

TRAFFIC ACCESS ASSESSMENT

FOR

SUTTER RANCH SUBDIVISION

Sutter, Sutter County, CA

Prepared for:

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January 30, 2020

3667-01

Sutter Ranch 1-30-2020.rpt

KD Anderson & Associates, Inc.
Transportation Engineers

**TRAFFIC ACCESS ASSESSMENT FOR
SUTTER RANCH SUBDIVISION
Sutter, Sutter County, CA**

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**TRAFFIC ACCESS ASSESSMENT FOR
SUTTER RANCH SUBDIVISION**
Sutter, Sutter County, CA

INTRODUCTION

This report summarizes KDAnderson & Associates assessment of traffic circulation and access to the **Sutter Ranch Subdivision** proposed in the Sutter County community of Sutter, as shown in Figure 1 (vicinity map) and Figure 2 (site plan).

Study Approach /Key Issues

The assessment contained herein addresses the operation of the five (5) existing intersections in Sutter during the weekday a.m. and p.m. peak hours. A long term analysis was not conducted for this site.

Key issues identified by Sutter County Department of Public Works staff include:

1. What are the trip generation characteristics of the project and how will those trips be distributed?
2. What is the project's impact to key locations in and around Sutter?
3. What improvements are needed to safely accommodate traffic at the project's access points on Butte House Road?

BACKGROUND INFORMATION

Streets and Intersections

The materials which follow describe the study area circulation system.

Roadways. These roadways serve the area of the project.

Butte House Road. Butte House Road is two-lane road that extends for 7 miles from the Acacia Avenue intersection in Sutter through the community to the area of the State Route 99 / State Route 20 intersection in Yuba City. The roadway is designated a Rural Major Collector in the Sutter County General Plan Circulation Element from Sutter to Township Road and a Urban Minor Arterial from Township Road to the Yuba City limit. In Sutter the route is a two-lane rural road with paved shoulders of varying width. In the area of the project the roadway has a centerline stripe with "no passing zones" indicated at intersections. The posted speed limit is 35 mph in Sutter west of the proposed project but increases to 55 mph in the area east of the site.

A 24-hr traffic count conducted for this study in December 2019 indicated that Butte House Road carried an average daily traffic volume (ADT) of 3,056 along the project's frontage. As a comparison, the 2010 General Plan EIR noted that Butte House Road carried 2,450 ADT from Acacia Avenue to Howlett Road.

Mallott Road. Mallott Road is a Rural local road that extends north from Butte House Road along the eastern side of the project site. Mallott Road is a two-lane road with gravel shoulders. The 55 mph prima facie speed limit applies. Centerline striping is provided. While no daily traffic volume counts were made for this low volume road, based on the peak hour volume observed at its intersection with Butte House Road the 24 hr volume on Mallott Road is estimated to be roughly 250 vehicles per day.

Butte Avenue. Butte Avenue is a Rural local road that is parallel to and north of Butte House Road from Acacia Avenue through the Sutter cemetery to the project site. Butte Avenue is a two-lane road with varying level of improvements. Near the project the road has no shoulder, but further west the roadway has curb and designated on-street parking for the cemetery. A centerline stripe is marked through the cemetery.

Sutter Avenue. Sutter Avenue is a Rural local road that runs east-west across the community from an intersection on Acacia Avenue near Sutter HS to the project site. Sutter Avenue is generally a two-lane roadway with varying paved or graveled shoulders. Direct access to private residences is prevalent, and parking along the roadway occurs frequently. There are no centerline markings on Sutter Avenue. A 25 mph prima facie speed limit applies.

Intersections. The following five intersections are addressed in this analysis.

The **Acacia Avenue / Butte House Road intersection** is a “tee” controlled by a stop sign on the Butte House Road approach. Each approach has a single entering travel lane, but there are Class 2 bike lanes on Acacia Avenue through the intersection. No crosswalks are striped.

The **Butte House Road / California Avenue intersection** is a four-way intersection controlled by stop signs on the northbound and southbound California Avenue approaches. Each approach has a single lane. Crosswalks are striped on the south, west and east legs of the intersection. Class 2 bike lanes begin on California Avenue south of the intersection.

The **Butte House Road / Mallott Road intersection** is a four-legged intersection, although the other leg is an unimproved private access road. The intersection is controlled by a stop sign on the southbound Mallott Road approach, and each approach has a single lane.

The **Butte House Road / Township Road intersection** is a four-legged intersection controlled by an all-way stop. Each approach has a single entering lane.

The **Acacia Avenue / Sutter Avenue intersection** is a four-legged intersection, with the western leg being an exit from Sutter HS's lane student drop-off zone. The intersection is

controlled by stop signs on westbound Sutter Avenue and on the school exit. Class 2 bike lanes are striped on both streets. Crosswalks are striped across the east and north legs of the intersection, and sidewalk connects the intersection with Sutter HS.

Traffic Volume Data Collection

Weekday a.m. and p.m. peak hour traffic counts were conducted at the study intersections on December 3, 2019 when local schools were in session. The results of these counts are presented in Figure 3. A 24-hour count was also conducted on Butte House Road along the project frontage west of Mallott Road. Traffic count information is provided in the appendix.





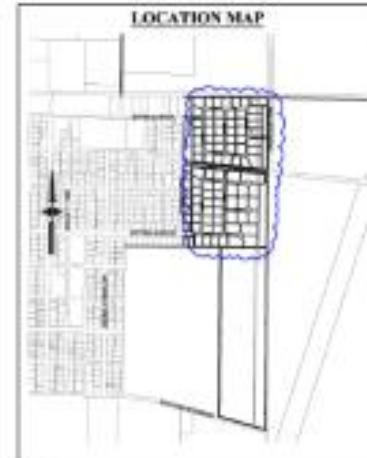
TENTATIVE PARCEL MAP
2019-00XX (SMALL LOT)
SUTTER RANCH SUBDIVISION MAP

SUTTER COUNTY, CALIFORNIA

DR. TILGHMAN, JR., 2009

PAGE 4 OF 5

LOCATION MAP

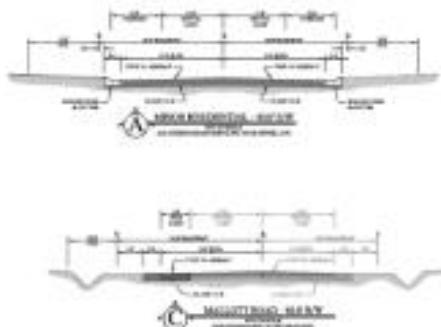


LAND USE SUMMARY

PARCEL NUMBER:	28 LOTS	20-11 ACRES	L28 LOTSBA
RELEASE NO 1-	28 LOTS	13-03 ACRES	L23 LOTSBA
RELEASE NO 2-	28 LOTS	13-04 ACRES	L24 LOTSBA
RELEASE NO 3-	28 LOTS	13-05 ACRES	L25 LOTSBA
RELEASE NO 4-	28 LOTS	13-06 ACRES	L26 LOTSBA

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PARCEL-A	DEED DATE-PEND	0.00 ACRES
PARCEL-B	DEED DATE-PEND	1.23 ACRES
PARCEL-C	DEED DATE-PEND	1.91 ACRES
TOTAL-A		1.23 ACRES
TOTAL-C		1.91 ACRES



PROJECT NOTES

SODER A KAUSHI TRUST	10555 PINE ST.	10555 PINE ST.
2000 BIRCH AVENUE	REDWOOD CITY, CA 94063	COUNTY OF SAN MATEO
SETTELL, CA 94082	EXISTING GENERAL PLAT SURVEYORSHIP	LAW ENFORCEMENT
CONTACT: PAULA SABIS	LOW DENSITY RESIDENTIAL	COURT OF MATEO
PHONE: (650) 551-1111	PROPOSED GENERAL PLAT SURVEYORSHIP	SANITARY DISTRICT
APPLICANT:	LOW DENSITY RESIDENTIAL	PARKING DISTRICT
SETTELL	EXISTING SURVEY	PUBLIC WORKS
10555 PINE ST., SUITE 1100	PROPOSED SURVEY	POWER DISTRICT
SETA CITY, CA 94063	PROPOSED PLAT	SEWER DISTRICT
CONTACT: ROBERT SETTELL	PROPOSED SURVEY	WATER DISTRICT
PHONE: (650) 551-0000	LEVEL PROTECTION	WILDERNESS
PERMITTING AUTHORITY:	STATE OF CALIFORNIA	WORKS OF PUBLIC USE
MAN: DETERMINED	ELEMENTARY SCHOOL DISTRICT	WILDERNESS DISTRICT
1200 E STREET, P.O. BOX 2	SETTELL ELEMENTARY SCHOOL DISTRICT	WILDERNESS EXTENSION W/
MARIN COUNTY, CA 94541	EXISTING MUNICIPAL DISTRICT	WILDERNESS
CONTACT: MIKE MORRISON	SETTELL MUNICIPAL DISTRICT	PARKS & GARDEN-ELECTRIC
PHONE: (415) 454-5400	EXISTING SURVEY	NATURAL GAS
ADDITIONAL PAGE 11, NO.	EXISTING SURVEY	ELECTRIC GAS & ELECTRIC
1-245-BEX	EXISTING SURVEY	COMMERCIAL
1-246-BEX	EXISTING SURVEY	ALUMINUM & COPPER-SET
1-247-BEX	EXISTING SURVEY	CABLE
1-248-BEX	EXISTING SURVEY	CONCRETE
1-249-BEX	EXISTING SURVEY	DRILLING
1-250-BEX	EXISTING SURVEY	HAZARDOUS WASTE
1-251-BEX	EXISTING SURVEY	INDUSTRIAL
AREA OF SURVEYED MAP:	CODECURE	LINE
NO. 100 SURVEY ACRES	BUTTERFIELD SURVEY DISTRICT	LINE

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3. RESIDENTIAL PROPERTY OWNERS THAT HAVE DEVELOPMENT AND PLAT RELATED FINAL MAPS PERTAINING TO SECTION 8A(1)(G) OF THE SUBDIVISION ACT.
 4. A PUBLIC UTILITY EASEMENT AGREEMENT OR DEED FOR ADDITIONAL SUBDIVISION TO ALL PUBLIC UTILITY PROVIDERS EXCEPT AGREEMENTS TO EXISTING PUBLIC UTILITY EASEMENTS WHICH ARE IN PLACE WHEN THIS APPROVEMENT WAS APPROVED BY COUNTY ENGINEER.
 5. THIS SUBDIVISION IS FOR SUBDIVISION MAP PURPOSES ONLY. NOTING SUBDIVISIONS, BLOCK ALLOCATIONS, ADDRESS, AND PARCELS ARE FOR VISIBLE RECORDS TO FINAL MAP.
 6. THIS IS AN APPROVAL FOR A DEVELOPMENT PERMIT.
 7. VILLAGE NUMBERINGS IS FOR HOMEPURCHASE PURPOSES ONLY AND DOES NOT INDICATE PLANNED USE OR DEVELOPMENT. ULTIMATE DEVELOPMENT PLANS WILL BE DETERMINED AND PUBLISHED AT FINAL MAP AND/OR IMPROVEMENT PLAN STAGES.
 8. ALL STREETING SURVEYS AND WILLS BE REMOVED PRIOR TO OR IN PART OF CONSTRUCTION.
 9. ALL SEPTIC TANKS SHALL BE REMOVED PRIOR TO OR IN PART OF CONSTRUCTION.
 10. DEVELOPER SHALL REINSTATE CRANE TRAILER FRONTAGE DETERMINED BY THE COUNTY AS PART OF DEVELOPMENT OF TRACT 1 OWNED ON THE COUNTY'S PARCEL MAP.
 11. CRIMINAL, APPLICANT, ENGINEER, AND SURVEYOR SHALL MAINTAIN COMMUNICATING ANDER WITHIN RELATED TO THIS REQUEST.

