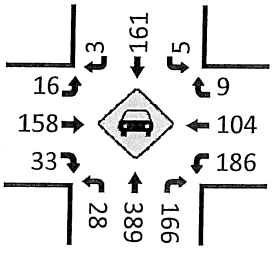
0 0 0 0

Santa Maria Way — NORTHBOUND

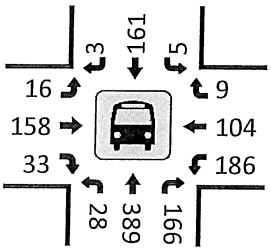
PM	528	9	18	266	140	PM
NOON	0	0	0	0	0	NOON
AM	391	11	28	389	166	AM

Santa Maria Way

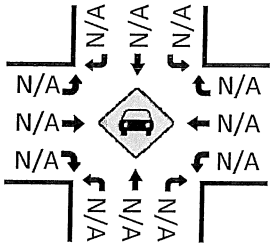
Total Vehicles (AM)



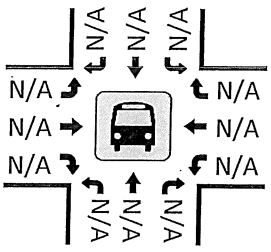
(AM)



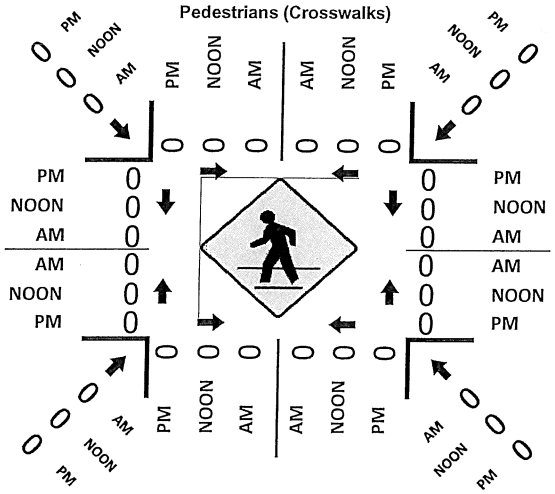
Total Vehicles (Noon)



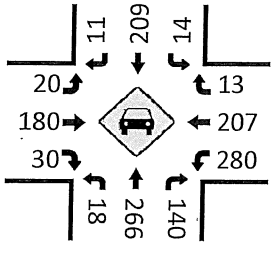
(NOON)



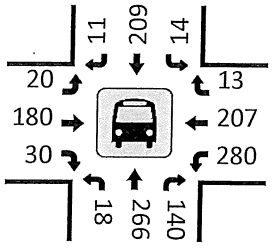
Pedestrians (Crosswalks)



Total Vehicles (PM)



(PM)



Prepared by National Data & Surveying Services

Santa Maria Way & S Bradley Rd

Peak Hour Turning Movement Count

ID: 18-02093-007
City: Santa Maria

Day: Wednesday
Date: 09/05/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Santa Maria Way — SOUTHBOUND

AM	168	263	50	20	720	AM
NOON	0	0	0	0	0	NOON
PM	227	213	48	17	594	PM

EASTBOUND — S Bradley Rd

AM	NOON	PM	
740	0	987	⇦
0	0	0	↶ 0
304	0	238	↑ 0
292	0	339	→ 0
343	0	325	↴ 0
AM	NOON	PM	

WESTBOUND — S Bradley Rd

PM	NOON	AM	
41	0	44	↰ 0
422	0	244	← 0
63	0	89	↶ 0
7	0	3	↶ 0
490	0	409	⇨
PM	NOON	AM	

CONTROL

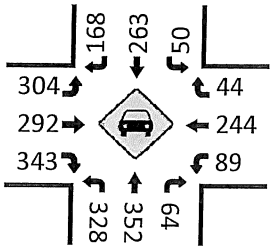
0

TEV	2564 AM	0 NOON	2673 PM
PHF	0.94		0.93

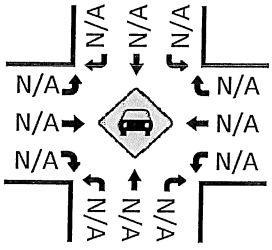
NORTHBOUND — Santa Maria Way

PM	602	1	338	298	96	PM
NOON	0	0	0	0	0	NOON
AM	695	0	328	352	64	AM

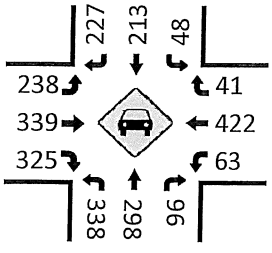
Total Vehicles (AM)