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AMERICAN TITLE COMPANY - GEORGIA NUMBER
E102-599944 DATED APRIL 5, 1999



COUNTY RECORDER APPROVAL
THE COUNTY OF SUTTER PLANNING
COMMISSION HAS CONSIDERED AND APPROVED
RESOLUTION #14-005 APPROVING TENTATIVE
PLATTS AND THE PUBLIC RECORDING
PLANS FOR THE PROJECT NUMBER
2010.

000475-BL0008

2 INDICATE PREPARED SMALL LOT FRAME AND LARGE LOT PARCEL.

M·H·M
ENGINEERS & ARCHITECTS SINCE 1862
300 E. 22nd Street, P.O. Box 800 • TEL. 702-747-6464

SITE PLAN

Level of Service Analysis

Methodology. *Level of Service Analysis* was used to provide a basis for describing existing traffic conditions and for evaluating the significance of project traffic impacts. Level of Service (LOS) measures the *quality* of traffic flow and is represented by letter designations from ‘A’ to ‘F’, with a grade of ‘A’ referring to the best conditions, and ‘F’ representing the worst conditions. The guidelines and analyses used for this report follow Sutter County standards. Table 1 provides definition of the Levels of Service A through F for both signalized and unsignalized intersections.

Significance Criteria. The minimum LOS standard used in this analysis is consistent with the Sutter County General Plan Policy M2.4 which identifies LOS D as the threshold unless otherwise addressed in an adopted specific plan or community plan.

**TABLE 1
LEVEL OF SERVICE DEFINITIONS**

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
A	Uncongested operations, all queues clear in a single-signal cycle. Delay \leq 10.0 sec	Little or no delay. Delay \leq 10 sec/veh	Completely free flow.
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and \leq 20.0 sec	Short traffic delays. Delay > 10 sec/veh to 15 sec/veh	Free flow, presence of other vehicles noticeable.
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and \leq 35.0 sec	Average traffic delays. Delay > 15 sec/veh to 25 sec/veh	Ability to maneuver and select operating speed affected.
D	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and \leq 55.0 sec	Long traffic delays. Delay > 25 sec/veh to 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and \leq 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh to 50 sec/veh	At or near capacity, flow quite unstable.
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Sources: 2010 Highway Capacity Manual, Transportation Research Board (TRB).

Existing Traffic Operations. The current traffic volume information (Figure 3) was used to calculate the Level of Service occurring at the study intersection during peak morning and evening periods and to evaluate traffic signal warrants.

Level of Service. The methodologies accepted by Sutter County under adopted guidelines were employed. Table 2 presents the Level of Service conditions at the study intersection based on these volumes. These intersections operate at LOS C or better which is within the County's minimum LOS D threshold.

TABLE 2
EXISTING PEAK HOUR LEVELS OF SERVICE AT INTERSECTIONS

Location	Control	AM Peak Hour		PM Peak Hour	
		LOS	Average Delay (secs)	LOS	Average Delay (secs)
Butte House Rd / Acacia Ave Westbound approach	WB Stop	C	18	B	10
Butte House Rd / California Ave Northbound approach Southbound approach	NB/SB Stop	B	11	A	10
		C	17	B	12
Butte House Rd / Mallott Rd Southbound approach	SB Stop	B	12	B	11
Butte House Rd / Township Rd	All-Way Stop	B	12	A	10
Acacia Ave / Sutter Ave Eastbound approach Westbound approach	EB/WB Stop	B	14	A	10
		B	15	B	11

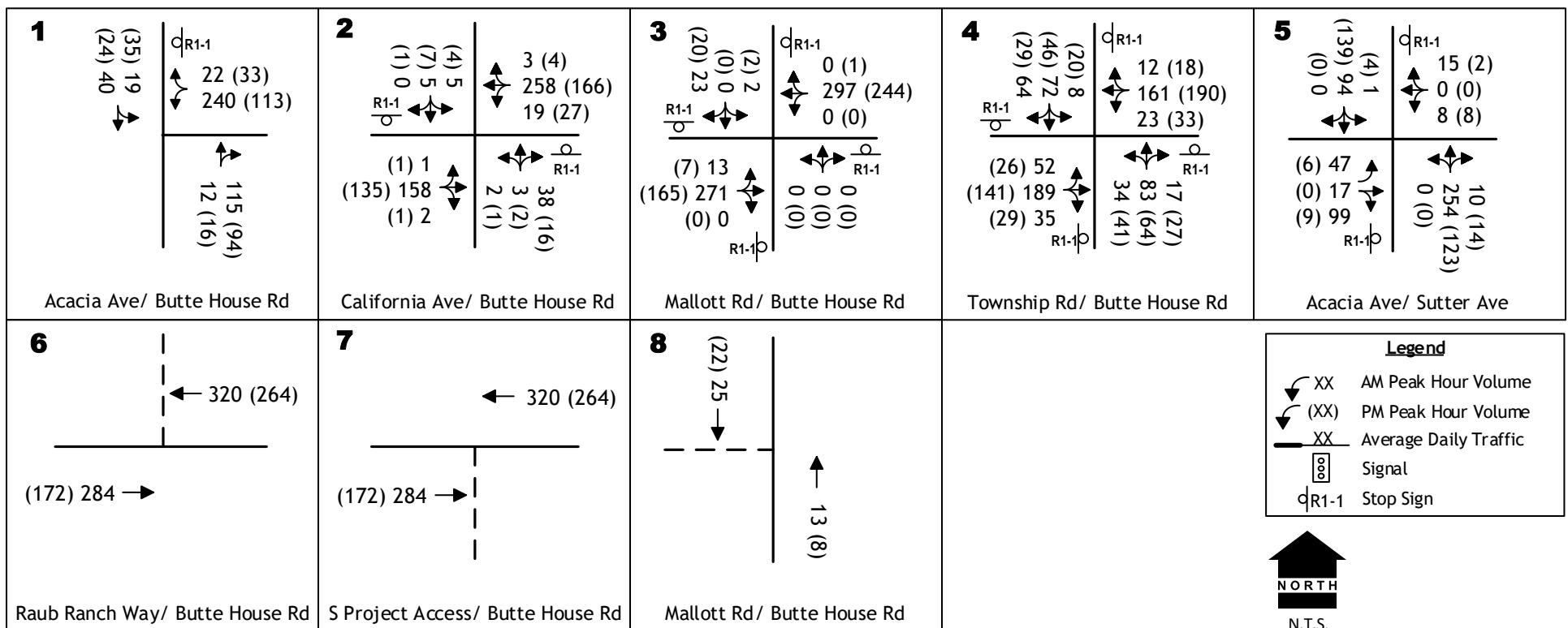
Traffic Signal Warrants. Current peak hour traffic volumes were compared to MUTCD traffic signal warrants to determine whether traffic signals may already be justified. Current volumes do not reach the level that signal warrants are reached.

Stopping Sight Distance

Available sight distance was evaluated based on the standards documented in the Caltrans *Highway Design Manual (HDM)*. The most significant evaluation parameter is the availability of "**Minimum Safe Stopping Distance**" (MSSD). This criterion is documented in Table 201.1 of the Highway Design Manual and suggests the minimum sight distance that must be available for a motorist to perceive a hazard in the road and come to a stop. Stopping sight distance is measured from the driver's eye, assumed to be 3½' above the pavement to an object ½' high on the road. For this analysis the perceived hazard is a vehicle entering the intersection from Mallott Road in advance of a motorist traveling eastbound or westbound along Butte House Road. Motorists at the intersection have unrestricted visibility as the roadway is straight, and the

available sight distance exceeds the requirements for the 55 mph *prima facie* posted speed (i.e., 500 feet).

A second sight distance standard employed for minor street traffic accounts for the gap in traffic required for motorists to join the traffic stream without influencing or impeding approaching traffic. This requirement, termed "**Corner Sight Distance**" (CSD), is documented in Table 405.1A of the Highway Design Manual. This criterion is often used for minor street traffic making a left turn across approaching traffic and entering the traffic flow on the far side of the intersection. For private street intersections, i.e. driveways, Table 201.1 may be used as the minimum distances. For a 55 mph speed the corner sight distance for a passenger vehicle entering a two-lane road is 600 feet. This sight distance is available at the Mallott Road intersection.



PROJECT IMPACTS

Project Characteristics

The project is an 84-lot single family residential subdivision with multiple points of access. The characteristics of a development project are identified in terms of trip generation, distribution and assignment.

Trip Generation. Traffic engineers characterize the vehicle movements into and out of a business in terms of “trip ends”. The trip generation forecast for this store has been based on review of trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition* (2017).

This project is expected to generate approximately 62 a.m. and 83 p.m. peak hour trips measured at the site access as shown in Table 3. ITE data suggests that on a daily basis the project could generate 624 trips (i.e., ½ inbound and ½ outbound)

TABLE 3
TRIP GENERATION RATES / FORECASTS

Land Use / ITE Code	Unit	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Single Family Detached Housing (210)	dwelling	25%	75%	0.74	63%	37%	0.99
Sutter Ranch Subdivision	84 dwellings	16	46	62	52	31	83

Source: ITE *Trip Generation Manual 10th Edition*

Trip Distribution. The distribution of project traffic was determined based on knowledge of the typical trips purposes at various times of the day for single family residence, from review of current travel patterns and with consideration for traffic volume forecasts from the City of Yuba City’s regional travel demand model. The community of Sutter is located about six miles west of Yuba City, and about 1 mile north of SR 20. The town has a population of about 3,000 and there are limited local shopping opportunities, but the community has local schools for students from TK to 12. We would expect most project traffic related to shopping and employment will be oriented to destinations outside of Sutter. The Yuba City traffic model includes the Sutter area, and review of model forecast indicates that Sutter’s external trips are split 10% south to SR 20 and 90% east on Butte House Road.

The resulting a.m. and p.m. peak hour trip distribution assumptions for the project are presented in Table 4.

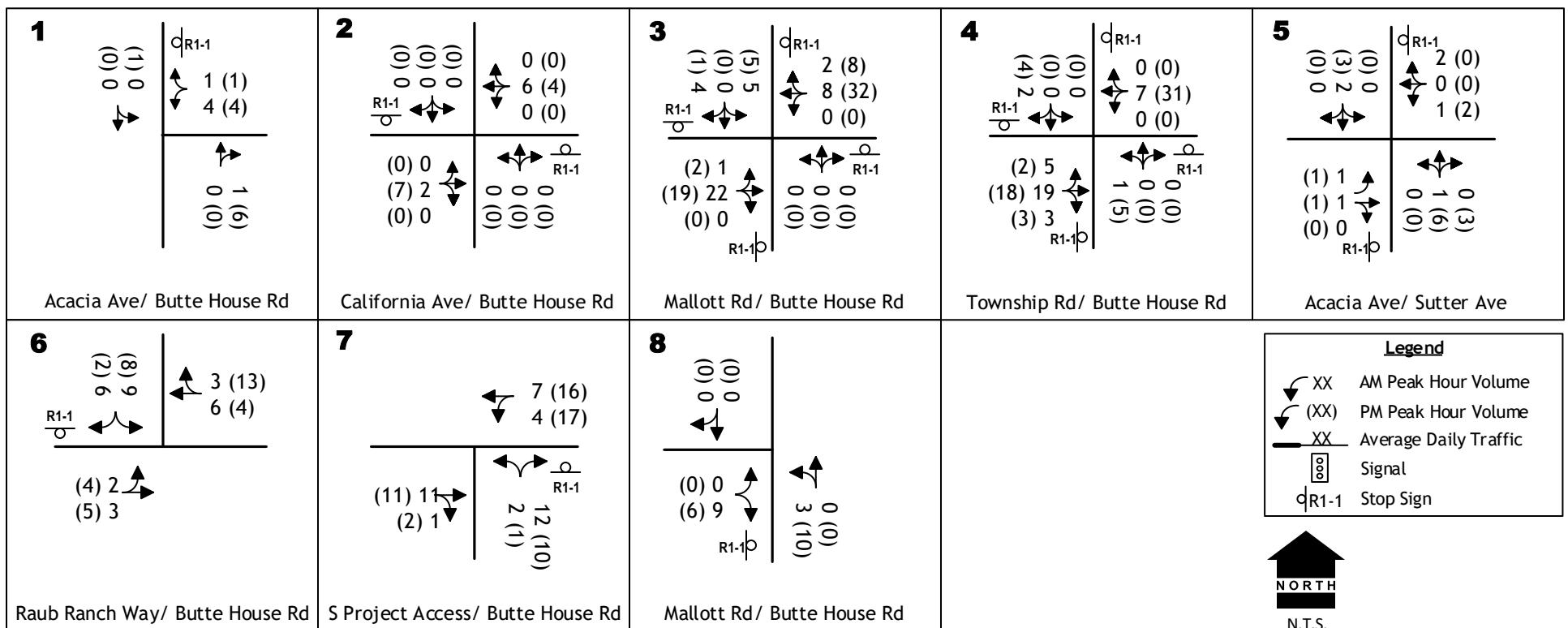
TABLE 4
PROJECT TRIP DISTRIBUTION

Direction	Route	Percentage	
		AM Peak Hour	PM Peak Hour
North	Acacia Avenue	2½ %	2½ %
South	Acacia Avenue to SR 20	6½ %	8½%
West	Internal to Sutter School and Commercial	32½%	13½%
East	Butte House Road beyond Mallott Road	58½%	76½%
Total		100%	100%

Figure 4 identifies the resulting assignment of Sutter Ranch trips to the study area street system while Figure 5 shows the Existing plus Project volumes. As suggested in Figure 4, most of the project's local access trips will find their way to Butte House Road, but there are other access routes that could be used from various portions of the site. For example, residents of the southern portion of the development could use Sutter Street to travel west. The assignment assumes 90 daily trips will use this route, with 11 trips in the a.m. peak hour and 10 trips in the p.m. peak hour. Similarly, some residents of the northern portion of the site may use Butte Avenue to travel west. To present a conservative assessment of project impacts to Butte House Road, no project trips have been assigned to this alternative route but it is reasonable to expect that 20 daily and 2-4 peak hour trips might choose to use Butte Avenue.

Existing plus Project Intersection Conditions. Table 5 displays the a.m. and p.m. peak period Level of Service at each study intersection with the proposed project superimposed onto the existing traffic conditions. While existing intersection may see average delays increase by a second or two, all study intersections will operate within the County's minimum LOS D threshold. Thus, the project's traffic impacts are not significant from the standpoint of County LOS policy.

Impacts to Adjacent Roadways. The project will add a small amount of traffic to roads parallel to Butte House Road such as Butte Avenue and Sutter Avenue. The contribution itself is likely to be less than 100 vehicles per day on any road, and increases of this magnitude would not have an appreciable impact based on the overall capacity of the existing roadway system. No specific mitigation is required.



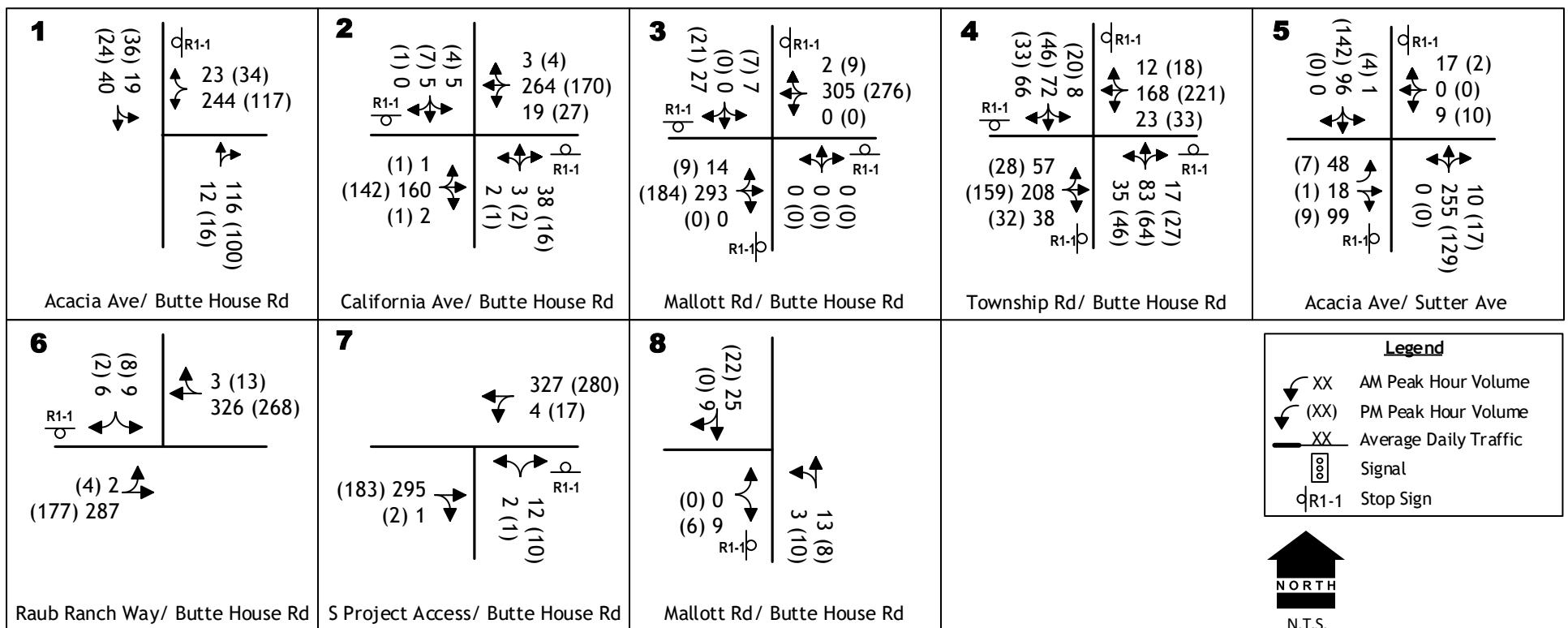


TABLE 5
EXISTING PLUS PROJECT PEAK HOUR LEVELS OF SERVICE AT INTERSECTIONS

Location	Control	AM Peak Hour				PM Peak Hour			
		Existing		Existing Plus Project		Existing		Existing Plus Project	
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
Butte House Rd / Acacia Ave Westbound approach	WB Stop	C	18	C	19	B	10	B	11
Butte House Rd / California Ave Northbound approach Southbound approach	NB/SB Stop	B C	11 17	B C	11 17	A B	10 12	A B	10 12
Butte House Rd / Mallott Rd Southbound approach	SB Stop	B	12	B	14	B	11	B	11
Butte House Rd / Township Rd	All-Way Stop	B	12	B	13	A	10	B	11
Acacia Ave / Sutter Ave Eastbound approach Westbound approach	EB/WB Stop	B B	14 15	B C	14 16	A B	10 11	A B	10 11
Butte House Rd / West Access Southbound approach	SB Stop	-	-	B	13	-	-	B	12
Butte House Rd / East Access Northbound approach	NB Stop	-	-	B	11	-	-	A	10

Assessment of Project Impacts / Issues

Traffic conditions at the project entrances were evaluated based on consideration of sight distance, left turn lane requirements, truck turning requirements, etc.

Sight Distance. Similar to the assessment conducted for the Mallott Road intersection sight distance along Butte House Road approaching the project's two access intersections is unrestricted because the road is straight and level. The view from the most westerly access is clear for about 800 feet to the curve on Butte House Road west of Cypress Street. The resulting sight distance exceeds the MSSD and Corner Sight Distance requirements for 55 mph.

Left Turn Channelization at Access. The project will improve Butte House Road along its frontage to the standard section required by Sutter County. This work will include left turn lanes at the site access intersections. While the roadway will be widened up to the Mallott Road intersection, this intersection itself would continue to have a centerline stripe.

This level of improvement exceeds that provided elsewhere on Butte House Road. Today there are no left turn lanes on Butte House Road at intersections in Sutter west of the project. To an extent this may be due to the lower speed limit adopted in the community (i.e., 35 mph). East of Mallott Road there are no left turn lanes between Sutter and the All-Way Stop at Township Road. East of Township Road there is a left turn lane at the Royo Ranchero Drive and at Madison Road as the route enters the City of Yuba City.

Pedestrian / Bicycle Activity. The location of the proposed is located at the eastern boundary of the community of Sutter. Very little sidewalk exists in the community, notably along the Sutter Union High School frontage and in new residential areas; however, there is generally unpaved shoulder adjacent to the paved roadway shoulder that is available to pedestrians throughout the town. Sidewalks will be provided along the project frontage on Butte House Road. Residents of the southern portion of the site will also be able to walk on Sutter Avenue into town, and while no sidewalks are available, because the volume of background traffic is low this route will be adequate. Similarly the northern portion of the site is also linked to Butte Avenue, and this route is available for pedestrians.

The extent to which a marked crossing is needed on Butte House Road to link the two portions of the site was considered. A legal crossing will exist at each intersection regardless of the presence of a marked crosswalk. Today marked crosswalks are only provided across Butte House Road at California Street, roughly $\frac{1}{2}$ mile from the site. Legal unmarked crossings exist at all other intersections. In this case adding a crosswalk within the existing 55 mph speed limit as the marking could give pedestrians the impression that drivers will always see them and stop, leading to a false sense of security.

Sutter County establishes speed zones in response to engineering surveys that identify the prevailing (85th percentile) and adjust that value in response to factors that are not readily obvious to drivers. It is possible that as the project is developed with access to Butte House Road motorists will react to the new environment by driving at speeds that would permit

enforcement of a lower speed limit. The need for a marked crossing can be revisited at that time. If a marked crossing is installed immediately, it should be accompanied by appropriate advance warning devices.

Similarly, bicyclists will have the opportunity to use local street connections in addition to Butte House Road to reach the balance of the community. No additional mitigation is required.

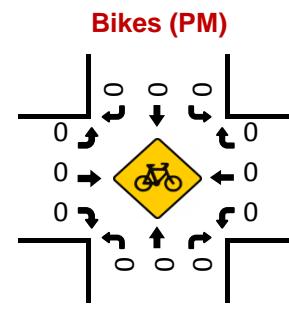
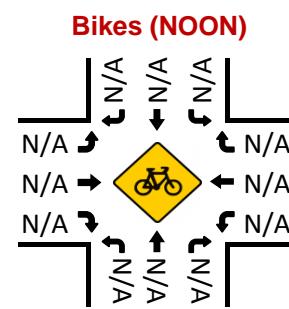
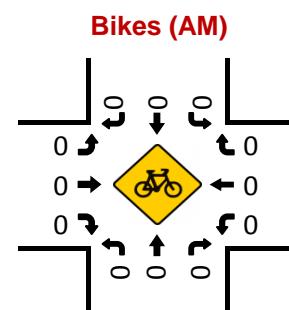
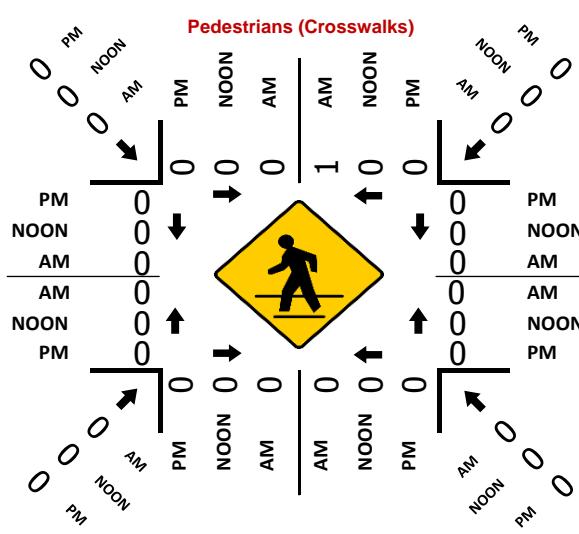
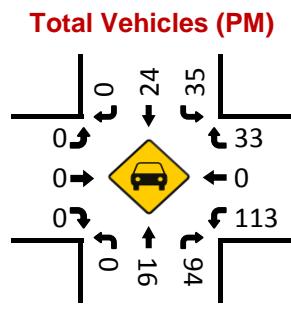
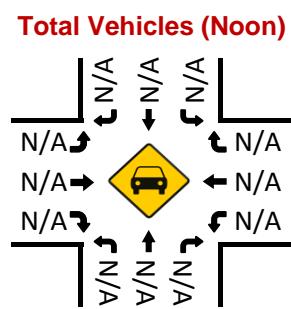
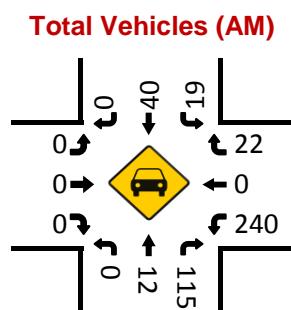
APPENDIX