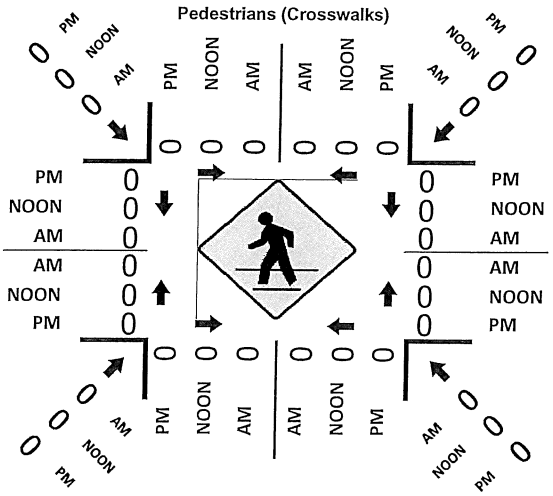
Total Vehicles (Noon)



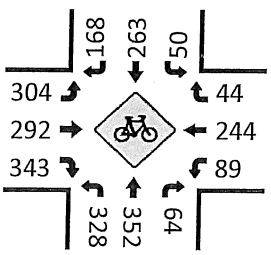
Total Vehicles (PM)



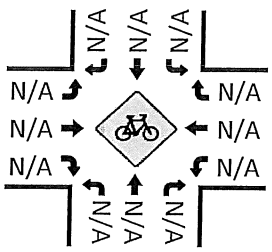
Pedestrians (Crosswalks)



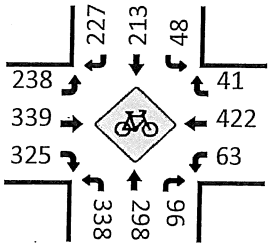
(AM)



(NOON)



(PM)



Prepared by National Data & Surveying Services

US 101 SB Ramp & Santa Maria Way

Peak Hour Turning Movement Count

ID: 18-02093-008
City: Santa Maria

Day: Wednesday
Date: 09/05/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

US 101 SB Ramp — SOUTHBOUND

AM	484	0	3	0	0	AM
NOON	0	0	0	0	0	NOON
PM	495	0	14	0	0	PM

Santa Maria Way — EASTBOUND

AM	NOON	PM	
739	0	749	⇦
0	0	0	↶ 0
0	0	0	↑ 0
490	0	398	→ 0
216	0	213	↷ 0
AM	NOON	PM	

CONTROL

0

TEV	1452 AM	0 NOON	1382 PM
PHF	0.88		0.90

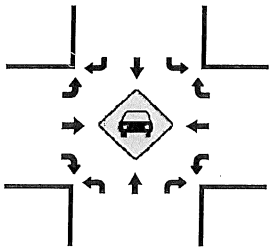
Santa Maria Way — WESTBOUND

PM	NOON	AM	
0	0	0	0 ↰
254	0	255	0 ←
8	0	4	0 ↙
0	0	0	0 ↳
412	0	493	⇨
PM	NOON	AM	

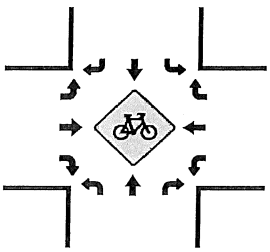
US 101 SB Ramp — NORTHBOUND

PM	221	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	220	0	0	0	0	AM

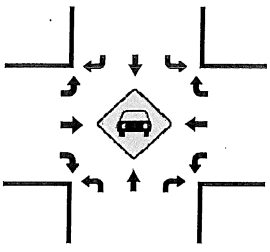
Total Vehicles (AM)



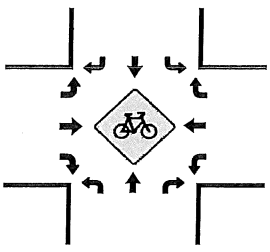
(AM)