Prepared by National Data & Surveying Services

Acacia Ave & Butte House Rd

Peak Hour Turning Movement Count

ID: 19-07463-001
City: Sutter



National Data & Surveying Services

Intersection Turning Movement Count

Location: Acacia Ave & Butte House Rd
City: Sutter
Control: 1-Way Stop (WB)

Project ID: 19-07463-001
Date: 12/3/2019

Total																	
NS/EW Streets:	Acacia Ave				Acacia Ave				Butte House Rd				Butte House Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	0	10	0	2	3	0	0	0	0	0	0	16	0	5	0	
	0	3	20	0	3	3	0	0	0	0	0	0	25	0	3	0	
	0	3	31	0	7	15	0	0	0	0	0	0	83	0	6	0	
	0	4	48	0	4	14	0	0	0	0	0	0	116	0	9	0	
	0	2	16	0	5	8	0	0	0	0	0	0	16	0	4	0	
	0	2	7	0	6	3	0	0	0	0	0	0	6	0	7	0	
	0	2	8	0	3	2	0	0	0	0	0	0	13	0	6	0	
	0	4	9	0	6	5	0	0	0	0	0	0	6	0	4	0	
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU
APPROACH %'s :		0	20	149	0	36	53	0	0	0	0	0	0	281	0	44	0
PEAK HR :		07:15 AM - 08:15 AM												TOTAL			
PEAK HR VOL :		0	12	115	0	19	40	0	0	0	0	0	0	240	0	22	0
PEAK HR FACTOR :		0.000	0.750	0.599	0.000	0.679	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.517	0.000	0.611	0.000
		0.611				0.670								0.524			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	6	23	0	5	5	0	0	0	0	0	0	16	0	10	0	
	0	7	13	0	7	4	0	0	0	0	0	0	20	0	6	0	
	0	5	17	0	10	7	0	0	0	0	0	0	21	0	7	0	
	0	3	28	0	9	6	0	0	0	0	0	0	23	0	10	0	
	0	4	28	0	11	3	0	0	0	0	0	0	27	0	10	0	
	0	4	21	0	5	8	0	0	0	0	0	0	42	0	6	0	
	0	8	17	0	6	6	0	0	0	0	0	0	18	0	8	0	
	0	4	16	0	10	8	0	0	0	0	0	0	14	0	10	0	
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU
APPROACH %'s :		0	41	163	0	63	47	0	0	0	0	0	0	181	0	67	0
PEAK HR :		04:30 PM - 05:30 PM												TOTAL			
PEAK HR VOL :		0	16	94	0	35	24	0	0	0	0	0	0	113	0	33	0
PEAK HR FACTOR :		0.000	0.800	0.839	0.000	0.795	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.673	0.000	0.825	0.000
		0.859				0.868								0.760			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Acacia Ave & Butte House Rd
City: Sutter
Control: 1-Way Stop (WB)

Project ID: 19-07463-001
Date: 12/3/2019

National Data & Surveying Services

Intersection Turning Movement Count

Location: Acacia Ave & Butte House Rd
City: Sutter

Project ID: 19-07463-001
Date: 12/3/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Acacia Ave		Acacia Ave		Butte House Rd		Butte House Rd		
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
AM	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	EB 0	WB 1	EB 0	WB 0	NB 0	SB 1	NB 0	SB 0	TOTAL 2
APPROACH %'s :	0.00%	100.00%			0.00%	100.00%			
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	0	1			0	0	0	0	TOTAL 1
PEAK HR FACTOR :	0.250								0.250

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 0	SB 0	TOTAL 0
APPROACH %'s :									
PEAK HR :	04:30 PM - 05:30 PM								TOTAL 0
PEAK HR VOL :	0	0			0	0	0	0	TOTAL 0
PEAK HR FACTOR :	0.250								

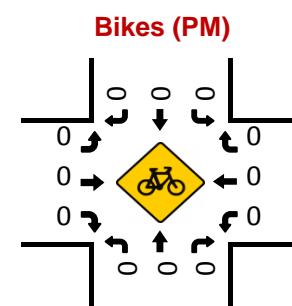
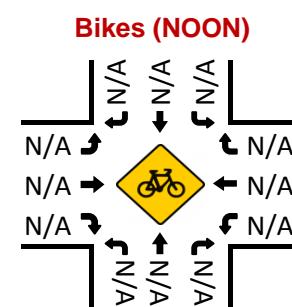
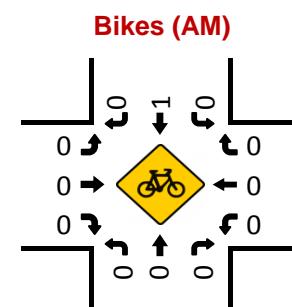
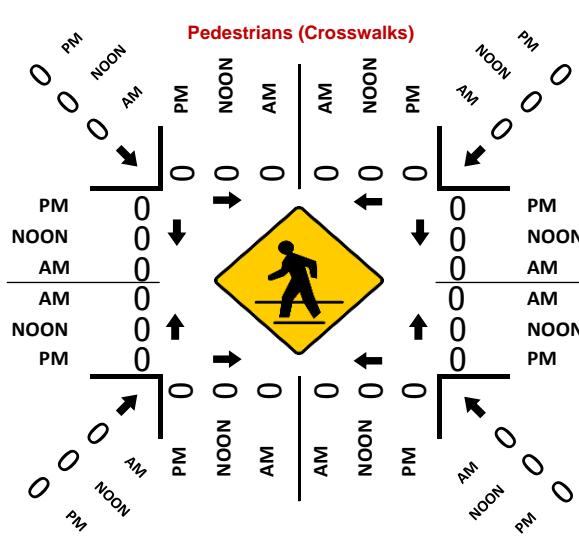
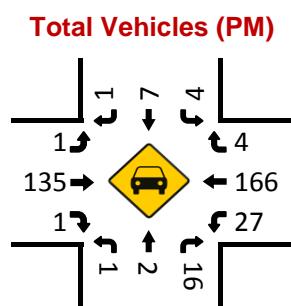
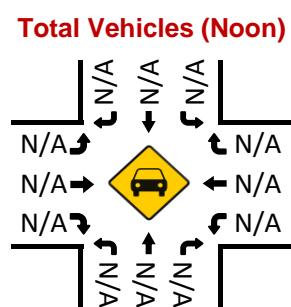
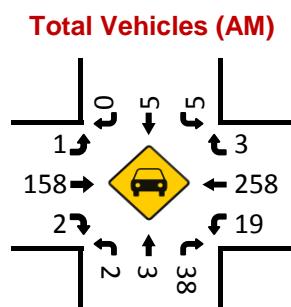
Prepared by National Data & Surveying Services

California Ave & Butte House Rd

Peak Hour Turning Movement Count

ID: 19-07463-002
City: Sutter

California Ave											
SOUTHBOUND											
PEAK HOURS	07:15 AM - 08:15 AM					07:00 AM - 09:00 AM					
	NONE	AM	0	5	5	0	7	AM			
		NOON	0	0	0	0	0	NOON			
PM		1	7	4	0	7	PM				
04:30 PM - 05:30 PM											
04:00 PM - 06:00 PM	AM	0	0	0	0	0	PM				
	NOON	0	0	0	0	0	NOON				
	PM	0	0	0	0	0	PM				
COUNT PERIODS											
Butte House Rd	EASTBOUND					WESTBOUND					
	AM	NOON	PM	AM	NOON	PM	AM	NOON	PM		
260	0	168	0	4	0	3					
	0	0	0	0	0	0					
	0	0	0	0	0	0					
	1	0	1	0	0	0					
	158	0	135	0	0	0					
155	0	0	0	0	0	0					
	0	0	0	0	0	0					
	0	0	0	0	0	0					
	0	0	0	0	0	0					
	2	0	1	0	0	0					
AM	NOON	PM	AM	NOON	PM						
CONTROL											
2-Way Stop(NB/SB)											
TEV	494	0	365								
AM	NOON	PM	AM	NOON	PM						
PHF	0.65		0.84								



National Data & Surveying Services

Intersection Turning Movement Count

Location: California Ave & Butte House Rd
City: Sutter
Control: 2-Way Stop(NB/SB)

Project ID: 19-07463-002
Date: 12/3/2019

Total

NS/EW Streets:	California Ave				California Ave				Butte House Rd				Butte House Rd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	0	5	0	1	0	0	0	0	22	0	0	2	23	0	0	53
7:15 AM	1	0	5	0	2	1	0	0	0	25	0	0	6	32	1	0	73
7:30 AM	0	0	11	0	1	1	0	0	0	49	0	0	5	102	1	0	170
7:45 AM	1	1	14	0	1	1	0	0	1	60	0	0	5	105	1	0	190
8:00 AM	0	2	8	0	1	2	0	0	0	24	2	0	3	19	0	0	61
8:15 AM	2	1	1	0	0	0	0	0	0	13	1	0	1	14	1	0	34
8:30 AM	0	1	7	0	1	1	1	0	0	13	1	0	1	16	0	0	42
8:45 AM	1	1	5	0	0	0	0	0	0	16	0	0	6	10	1	0	40
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	5 7.46%	6 8.96%	56 83.58%	0 0.00%	7 50.00%	6 42.86%	1 7.14%	0 0.00%	1 0.44%	222 97.80%	4 1.76%	0 0.00%	29 8.17%	321 90.42%	5 1.41%	0 0.00%	663
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	2	3	38	0	5	5	0	0	1	158	2	0	19	258	3	0	494
PEAK HR FACTOR :	0.500	0.375	0.679	0.000	0.625	0.625	0.000	0.000	0.250	0.658	0.250	0.000	0.792	0.614	0.750	0.000	0.650
	0.672				0.833				0.660				0.815				
PM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	1	1	3	0	2	0	0	0	2	28	1	0	8	26	1	0	73
4:15 PM	0	2	7	0	0	2	1	0	0	24	0	0	9	31	3	0	79
4:30 PM	0	0	7	0	1	1	1	0	0	33	0	0	6	37	1	0	87
4:45 PM	1	1	2	0	0	2	0	0	0	36	1	0	10	34	0	0	87
5:00 PM	0	1	6	0	2	3	0	0	0	42	0	0	6	47	2	0	109
5:15 PM	0	0	1	0	1	1	0	0	1	24	0	0	5	48	1	0	82
5:30 PM	1	0	3	0	0	2	0	0	0	29	1	0	4	36	0	0	76
5:45 PM	0	0	2	0	0	1	0	0	0	25	1	0	3	33	1	0	66
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	3 7.69%	5 12.82%	31 79.49%	0 0.00%	6 30.00%	12 60.00%	2 10.00%	0 0.00%	3 1.21%	241 97.18%	4 1.61%	0 0.00%	51 14.49%	292 82.95%	9 2.56%	0 0.00%	659
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	2	16	0	4	7	1	0	1	135	1	0	27	166	4	0	365
PEAK HR FACTOR :	0.250	0.500	0.571	0.000	0.500	0.583	0.250	0.000	0.250	0.804	0.250	0.000	0.675	0.865	0.500	0.000	0.837
	0.679				0.600				0.815				0.895				