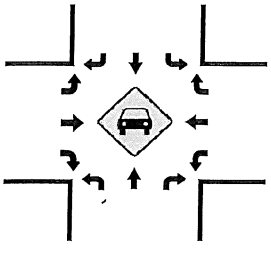
Total Vehicles (Noon)



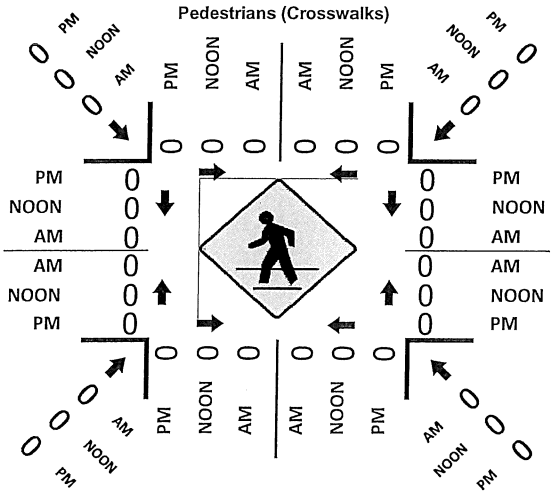
(NOON)



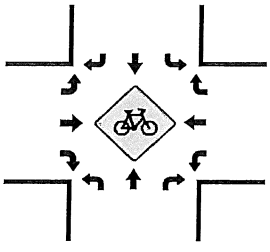
Total Vehicles (PM)



Pedestrians (Crosswalks)



(PM)



INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

Reference 1 - Santa Maria Way/Broadway
Reference 2 - Santa Maria Way/Miller St
Reference 3 - Santa Maria Way/College Dr-Bradley Rd
Reference 4 - Santa Maria Way/US 101 SB Ramps
Reference 5 - Santa Maria Way/Project Access

#20081 SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT **REF:** 01 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***9/10/2018***

TIME PERIOD: ***AM PEAK HOUR***

N/S STREET: ***SOUTH BROADWAY***

E/W STREET: ***SANTA MARIA WAY***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES		NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A)	EXISTING:	**3**	**935**	**16**	**186**	**494**	**27**	**83**	**12**	**4**	**7**	**6**	**363**
(B)	PROJECT-ADDED:	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
(C)	CUMULATIVE:	**3**	**1096**	**16**	**204**	**518**	**27**	**83**	**12**	**4**	**7**	**7**	**428**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND L TT R	SOUTH BOUND LL TT R	EAST BOUND L TR	WEST BOUND LT RR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	3	3	3	3	0.002	0.002	0.002	0.002
NBT	2	3200	935	935	1096	1096	0.292 *	0.292 *	0.343 *	0.343 *
NBR *(a)*	1	1600	13	13	13	13	0.008	0.008	0.008	0.008
SBL	2	3200	186	187	204	205	0.058 *	0.058 *	0.064 *	0.064 *
SBT	2	3200	494	494	518	518	0.154	0.154	0.162	0.162
SBR *(b)*	1	1600	25	25	25	25	0.016	0.016	0.016	0.016
EBL	1	1600	83	83	83	83	0.052 *	0.052 *	0.052 *	0.052 *
EBT	1	1600	12	12	12	12	0.008	0.008	0.008	0.008
EBR *(c)*	0	0	1	1	1	1	-	-	-	-
WBL	0	0	7	7	7	7	-	-	-	-
WBT	1	1600	6	7	7	8	0.008 *	0.009 *	0.009 *	0.009 *
WBR *(d)*	2	3200	36	37	43	43	0.011	0.012	0.013	0.013
						LOST TIME:	0.100 *	0.100 *	0.100 *	0.100 *
						TOTAL INTERSECTION CAPACITY UTILIZATION:	**0.510**	**0.511**	**0.568**	**0.568**
						SCENARIO LEVEL OF SERVICE:	A	A	A	A

NOTES:

RTOR: *(a) 29%*
(b) 7%
(c) 75%
(d) 90%

Printed: 12/02/20

#20081 SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT **REF:** 01 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***9/10/2018***