National Data & Surveying Services

Intersection Turning Movement Count

Location: California Ave & Butte House Rd
City: Sutter
Control: 2-Way Stop(NB/SB)

Project ID: 19-07463-002
Date: 12/3/2019

National Data & Surveying Services

Intersection Turning Movement Count

Location: California Ave & Butte House Rd
City: Sutter

Project ID: 19-07463-002
Date: 12/3/2019

Pedestrians (Crosswalks)

NS/EW Streets:	California Ave		California Ave		Butte House Rd		Butte House Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

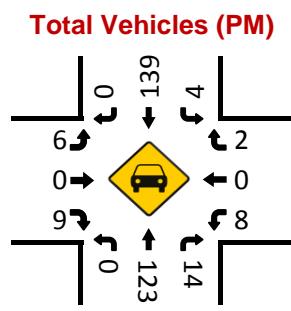
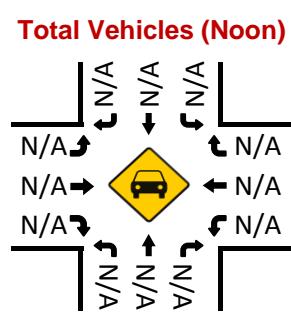
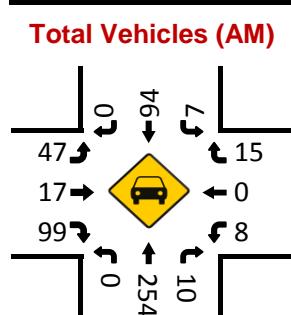
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	1	1	0	0	0	0	0	0	2
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL 3
	1	1	0	0	0	1	0	0	
APPROACH %'s :	50.00%		50.00%		0.00%		100.00%		TOTAL 0
	PEAK HR : 04:30 PM - 05:30 PM								
PEAK HR VOL :	0	0	0	0	0	0	0	0	TOTAL 0
PEAK HR FACTOR :									

Acacia Ave & Sutter Ave

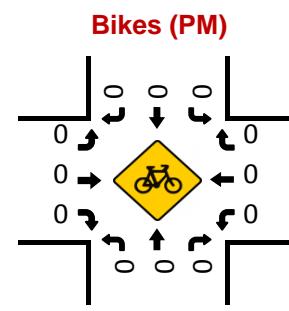
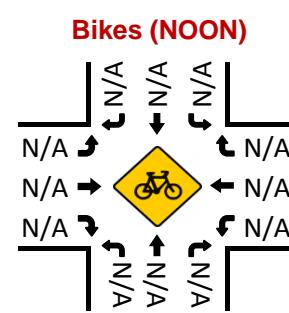
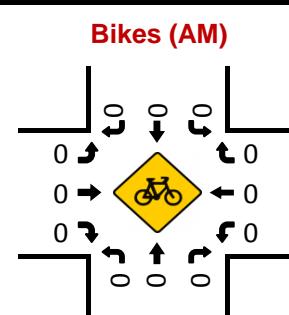
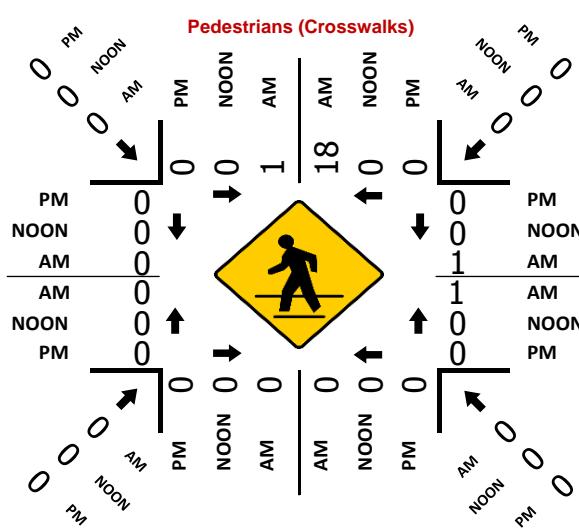
Peak Hour Turning Movement Count

ID: 19-07463-003
City: Sutter

Acacia Ave								
SOUTHBOUND								
PEAK HOURS	07:15 AM - 08:15 AM			316			AM	
	NONE			0	94	7		0
	04:45 PM - 05:45 PM			0	0	0		0
Sutter Ave	AM	0	94	7	0	316	AM	
	NOON	0	0	0	0	0	NOON	
	PM	0	139	4	0	131	PM	
	AM	0	0	0	0	0	AM	
	NOON	0	0	0	0	0	NOON	
	PM	0	0	0	0	0	PM	
CONTROL								
2-Way Stop(EB/WB)								
TEV	551	0	305					
AM		NOON	PM					
PHF	0.56		0.83					
WESTBOUND								
Sutter Ave								
EASTBOUND								
PEAK HOURS								
07:00 AM - 09:00 AM								
NONE								
04:00 PM - 06:00 PM								
COUNT PERIODS								



PM	156	0	0	123	14	PM
NOON	0	0	0	0	0	NOON
AM	201	0	0	254	10	AM



National Data & Surveying Services

Intersection Turning Movement Count

Location: Acacia Ave & Sutter Ave
City: Sutter
Control: 2-Way Stop(EB/WB)

Project ID: 19-07463-003
Date: 12/3/2019

National Data & Surveying Services

Intersection Turning Movement Count

Location: Acacia Ave & Sutter Ave
City: Sutter
Control: 2-Way Stop(EB/WB)

Project ID: 19-07463-003
Date: 12/3/2019

National Data & Surveying Services

Intersection Turning Movement Count

Location: Acacia Ave & Sutter Ave
City: Sutter

Project ID: 19-07463-003
Date: 12/3/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Acacia Ave		Acacia Ave		Sutter Ave		Sutter Ave			
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB		
7:00 AM	0	0	0	0	0	0	0	0	0	
	1	2	0	0	0	1	0	0	4	
	0	7	0	0	1	0	0	0	8	
	0	9	0	0	0	0	0	0	9	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES :		EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :		1	18	0	0	1	1	0	0	21
PEAK HR :		07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :		1	18			1	1			21
PEAK HR FACTOR :		0.250	0.500			0.250	0.250			0.583
		0.528				0.500				

Prepared by National Data & Surveying Services

Pepper St & Barrow St

Peak Hour Turning Movement Count

ID: 19-07463-004
City: Sutter

Pepper St

SOUTHBOUND

PEAK HOURS	07:30 AM - 08:30 AM	04:00 PM - 05:00 PM	07:00 AM - 09:00 AM	04:00 PM - 06:00 PM	COUNT PERIODS	
AM	1	49	1	0	35	AM
NOON	0	0	0	0	0	NOON
PM	1	3	0	0	3	PM

Barrow St

EASTBOUND

PEAK HOURS	AM	NOON	PM
27	0	9	
0	0	0	0
1	0	1	0
8	0	14	0
56	0	4	0

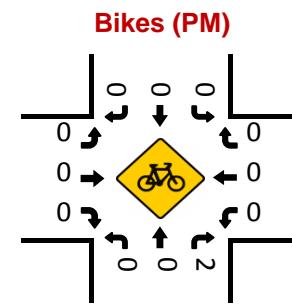
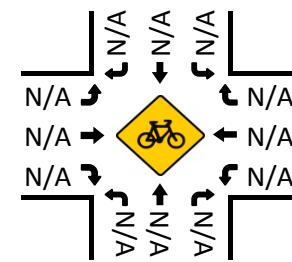
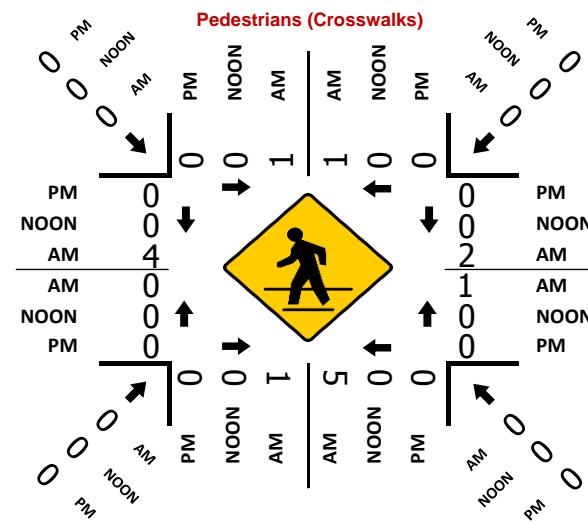
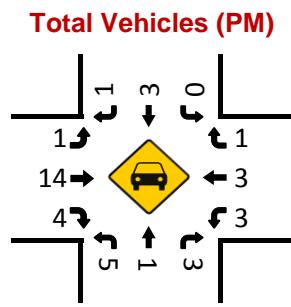
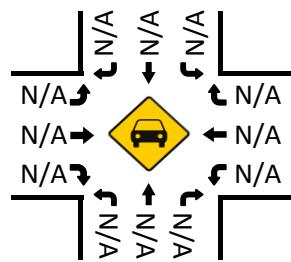
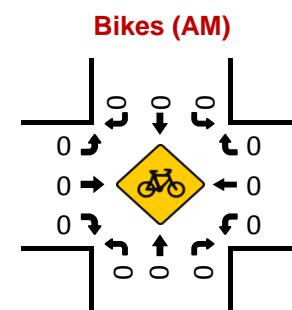
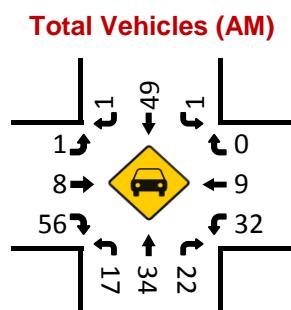
CONTROL

4-Way Stop

TEV	230	0	40
PHF	0.58		0.77

WESTBOUND

PEAK HOURS	PM	NOON	AM
0	1	0	0
0	3	0	9
0	3	0	32
0	0	0	0
17	0	31	



National Data & Surveying Services

Intersection Turning Movement Count

Location: Pepper St & Barrow St
City: Sutter
Control: 4-Way Stop

Project ID: 19-07463-004
Date: 12/3/2019

Total

NS/EW Streets:	Pepper St				Pepper St				Barrow St				Barrow St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	1	0	0	0	0	1	1	0	1	3	2	0	1	2	0	0	12
7:15 AM	3	2	3	0	0	6	0	0	0	0	2	0	5	2	2	0	25
7:30 AM	3	6	2	0	0	15	0	0	0	1	11	0	8	2	0	0	48
7:45 AM	6	5	4	0	1	10	0	0	0	0	16	0	6	5	0	0	53
8:00 AM	5	14	13	0	0	20	1	0	0	4	25	0	15	2	0	0	99
8:15 AM	3	9	3	0	0	4	0	0	1	3	4	0	3	0	0	0	30
8:30 AM	0	2	1	0	0	3	0	0	0	1	1	0	1	0	0	0	9
8:45 AM	1	1	0	0	0	2	0	0	0	0	0	0	1	1	0	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	22 25.29%	39 44.83%	26 29.89%	0 0.00%	1 1.56%	61 95.31%	2 3.13%	0 0.00%	2 2.67%	12 16.00%	61 81.33%	0 0.00%	40 71.43%	14 25.00%	2 3.57%	0 0.00%	282
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	17	34	22	0	1	49	1	0	1	8	56	0	32	9	0	0	230
PEAK HR FACTOR :	0.708	0.607	0.423	0.000	0.250	0.613	0.250	0.000	0.250	0.500	0.560	0.000	0.533	0.450	0.000	0.603	0.581
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	2	0	1	1	0	1	0	0	1	1	0	0	1	1	1	0	10
4:15 PM	1	1	0	0	0	1	0	0	0	2	1	0	0	2	0	0	8
4:30 PM	1	0	0	0	0	1	1	0	0	7	2	0	1	0	0	0	13
4:45 PM	1	0	2	0	0	0	0	0	0	4	1	0	1	0	0	0	9
5:00 PM	1	1	0	0	0	1	0	0	1	1	2	0	0	1	0	0	8
5:15 PM	1	0	0	0	0	1	0	0	2	3	0	0	0	2	0	0	9
5:30 PM	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	7 46.67%	4 26.67%	3 20.00%	1 6.67%	0 0.00%	6 85.71%	1 14.29%	0 0.00%	5 16.67%	19 63.33%	6 20.00%	0 0.00%	3 30.00%	6 60.00%	1 10.00%	0 0.00%	62
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	5	1	3	1	0	3	1	0	1	14	4	0	3	3	1	0	40
PEAK HR FACTOR :	0.625	0.250	0.375	0.250	0.000	0.750	0.250	0.000	0.250	0.500	0.500	0.000	0.750	0.375	0.250	0.583	0.769