TIME PERIOD: ***PM PEAK HOUR***

N/S STREET: ***SOUTH BROADWAY***

E/W STREET: ***SANTA MARIA WAY***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES		NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A)	EXISTING:	**8**	**895**	**8**	**217**	**985**	**85**	**60**	**6**	**7**	**6**	**4**	**309**
(B)	PROJECT-ADDED:	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
(C)	CUMULATIVE:	**8**	**912**	**8**	**238**	**1201**	**86**	**60**	**7**	**7**	**31**	**5**	**359**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND L TT R	SOUTH BOUND LL TT R	EAST BOUND L TR	WEST BOUND LT RR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	8	8	8	8	0.005	0.005	0.005 *	0.005 *
NBT	2	3200	895	895	912	912	0.280 *	0.280 *	0.285	0.285
NBR *(a)*	1	1600	5	5	5	5	0.003	0.003	0.003	0.003
SBL	2	3200	217	218	238	239	0.068 *	0.068 *	0.074	0.075
SBT	2	3200	985	985	1201	1201	0.308	0.308	0.375 *	0.375 *
SBR *(b)*	1	1600	73	73	74	74	0.046	0.046	0.046	0.046
EBL	1	1600	60	60	60	60	0.038 *	0.038 *	0.038 *	0.038 *
EBT	1	1600	6	6	7	7	0.005	0.005	0.006	0.006
EBR *(c)*	0	0	2	2	2	2	-	-	-	-
WBL	0	0	6	6	31	31	-	-	-	-
WBT	1	1600	4	5	5	6	0.006 *	0.007 *	0.023 *	0.023 *
WBR *(d)*	2	3200	40	41	47	47	0.013	0.013	0.015	0.015
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.492**	**0.493**	**0.541**	**0.541**
					SCENARIO LEVEL OF SERVICE:		**A**	**A**	**A**	**A**

NOTES:

RTOR: *(a) 38%*
(b) 14%
(c) 71%
(d) 87%

Printed: 12/04/20

#20081 SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT REF: 02 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *01/23/19*

TIME PERIOD: *AM PEAK HOUR*

N/S STREET: *SANTA MARIA WAY*

E/W STREET: *MILLER STREET (SPLIT PHASED)*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES		NORTH BOUND L	T	R	SOUTH BOUND L	T	R	EAST BOUND L	T	R	WEST BOUND L	T	R
(A)	EXISTING:	**39**	**389**	**166**	**5**	**161**	**3**	**26**	**158**	**33**	**188**	**104**	**9**
(B)	PROJECT-ADDED:	**1**	**5**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**
(C)	CUMULATIVE:	**39**	**430**	**173**	**5**	**181**	**3**	**26**	**188**	**35**	**210**	**116**	**9**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND L T TR	SOUTH BOUND L T TR	EAST BOUND L T TR	WEST BOUND L LT TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	39	40	39	40	0.024	0.025	0.024	0.025
NBT	2	3200	389	394	430	435	0.165 *	0.168 *	0.179 *	0.183 *
NBR *(a)*	0	0	138	143	144	149	-	-	-	-
SBL	1	1600	5	5	5	5	0.003 *	0.003 *	0.003 *	0.003 *
SBT	2	3200	161	162	181	182	0.051	0.051	0.057	0.058
SBR *(b)*	0	0	2	2	2	2	-	-	-	-
EBL	1	1600	26	26	26	26	0.016	0.016	0.016	0.016
EBT	2	3200	158	158	188	188	0.055 *	0.055 *	0.065 *	0.065 *
EBR *(c)*	0	0	19	19	20	20	-	-	-	-
WBL	0	0	188	190	210	212	-	-	-	-
WBT	3	4800	104	104	116	116	0.062 *	0.062 *	0.069 *	0.069 *
WBR *(d)*	0	0	4	4	4	4	-	-	-	-
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.385**	**0.388**	**0.416**	**0.420**
					SCENARIO LEVEL OF SERVICE:		A	A	A	A

NOTES:

RTOR: *(a) 17%*
(b) 33%
(c) 42%
(d) 55%

Printed: 12/02/20

#20081 SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT **REF:** 02 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***01/23/19***

TIME PERIOD: ***PM PEAK HOUR***

N/S STREET: ***SANTA MARIA WAY***

E/W STREET: ***MILLER STREET (SPLIT PHASED)***

CONTROL TYPE: ***SIGNAL***

TRAFFIC VOLUME SUMMARY

VOLUMES		NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A)	EXISTING:	**27**	**266**	**140**	**15**	**209**	**11**	**23**	**180**	**30**	**286**	**207**	**13**
(B)	PROJECT-ADDED:	**1**	**5**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**
(C)	CUMULATIVE:	**27**	**343**	**152**	**15**	**230**	**11**	**23**	**190**	**57**	**303**	**255**	**14**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND L T TR	SOUTH BOUND L T TR	EAST BOUND L T TR	WEST BOUND L LT TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	1	1600	27	28	27	28	0.017	0.018	0.017	0.018
NBT	2	3200	266	271	343	348	0.111 *	0.114 *	0.138 *	0.140 *
NBR (a)	0	0	90	93	97	101	-	-	-	-
SBL	1	1600	15	15	15	15	0.009 *	0.009 *	0.009 *	0.009 *
SBT	2	3200	209	210	230	231	0.067	0.067	0.073	0.073
SBR (b)	0	0	4	4	4	4	-	-	-	-
EBL	1	1600	23	23	23	23	0.014	0.014	0.014	0.014
EBT	2	3200	180	180	190	190	0.062 *	0.062 *	0.071 *	0.071 *
EBR (c)	0	0	19	19	36	36	-	-	-	-
WBL	0	0	286	288	303	305	-	-	-	-
WBT	3	4800	207	207	255	255	0.104 *	0.105 *	0.118 *	0.119 *
WBR (d)	0	0	8	8	9	9	-	-	-	-
			LOST TIME:				0.100 *	0.100 *	0.100 *	0.100 *
			TOTAL INTERSECTION CAPACITY UTILIZATION:				**0.386**	**0.390**	**0.436**	**0.439**
			SCENARIO LEVEL OF SERVICE:				A	A	A	A

NOTES:

RTOR: *(a) 36%*
(b) 64%
(c) 37%
(d) 38%

Printed: 12/04/20

#20081 SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT REF: 03 AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *9/10/2018*

TIME PERIOD: *AM PEAK HOUR*

N/S STREET: *BRADLEY ROAD-COLLEGE DRIVE (SPLIT PHASED)*

E/W STREET: *SANTA MARIA WAY*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES		NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A)	EXISTING:	**304**	**292**	**343**	**92**	**244**	**44**	**70**	**263**	**168**	**328**	**352**	**64**
(B)	PROJECT-ADDED:	**2**	**0**	**0**	**0**	**0**	**2**	**5**	**5**	**5**	**0**	**2**	**0**
(C)	CUMULATIVE:	**327**	**371**	**364**	**95**	**249**	**44**	**76**	**317**	**174**	**334**	**364**	**134**

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND L LT T R	SOUTH BOUND L T TR	EAST BOUND L TT R	WEST BOUND L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVE-MENTS		# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL		0	0	304	306	327	329	-	-	-	-
NBT		3	4800	292	292	371	371	0.124 *	0.125 *	0.145 *	0.146 *
NBR	*(a)*	1	1600	343	343	364	364	0.214	0.214	0.228	0.228
SBL		1	1600	92	92	95	95	0.058	0.058	0.059	0.059
SBT		2	3200	244	244	249	249	0.083 *	0.083 *	0.084 *	0.085 *
SBR	*(b)*	0	0	21	22	21	22	-	-	-	-
EBL		1	1600	70	75	76	81	0.044	0.047	0.048	0.051
EBT		2	3200	263	268	317	322	0.082 *	0.084 *	0.099 *	0.101 *
EBR	*(c)*	1	1600	84	87	87	90	0.053	0.054	0.054	0.056
WBL		1	1600	328	328	334	334	0.205 *	0.205 *	0.209 *	0.209 *
WBT		2	3200	352	354	364	366	0.125	0.126	0.145	0.146
WBR	*(d)*	0	0	48	48	101	101	-	-	-	-
						LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
						TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.594**	**0.597**	**0.637**	**0.641**
						SCENARIO LEVEL OF SERVICE:		**A**	**A**	**B**	**B**

NOTES:

RTOR: *(a) Free RT Lane.*
(b) 52%
(c) 50%
(d) 25%

Printed: 12/02/20

#20081 SANTA MARIA DRIVE-IN RESIDENTIAL PROJECT **REF:** 03 PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: *9/10/2018*