National Data & Surveying Services

Intersection Turning Movement Count

Location: Pepper St & Barrow St
City: Sutter
Control: 4-Way Stop

Project ID: 19-07463-004
Date: 12/3/2019

National Data & Surveying Services

Intersection Turning Movement Count

Location: Pepper St & Barrow St
City: Sutter

Project ID: 19-07463-004
Date: 12/3/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Pepper St		Pepper St		Barrow St		Barrow St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	1	1	0	2	1	1	0	1	7
7:45 AM	0	0	0	0	0	1	0	3	4
8:00 AM	0	0	1	3	0	0	0	0	4
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	1	1	1	5	1	2	0	4	
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	1	1	1	5	1	2	0	4	15
PEAK HR FACTOR :	0.250	0.250	0.250	0.417	0.250	0.500	0.333	0.333	0.536

Township Rd & Butte House Rd**Peak Hour Turning Movement Count**

ID: 19-07463-005
City: Yuba

Township Rd**SOUTHBOUND**

	AM	64	72	8	0	147	AM
NOON	0	0	0	0	0	0	NOON
PM	29	46	20	0	108	PM	



Day: Tuesday
Date: 12/03/2019

PEAK HOURS
07:15 AM - 08:15 AM
NONE
04:30 PM - 05:30 PM

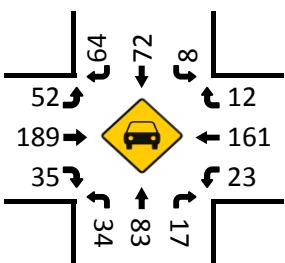
07:00 AM - 09:00 AM
NONE
04:00 PM - 06:00 PM

COUNT PERIODS

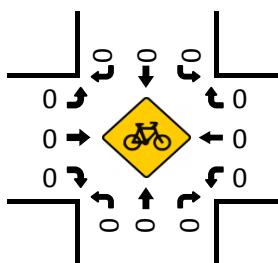
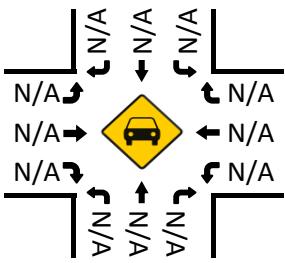
Butte House Rd	EASTBOUND		
	AM	NOON	PM
259	0	260	←
0	0	0	0
52	0	26	0
189	0	141	0
35	0	29	0
	AM	NOON	PM

CONTROL		
4-Way Stop		
TEV	750	0
PHF	0.79	0.90

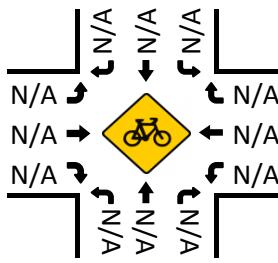
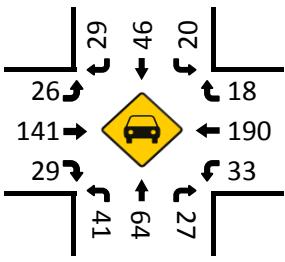
Butte House Rd	WESTBOUND		
	PM	NOON	AM
0	18	0	12
0	190	0	161
0	33	0	23
0	0	0	0
→	188	0	214
	PM	NOON	AM

Total Vehicles (AM)

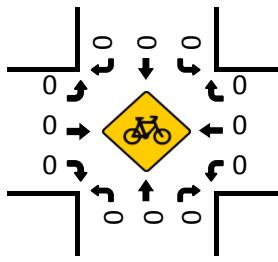
NORTHBOUND			
Township Rd			
PM	108	0	41
NOON	0	0	0
AM	130	0	83
	PM	NOON	AM

Bikes (AM)**Total Vehicles (Noon)**

Pedestrians (Crosswalks)			
PM	0	0	0
NOON	0	0	0
AM	0	0	0
	PM	NOON	AM

Bikes (Noon)**Total Vehicles (PM)**

Township Rd			
PM	29	46	20
NOON	0	0	0
AM	0	0	0
	PM	NOON	AM

Bikes (PM)

National Data & Surveying Services

Intersection Turning Movement Count

Location: Township Rd & Butte House Rd
City: Yuba
Control: 4-Way Stop

Project ID: 19-07463-005
Date: 12/3/2019

Total

NS/EW Streets:	Township Rd				Township Rd				Butte House Rd				Butte House Rd				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	6	12	2	0	2	11	3	0	6	32	8	0	2	13	2	0	99
7:15 AM	7	14	4	0	2	9	12	0	7	37	6	0	4	33	4	0	139
7:30 AM	15	25	2	0	2	17	29	0	12	44	13	0	6	68	4	0	237
7:45 AM	10	21	4	0	3	23	16	0	20	48	10	0	7	46	2	0	210
8:00 AM	2	23	7	0	1	23	7	0	13	60	6	0	6	14	2	0	164
8:15 AM	1	11	5	0	3	8	6	0	5	31	6	0	5	14	4	0	99
8:30 AM	2	4	6	0	1	9	4	0	2	28	5	0	5	14	2	0	82
8:45 AM	4	8	2	0	5	10	2	0	4	29	3	0	3	15	3	0	88
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	47	118	32	0	19	110	79	0	69	309	57	0	38	217	23	0	1118
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	34	83	17	0	8	72	64	0	52	189	35	0	23	161	12	0	750
PEAK HR FACTOR :	0.567	0.830	0.607	0.000	0.667	0.783	0.552	0.000	0.650	0.788	0.673	0.000	0.821	0.592	0.750	0.000	0.791
	0.798		0.750											0.873		0.628	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	7	11	9	0	8	11	3	0	3	32	10	0	8	33	5	0	140
4:15 PM	8	8	6	0	5	9	4	0	3	23	3	0	6	38	4	0	117
4:30 PM	10	13	7	0	8	19	10	0	7	31	6	0	8	41	2	0	162
4:45 PM	3	17	8	0	4	12	9	0	6	29	7	0	10	42	3	0	150
5:00 PM	20	19	7	0	6	4	7	0	7	45	9	0	10	46	5	0	185
5:15 PM	8	15	5	0	2	11	3	0	6	36	7	0	5	61	8	0	167
5:30 PM	11	9	3	0	6	9	2	0	5	27	7	0	6	49	4	0	138
5:45 PM	9	8	3	0	5	7	1	0	7	26	5	0	3	35	7	0	116
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	76	100	48	0	44	82	39	0	44	249	54	0	56	345	38	0	1175
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	41	64	27	0	20	46	29	0	26	141	29	0	33	190	18	0	664
PEAK HR FACTOR :	0.513	0.842	0.844	0.000	0.625	0.605	0.725	0.000	0.929	0.783	0.806	0.000	0.825	0.779	0.563	0.000	0.897
	0.717		0.642											0.803		0.814	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Township Rd & Butte House Rd
City: Yuba
Control: 4-Way Stop

Project ID: 19-07463-005
Date: 12/3/2019

National Data & Surveying Services

Intersection Turning Movement Count

Location: Township Rd & Butte House Rd
City: Yuba

Project ID: 19-07463-005
Date: 12/3/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Township Rd		Township Rd		Butte House Rd		Butte House Rd		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

Mallott Rd & Butte House Rd**Peak Hour Turning Movement Count**

ID: 20-07009-001
 City: Sutter

Mallott Rd**SOUTHBOUND**

	AM	23	0	2	0	13	AM
NOON	0	0	0	0	0	0	NOON
PM	20	0	2	0	8	PM	

Day: Tuesday
 Date: 01/07/2020

07:00 AM - 09:00 AM

NONE

04:00 PM - 06:00 PM

COUNT PERIODS

Butte House Rd

PEAK HOURS	07:15 AM - 08:15 AM			05:00 PM - 06:00 PM			PEAK HOURS
	AM	NOON	PM	AM	NOON	PM	
	320	0	264	0	0	0	
	0	0	0	0	0	0	
	13	0	7	0	0	0	
	271	0	165	0	0	0	
	0	0	0	0	0	0	

Butte House Rd**EASTBOUND**

PEAK HOURS	07:15 AM - 08:15 AM			05:00 PM - 06:00 PM			PEAK HOURS
	AM	NOON	PM	AM	NOON	PM	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	

CONTROL

0

TEV

606

PHF

0.70

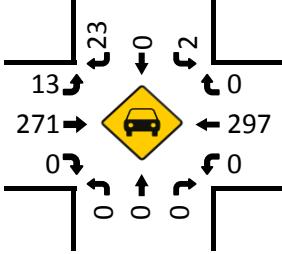
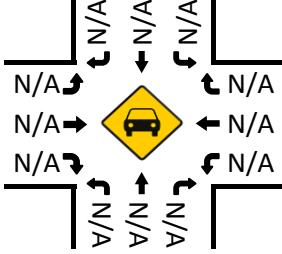
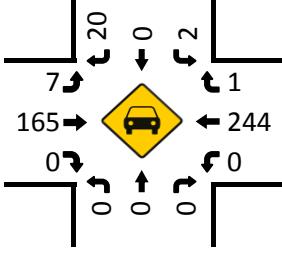
AM

NOON

439

PM

0.87

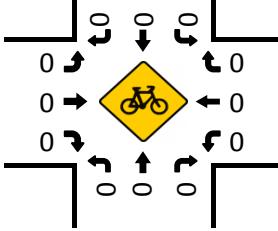
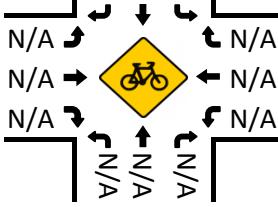
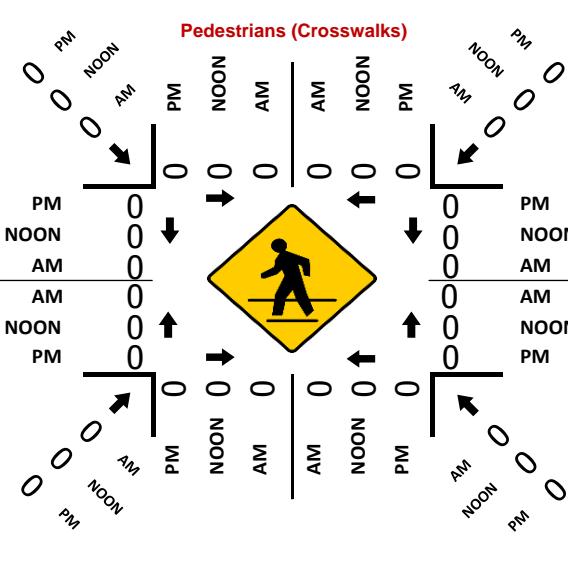
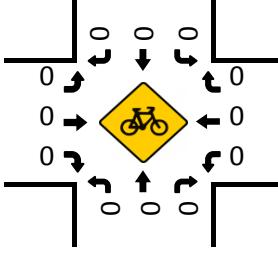
Total Vehicles (AM)**Total Vehicles (Noon)****Total Vehicles (PM)**