TIME PERIOD: *PM PEAK HOUR*

N/S STREET: *BRADLEY ROAD-COLLEGE DRIVE (SPLIT PHASED)*

E/W STREET: *SANTA MARIA WAY*

CONTROL TYPE: *SIGNAL*

TRAFFIC VOLUME SUMMARY

VOLUMES		NORTH BOUND L	NORTH BOUND T	NORTH BOUND R	SOUTH BOUND L	SOUTH BOUND T	SOUTH BOUND R	EAST BOUND L	EAST BOUND T	EAST BOUND R	WEST BOUND L	WEST BOUND T	WEST BOUND R
(A)	EXISTING:	238	339	325	70	422	41	65	213	227	339	298	96
(B)	PROJECT-ADDED:	2	0	0	0	0	2	5	5	5	0	2	0
(C)	CUMULATIVE:	263	433	337	117	580	61	99	328	233	355	399	165

GEOMETRICS

LANE GEOMETRICS	NORTH BOUND L LT T R	SOUTH BOUND L T TR	EAST BOUND L TT R	WEST BOUND L T TR

TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

LEVEL OF SERVICE CALCULATIONS

MOVEMENTS	# OF LANES	CAPACITY	SCENARIO VOLUMES 1	2	3	4	SCENARIO V/C RATIOS 1	2	3	4
NBL	0	0	238	240	263	265	-	-	-	-
NBT	3	4800	339	339	433	433	0.120 *	0.121 *	0.145 *	0.145 *
NBR (a)	1	1600	325	325	337	337	0.203	0.203	0.211	0.211
SBL	1	1600	70	70	117	117	0.044	0.044	0.073	0.073
SBT	2	3200	422	422	580	580	0.140 *	0.140 *	0.193 *	0.193 *
SBR (b)	0	0	25	26	37	38	-	-	-	-
EBL	1	1600	65	70	99	104	0.041	0.044	0.062	0.065
EBT	2	3200	213	218	328	333	0.067 *	0.068 *	0.103 *	0.104 *
EBR (c)	1	1600	102	104	105	107	0.064	0.065	0.066	0.067
WBL	1	1600	339	339	355	355	0.212 *	0.212 *	0.222 *	0.222 *
WBT	2	3200	298	300	399	401	0.108	0.108	0.149	0.150
WBR (d)	0	0	46	46	79	79	-	-	-	-
					LOST TIME:		0.100 *	0.100 *	0.100 *	0.100 *
					TOTAL INTERSECTION CAPACITY UTILIZATION:		**0.639**	**0.641**	**0.763**	**0.764**
					SCENARIO LEVEL OF SERVICE:		**B**	**B**	**C**	**C**

NOTES:

RTOR: *(a) Free RT Lane.*
(b) 39%
(c) 55%
(d) 52%

Printed: 12/04/20

HCS7 Two-Way Stop-Control Report

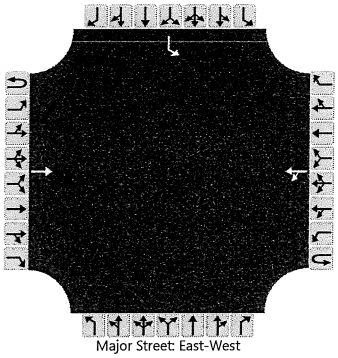
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/2/2020
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	EXISTING CONDITIONS

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			490			4	255							3		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5								3		
Capacity, c (veh/h)						1009								276		
v/c Ratio						0.00								0.01		
95% Queue Length, Q_{95} (veh)						0.0								0.0		
Control Delay (s/veh)						8.6								18.2		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)					0.2								18.2			
Approach LOS													C			

AWD = 12.2 SEC = LOS B

HCS7 Two-Way Stop-Control Report

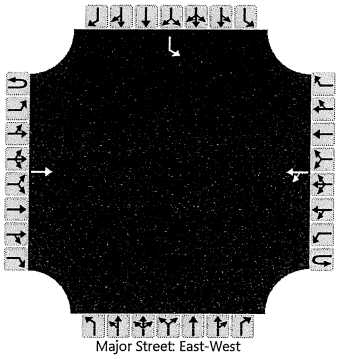
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/10/2020
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	EXISTING CONDITIONS

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			398			8	254							14		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9								16		
Capacity, c (veh/h)						1113								328		
v/c Ratio						0.01								0.05		
95% Queue Length, Q_{95} (veh)						0.0								0.1		
Control Delay (s/veh)						8.3								16.5		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)						0.3								16.5		
Approach LOS														C		