PEAK HOURS	07:00 AM - 09:00 AM			04:00 PM - 06:00 PM			PEAK HOURS
	PM	NOON	AM	PM	NOON	AM	
	0	1	0	0	244	0	
	0	2	0	0	0	297	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	

WESTBOUND**Butte House Rd**

PEAK HOURS	07:00 AM - 09:00 AM			04:00 PM - 06:00 PM			PEAK HOURS
	PM	NOON	AM	PM	NOON	AM	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	

PEAK HOURS	07:00 AM - 09:00 AM			04:00 PM - 06:00 PM			PEAK HOURS
	PM	NOON	AM	PM	NOON	AM	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	
	0	0	0	0	0	0	

Bikes (AM)**Bikes (NOON)****Bikes (PM)**

National Data & Surveying Services

Intersection Turning Movement Count

Location: Mallott Rd & Butte House Rd
City: Sutter
Control:

Project ID: 20-07009-001
Date: 1/7/2020

Total

NS/EW Streets:	Mallott Rd				Mallott Rd				Butte House Rd				Butte House Rd				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	0	0	0	0	0	0	2	0	2	24	0	0	0	20	2	0	50
7:15 AM	0	0	0	0	0	0	4	0	3	43	0	0	0	43	0	0	93
7:30 AM	0	0	0	0	0	0	10	0	2	67	0	0	0	106	0	0	185
7:45 AM	0	0	0	0	1	0	5	0	4	97	0	0	0	109	0	0	216
8:00 AM	0	0	0	0	1	0	4	0	4	64	0	0	0	39	0	0	112
8:15 AM	0	0	0	0	0	0	2	0	2	50	0	0	0	16	0	0	70
8:30 AM	0	0	0	0	0	0	5	0	2	30	0	0	0	11	0	0	48
8:45 AM	0	0	0	0	0	0	1	0	1	36	0	0	0	22	0	0	60
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	0	33	0	20	411	0	0	0	366	2	0	834
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	23	0	13	271	0	0	0	297	0	0	606
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.575	0.000	0.813	0.698	0.000	0.000	0.000	0.681	0.000	0.000	0.701

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	0	0	0	0	0	0	4	0	1	40	0	0	0	53	0	0	98
4:15 PM	0	0	0	0	0	0	9	0	3	41	0	0	0	51	2	0	106
4:30 PM	0	0	0	0	1	0	3	0	4	37	0	0	0	46	0	0	91
4:45 PM	0	0	0	0	0	0	0	0	0	39	0	0	0	57	0	0	96
5:00 PM	0	0	0	0	0	0	4	0	1	62	0	0	0	59	0	0	126
5:15 PM	0	0	0	0	1	0	7	0	0	46	0	0	0	65	1	0	120
5:30 PM	0	0	0	0	0	0	2	0	1	28	0	0	0	61	0	0	92
5:45 PM	0	0	0	0	1	0	7	0	5	29	0	0	0	59	0	0	101
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	3	0	36	0	15	322	0	0	0	451	3	0	830
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	20	0	7	165	0	0	0	244	1	0	439
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.714	0.000	0.350	0.665	0.000	0.000	0.000	0.938	0.250	0.000	0.871

VOLUME

Butte House Rd Bet. Oak St & Mallott Rd

Day: Tuesday
Date: 12/3/2019

City: Sutter
Project #: CA19_7464_001

DAILY TOTALS				NB	SB	EB	WB					Total
				0	0	2,435	2,441					4,876

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	3	3	12:00			36	29	65
00:15			1	3	4	12:15			38	33	71
00:30			2	3	5	12:30			33	40	73
00:45			1	4	10	12:45			62	169	99 308
01:00			2	2	4	13:00			49	40	89
01:15			1	0	1	13:15			34	34	68
01:30			0	0	0	13:30			37	36	73
01:45			0	3	2	13:45			31	151	73 303
02:00			4	1	5	14:00			33	47	80
02:15			1	4	5	14:15			37	46	83
02:30			0	0	0	14:30			32	56	88
02:45			1	6	2	14:45			48	150	111 362
03:00			0	1	1	15:00			79	81	160
03:15			3	2	5	15:15			110	51	161
03:30			3	0	3	15:30			65	46	111
03:45			2	8	0	15:45			41	295	106 538
04:00			3	0	3	16:00			47	49	96
04:15			3	2	5	16:15			34	48	82
04:30			9	1	10	16:30			54	62	116
04:45			10	25	3	16:45			53	188	108 402
05:00			8	2	10	17:00			53	75	128
05:15			17	6	23	17:15			35	73	108
05:30			16	6	22	17:30			39	55	94
05:45			23	64	15	17:45			42	169	92 422
06:00			28	12	40	18:00			38	41	79
06:15			30	14	44	18:15			32	46	78
06:30			35	23	58	18:30			24	30	54
06:45			37	130	25	18:45			16	110	52 263
07:00			48	25	73	19:00			18	37	55
07:15			59	46	105	19:15			11	30	41
07:30			72	117	189	19:30			13	19	32
07:45			88	267	80	19:45			19	61	53 181
08:00			76	28	104	20:00			17	22	39
08:15			40	22	62	20:15			15	31	46
08:30			31	20	51	20:30			24	20	44
08:45			31	178	21	20:45			11	67	22 151
09:00			31	19	50	21:00			8	17	25
09:15			33	21	54	21:15			4	18	22
09:30			41	18	59	21:30			3	16	19
09:45			27	132	20	21:45			4	19	14 80
10:00			30	20	50	22:00			2	5	7
10:15			30	15	45	22:15			3	3	6
10:30			25	37	62	22:30			1	2	3
10:45			29	114	13	22:45			2	8	8 24
11:00			26	29	55	23:00			2	4	6
11:15			31	31	62	23:15			0	4	4
11:30			27	34	61	23:30			1	7	8
11:45			30	114	26	23:45			0	3	4 22
TOTALS			1045	775	1820	TOTALS			1390	1666	3056
SPLIT %			57.4%	42.6%	37.3%	SPLIT %			45.5%	54.5%	62.7%

DAILY TOTALS				NB	SB	EB	WB				Total
				0	0	2,435	2,441				4,876

AM Peak Hour	07:15	07:15	07:15	PM Peak Hour	14:45	16:30	14:45
AM Pk Volume	295	271	566	PM Pk Volume	302	265	543
Pk Hr Factor	0.838	0.579	0.749	Pk Hr Factor	0.686	0.883	0.843
7 - 9 Volume	0	0	445	23:00	0	0	23:00
7 - 9 Peak Hour			359	23:15			23:15
7 - 9 Pk Volume			804	23:30			23:30
Pk Hr Factor	0.000	0.000	0.838	23:45	0.000	0.000	23:45
4 - 6 Volume	0	0	357	0	0	357	0
4 - 6 Peak Hour			467	16:30			16:30
4 - 6 Pk Volume			824	16:30			16:30
Pk Hr Factor	0.903	0.883	0.898	460	0.883	0.898	460

KDA

Intersection

Int Delay, s/veh 10.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	B			
Traffic Vol, veh/h	240	22	12	115	19	40
Future Vol, veh/h	240	22	12	115	19	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	421	39	21	202	33	70

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	258	122	0	0	223
Stage 1	122	-	-	-	-
Stage 2	136	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	731	929	-	-	1346
Stage 1	903	-	-	-	-
Stage 2	890	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	712	929	-	-	1346
Mov Cap-2 Maneuver	712	-	-	-	-
Stage 1	903	-	-	-	-
Stage 2	867	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	0	2.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	726	1346	-
HCM Lane V/C Ratio	-	-	0.633	0.025	-
HCM Control Delay (s)	-	-	18.1	7.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	4.6	0.1	-

HCM 6th TWSC
2: CALIFORNIA AVE & BUTTE HOUSE RD

AM EXISTING
01/27/2020

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	158	2	19	258	3	2	3	38	5	5	0
Future Vol, veh/h	1	158	2	19	258	3	2	3	38	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	243	3	29	397	5	3	5	58	8	8	0

Major/Minor	Major1	Major2		Minor1		Minor2						
Conflicting Flow All	402	0	0	246	0	0	711	709	245	738	708	400
Stage 1	-	-	-	-	-	-	249	249	-	458	458	-
Stage 2	-	-	-	-	-	-	462	460	-	280	250	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1157	-	-	1320	-	-	348	359	794	334	360	650
Stage 1	-	-	-	-	-	-	755	701	-	583	567	-
Stage 2	-	-	-	-	-	-	580	566	-	727	700	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1157	-	-	1320	-	-	334	348	794	299	349	650
Mov Cap-2 Maneuver	-	-	-	-	-	-	334	348	-	299	349	-
Stage 1	-	-	-	-	-	-	753	700	-	582	551	-
Stage 2	-	-	-	-	-	-	556	550	-	668	699	-

Approach	EB	WB		NB		SB		
HCM Control Delay, s	0.1	0.5		10.8		16.7		
HCM LOS				B		C		
<hr/>								
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	688	1157	-	-	1320	-	-	322
HCM Lane V/C Ratio	0.096	0.001	-	-	0.022	-	-	0.048
HCM Control Delay (s)	10.8	8.1	0	-	7.8	0	-	16.7
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	271	0	0	297	0	0	0	0	2	0	23
Future Vol, veh/h	13	271	0	0	297	0	0	0	0	2	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	387	0	0	424	0	0	0	0	3	0	33

Major/Minor	Major1	Major2		Minor1		Minor2						
Conflicting Flow All	424	0	0	387	0	0	866	849	387	849	849	424
Stage 1	-	-	-	-	-	-	425	425	-	424	424	-
Stage 2	-	-	-	-	-	-	441	424	-	425	425	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1135	-	-	1171	-	-	274	298	661	281	298	630
Stage 1	-	-	-	-	-	-	607	586	-	608	587	-
Stage 2	-	-	-	-	-	-	595	587	-	607	586	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1135	-	-	1171	-	-	256	292	661	277	292	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	256	292	-	277	292	-
Stage 1	-	-	-	-	-	-	594	574	-	595	587	-
Stage 2	-	-	-	-	-	-	564	587	-	594	574	-

Approach	EB	WB		NB		SB		
HCM Control Delay, s	0.4	0		0		11.7		
HCM LOS				A		B		
<hr/>								
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1135	-	-	1171	-	-	572
HCM Lane V/C Ratio	-	0.016	-	-	-	-	-	0.062
HCM Control Delay (s)	0	8.2	0	-	0	-	-	11.7
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.2

Intersection

Intersection Delay, s/veh 12.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	52	189	35	23	161	12	34	83	17	8	72	64
Future Vol, veh/h	52	189	35	23	161	12	34	83	17	8	72	64
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	239	44	29	204	15	43	105	22	10	91	81
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	14			11.9			11.2			10.9		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	19%	12%	6%
Vol Thru, %	62%	68%	82%	50%
Vol Right, %	13%	13%	6%	44%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	134	276	196	144
LT Vol	34	52	23	8
Through Vol	83	189	161	72
RT Vol	17	35	12	64
Lane Flow Rate	170	349	248	182
Geometry Grp	1	1	1	1
Degree of Util (X)	0.277	0.517	0.379	0.285
Departure Headway (Hd)	5.869	5.327	5.505	5.623
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	609	674	650	636
Service Time	3.932	3.38	3.565	3.686
HCM Lane V/C Ratio	0.279	0.518	0.382	0.286
HCM Control Delay	11.2	14	11.9	10.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.1	3	1.8	1.2