AWD = 13.5 SEC = LOS B

HCS7 Two-Way Stop-Control Report

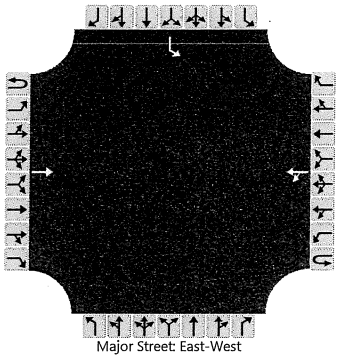
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/2/2020
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	EXISTING + PROJECT

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			494			4	256							3		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5								3		
Capacity, c (veh/h)						1005								273		
v/c Ratio						0.00								0.01		
95% Queue Length, Q_{95} (veh)						0.0								0.0		
Control Delay (s/veh)						8.6								18.3		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)					0.2								18.3			
Approach LOS													C			

AWD = 12.2 sec = LOS B

HCS7 Two-Way Stop-Control Report

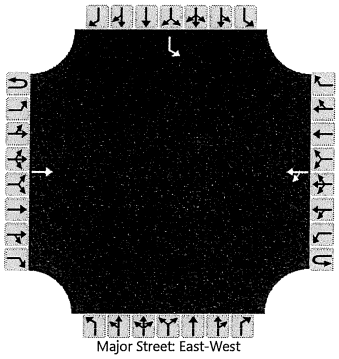
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/10/2020
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	EXISTING + PROJECT

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			402			8	255							14		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9								16		
Capacity, c (veh/h)						1108								325		
v/c Ratio						0.01								0.05		
95% Queue Length, Q_{95} (veh)						0.0								0.2		
Control Delay (s/veh)						8.3								16.6		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)					0.3								16.6			
Approach LOS													C			

AWD = 13.6 SEC = LOS B

HCS7 Two-Way Stop-Control Report

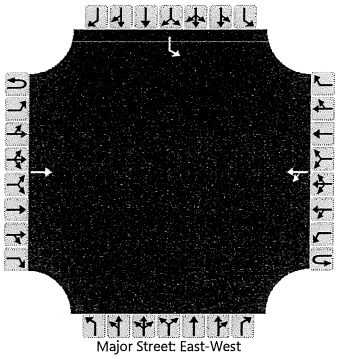
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/2/2020
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	CUMULATIVE

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			577			4	344							3		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5								3		
Capacity, c (veh/h)						927								201		
v/c Ratio						0.00								0.02		
95% Queue Length, Q_{95} (veh)						0.0								0.1		
Control Delay (s/veh)						8.9								23.2		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)					0.2								23.2			
Approach LOS													C			

AWD = 14.3 SEC = LOS B

HCS7 Two-Way Stop-Control Report

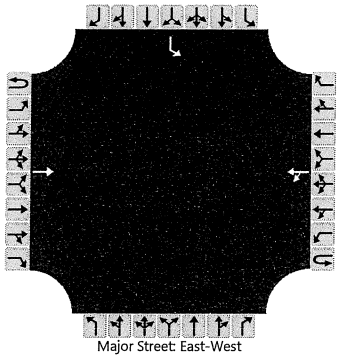
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/10/2020
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	CUMULATIVE

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			434			8	368							17		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9								19		
Capacity, c (veh/h)						1075								253		
v/c Ratio						0.01								0.07		
95% Queue Length, Q_{95} (veh)						0.0								0.2		
Control Delay (s/veh)						8.4								20.4		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)						0.3								20.4		
Approach LOS														C		

AWD = 16.5 SEC = LOS C

HCS7 Two-Way Stop-Control Report

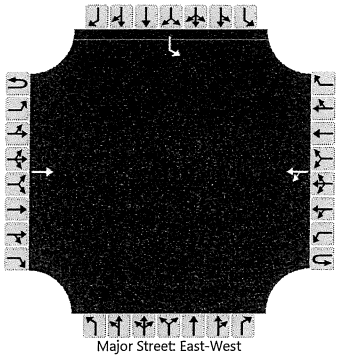
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/2/2020
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	CUMULATIVE + PROJECT

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			581			4	345							3		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						5								3		
Capacity, c (veh/h)						923								200		
v/c Ratio						0.00								0.02		
95% Queue Length, Q_{95} (veh)						0.0								0.1		
Control Delay (s/veh)						8.9								23.3		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)					0.2								23.3			
Approach LOS													C			

AWD = 14.3 SEC = LOS B

HCS7 Two-Way Stop-Control Report

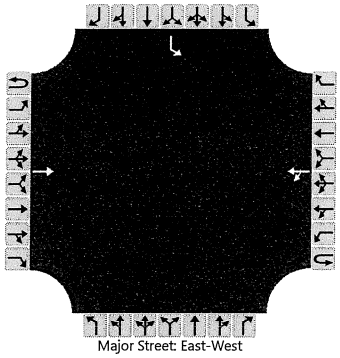
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	12/10/2020
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	CUMULATIVE + PROJECT

Site Information

Intersection	US 101 SB/SANTA MARIA WAY
Jurisdiction	SANTA MARIA
East/West Street	SANTA MARIA WAY
North/South Street	US 101 SB RAMPS
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		1	0	0
Configuration			T			LT								L		
Volume (veh/h)			437			8	369							17		
Percent Heavy Vehicles (%)						3								3		
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1		
Critical Headway (sec)						4.13								7.13		
Base Follow-Up Headway (sec)						2.2								3.5		
Follow-Up Headway (sec)						2.23								3.53		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						9								19		
Capacity, c (veh/h)						1072								251		
v/c Ratio						0.01								0.08		
95% Queue Length, Q_{95} (veh)						0.0								0.2		
Control Delay (s/veh)						8.4								20.5		
Level of Service (LOS)						A								C		
Approach Delay (s/veh)					0.3								20.5			
Approach LOS													C			

AWD = 16.6 Sec = LOS C

HCS7 Two-Way Stop-Control Report

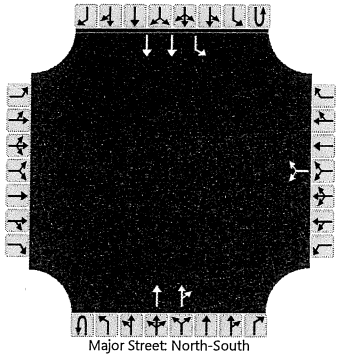
General Information

Analyst	SAS
Agency/Co.	SANTA MARIA
Date Performed	12/4/2020
Analysis Year	2020
Time Analyzed	AM
Intersection Orientation	North-South
Project Description	CUMULATIVE + PROJECT

Site Information

Intersection	SANTA MARIA WY/ DRIVEWAY
Jurisdiction	ATE
East/West Street	PROJECT DRIVEWAY
North/South Street	SANTA MARIA WAY
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						15		12			669	6	0	3	390	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							29							3		
Capacity, c (veh/h)							461							860		
v/c Ratio							0.06							0.00		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							13.3							9.2		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)					13.3								0.1			
Approach LOS					B											

AWD 12.9 LOS B

HCS7 Two-Way Stop-Control Report

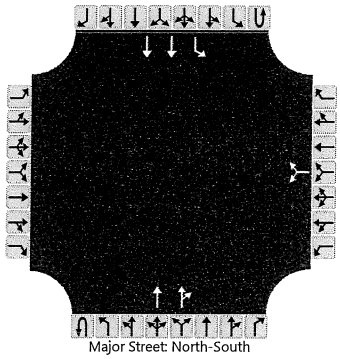
General Information

Analyst	SAS
Agency/Co.	SANTA MARIA
Date Performed	12/4/2020
Analysis Year	2020
Time Analyzed	PM
Intersection Orientation	North-South
Project Description	CUMULATIVE + PROJECT

Site Information

Intersection	SANTA MARIA WY/ DRIVEWAY
Jurisdiction	ATE
East/West Street	PROJECT DRIVEWAY
North/South Street	SANTA MARIA WAY
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	2	0	0	1	2	0
Configuration							LR				T	TR		L	T	
Volume (veh/h)						11		7			523	18	0	13	567	
Percent Heavy Vehicles (%)						3		3					3	3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.9						4.1		
Critical Headway (sec)						6.86		6.96						4.16		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							20							14		
Capacity, c (veh/h)							436							976		
v/c Ratio							0.04							0.01		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
Control Delay (s/veh)							13.6							8.7		
Level of Service (LOS)							B							A		
Approach Delay (s/veh)					13.6								0.2			
Approach LOS					B											

AWD 11.6 LOS B