Intersection

Int Delay, s/veh 4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗											
Traffic Vol, veh/h	47	17	99	8	0	15	0	254	10	1	94	0
Future Vol, veh/h	47	17	99	8	0	15	0	254	10	1	94	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	56	56	56	56	56	56	56	56	56	56	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	30	177	14	0	27	0	454	18	2	168	0

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	649	644	168	739	635	463	168	0	0	472	0	0
Stage 1	172	172	-	463	463	-	-	-	-	-	-	-
Stage 2	477	472	-	276	172	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	383	391	876	333	396	599	1410	-	-	1090	-	-
Stage 1	830	756	-	579	564	-	-	-	-	-	-	-
Stage 2	569	559	-	730	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	365	390	876	250	395	599	1410	-	-	1090	-	-
Mov Cap-2 Maneuver	365	390	-	250	395	-	-	-	-	-	-	-
Stage 1	830	754	-	579	564	-	-	-	-	-	-	-
Stage 2	544	559	-	558	754	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB			
HCM Control Delay, s	13.5	14.9			0			0.1			
HCM LOS	B	B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	1410	-	-	365	741	403	1090	-	-		
HCM Lane V/C Ratio	-	-	-	0.23	0.28	0.102	0.002	-	-		
HCM Control Delay (s)	0	-	-	17.8	11.7	14.9	8.3	0	-		
HCM Lane LOS	A	-	-	C	B	B	A	A	-		
HCM 95th %tile Q(veh)	0	-	-	0.9	1.1	0.3	0	-	-		

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	N			
Traffic Vol, veh/h	113	33	16	94	35	24
Future Vol, veh/h	113	33	16	94	35	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	36	17	102	38	26

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	170	68	0	0	119
Stage 1	68	-	-	-	-
Stage 2	102	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	820	995	-	-	1469
Stage 1	955	-	-	-	-
Stage 2	922	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	799	995	-	-	1469
Mov Cap-2 Maneuver	799	-	-	-	-
Stage 1	955	-	-	-	-
Stage 2	898	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	4.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	836	1469	-
HCM Lane V/C Ratio	-	-	0.19	0.026	-
HCM Control Delay (s)	-	-	10.3	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	135	1	27	166	4	1	2	16	4	7	1
Future Vol, veh/h	1	135	1	27	166	4	1	2	16	4	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	161	1	32	198	5	1	2	19	5	8	1

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	203	0	0	162	0	0	433	431	162	439	429	201
Stage 1	-	-	-	-	-	-	164	164	-	265	265	-
Stage 2	-	-	-	-	-	-	269	267	-	174	164	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1369	-	-	1417	-	-	533	517	883	528	518	840
Stage 1	-	-	-	-	-	-	838	762	-	740	689	-
Stage 2	-	-	-	-	-	-	737	688	-	828	762	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1369	-	-	1417	-	-	515	504	883	505	505	840
Mov Cap-2 Maneuver	-	-	-	-	-	-	515	504	-	505	505	-
Stage 1	-	-	-	-	-	-	837	761	-	739	672	-
Stage 2	-	-	-	-	-	-	709	671	-	807	761	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	0.1	1			9.7			12.1				
HCM LOS					A			B				
<hr/>												
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				

Capacity (veh/h)	791	1369	-	-	1417	-	-	522				
HCM Lane V/C Ratio	0.029	0.001	-	-	0.023	-	-	0.027				
HCM Control Delay (s)	9.7	7.6	0	-	7.6	0	-	12.1				
HCM Lane LOS	A	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1				

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	165	0	0	244	1	0	0	0	2	0	20
Future Vol, veh/h	7	165	0	0	244	1	0	0	0	2	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	190	0	0	280	1	0	0	0	2	0	23

Major/Minor	Major1	Major2		Minor1		Minor2	
Conflicting Flow All	281	0	0	190	0	0	498 487 190 487 487 281
Stage 1	-	-	-	-	-	206	206 - 281 281 -
Stage 2	-	-	-	-	-	292	281 - 206 206 -
Critical Hdwy	4.12	-	-	4.12	-	7.12 6.52 6.22	7.12 6.52 6.22
Critical Hdwy Stg 1	-	-	-	-	-	6.12 5.52	- 6.12 5.52 -
Critical Hdwy Stg 2	-	-	-	-	-	6.12 5.52	- 6.12 5.52 -
Follow-up Hdwy	2.218	-	-	2.218	-	3.518 4.018 3.318	3.518 4.018 3.318
Pot Cap-1 Maneuver	1282	-	-	1384	-	483 481 852	491 481 758
Stage 1	-	-	-	-	-	796 731	- 726 678 -
Stage 2	-	-	-	-	-	716 678	- 796 731 -
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1282	-	-	1384	-	466 478 852	489 478 758
Mov Cap-2 Maneuver	-	-	-	-	-	466 478	- 489 478 -
Stage 1	-	-	-	-	-	790 726	- 721 678 -
Stage 2	-	-	-	-	-	694 678	- 790 726 -

Approach	EB	WB		NB		SB	
HCM Control Delay, s	0.3	0		0		10.2	
HCM LOS				A		B	
<hr/>							
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR SBLn1
Capacity (veh/h)	-	1282	-	-	1384	-	- 722
HCM Lane V/C Ratio	-	0.006	-	-	-	-	- 0.035
HCM Control Delay (s)	0	7.8	0	-	0	-	- 10.2
HCM Lane LOS	A	A	A	-	A	-	- B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	- 0.1

Intersection

Intersection Delay, s/veh 10
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	26	141	29	33	190	18	41	64	27	20	46	29
Future Vol, veh/h	26	141	29	33	190	18	41	64	27	20	46	29
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	157	32	37	211	20	46	71	30	22	51	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	10			10.6			9.7			9.2		
HCM LOS	A			B			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	13%	14%	21%
Vol Thru, %	48%	72%	79%	48%
Vol Right, %	20%	15%	7%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	196	241	95
LT Vol	41	26	33	20
Through Vol	64	141	190	46
RT Vol	27	29	18	29
Lane Flow Rate	147	218	268	106
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.293	0.359	0.151
Departure Headway (Hd)	5.172	4.846	4.828	5.157
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	686	734	739	687
Service Time	3.262	2.926	2.903	3.254
HCM Lane V/C Ratio	0.214	0.297	0.363	0.154
HCM Control Delay	9.7	10	10.6	9.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	1.2	1.6	0.5

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗											
Traffic Vol, veh/h	6	0	9	8	0	2	0	123	14	4	139	0
Future Vol, veh/h	6	0	9	8	0	2	0	123	14	4	139	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	11	10	0	2	0	148	17	5	167	0

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	335	342	167	340	334	157	167	0	0	165	0	0
Stage 1	177	177	-	157	157	-	-	-	-	-	-	-
Stage 2	158	165	-	183	177	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	619	580	877	614	586	889	1411	-	-	1413	-	-
Stage 1	825	753	-	845	768	-	-	-	-	-	-	-
Stage 2	844	762	-	819	753	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	615	578	877	605	584	889	1411	-	-	1413	-	-
Mov Cap-2 Maneuver	615	578	-	605	584	-	-	-	-	-	-	-
Stage 1	825	750	-	845	768	-	-	-	-	-	-	-
Stage 2	842	762	-	806	750	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	9.9	10.7			0			0.2				
HCM LOS	A	B										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1411	-	-	615	877	646	1413	-	-			
HCM Lane V/C Ratio	-	-	-	0.012	0.012	0.019	0.003	-	-			
HCM Control Delay (s)	0	-	-	10.9	9.2	10.7	7.6	0	-			
HCM Lane LOS	A	-	-	B	A	B	A	A	-			
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	0	-	-			

Intersection

Int Delay, s/veh 11.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	B			
Traffic Vol, veh/h	244	23	12	116	19	40
Future Vol, veh/h	244	23	12	116	19	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	57	57	57	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	428	40	21	204	33	70

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	259	123	0	0	225
Stage 1	123	-	-	-	-
Stage 2	136	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	730	928	-	-	1344
Stage 1	902	-	-	-	-
Stage 2	890	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	711	928	-	-	1344
Mov Cap-2 Maneuver	711	-	-	-	-
Stage 1	902	-	-	-	-
Stage 2	867	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	2.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	726	1344	-
HCM Lane V/C Ratio	-	-	0.645	0.025	-
HCM Control Delay (s)	-	-	18.5	7.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	4.8	0.1	-

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	160	2	19	264	3	2	3	38	5	5	0
Future Vol, veh/h	1	160	2	19	264	3	2	3	38	5	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	246	3	29	406	5	3	5	58	8	8	0

Major/Minor	Major1	Major2		Minor1		Minor2						
Conflicting Flow All	411	0	0	249	0	0	723	721	248	750	720	409
Stage 1	-	-	-	-	-	-	252	252	-	467	467	-
Stage 2	-	-	-	-	-	-	471	469	-	283	253	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1148	-	-	1317	-	-	342	353	791	328	354	642
Stage 1	-	-	-	-	-	-	752	698	-	576	562	-
Stage 2	-	-	-	-	-	-	573	561	-	724	698	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1148	-	-	1317	-	-	328	342	791	294	343	642
Mov Cap-2 Maneuver	-	-	-	-	-	-	328	342	-	294	343	-
Stage 1	-	-	-	-	-	-	750	697	-	575	546	-
Stage 2	-	-	-	-	-	-	549	545	-	665	697	-

Approach	EB	WB		NB		SB		
HCM Control Delay, s	0	0.5		10.8		16.9		
HCM LOS				B		C		
<hr/>								
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	684	1148	-	-	1317	-	-	317
HCM Lane V/C Ratio	0.097	0.001	-	-	0.022	-	-	0.049
HCM Control Delay (s)	10.8	8.1	0	-	7.8	0	-	16.9
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	293	0	0	305	2	0	0	0	7	0	27
Future Vol, veh/h	14	293	0	0	305	2	0	0	0	7	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	70	70	70	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	419	0	0	436	3	0	0	0	10	0	39

Major/Minor	Major1	Major2		Minor1		Minor2						
Conflicting Flow All	439	0	0	419	0	0	916	898	419	897	897	438
Stage 1	-	-	-	-	-	-	459	459	-	438	438	-
Stage 2	-	-	-	-	-	-	457	439	-	459	459	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1121	-	-	1140	-	-	253	279	634	261	279	619
Stage 1	-	-	-	-	-	-	582	566	-	597	579	-
Stage 2	-	-	-	-	-	-	583	578	-	582	566	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1121	-	-	1140	-	-	233	273	634	256	273	619
Mov Cap-2 Maneuver	-	-	-	-	-	-	233	273	-	256	273	-
Stage 1	-	-	-	-	-	-	569	553	-	583	579	-
Stage 2	-	-	-	-	-	-	547	578	-	569	553	-

Approach	EB	WB		NB		SB						
HCM Control Delay, s	0.4	0		0		13.4						
HCM LOS				A		B						
<hr/>												
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1121	-	-	1140	-	-	479				
HCM Lane V/C Ratio	-	0.018	-	-	-	-	-	0.101				
HCM Control Delay (s)	0	8.3	0	-	0	-	-	13.4				
HCM Lane LOS	A	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.3				

Intersection

Intersection Delay, s/veh 13.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	57	208	38	23	168	12	35	83	17	8	72	66
Future Vol, veh/h	57	208	38	23	168	12	35	83	17	8	72	66
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	263	48	29	213	15	44	105	22	10	91	84
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	15.5			12.4			11.5			11.3		
HCM LOS	C			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	19%	11%	5%
Vol Thru, %	61%	69%	83%	49%
Vol Right, %	13%	13%	6%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	135	303	203	146
LT Vol	35	57	23	8
Through Vol	83	208	168	72
RT Vol	17	38	12	66
Lane Flow Rate	171	384	257	185
Geometry Grp	1	1	1	1
Degree of Util (X)	0.286	0.574	0.4	0.296
Departure Headway (Hd)	6.02	5.385	5.605	5.764
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	593	667	637	619
Service Time	4.098	3.446	3.674	3.842
HCM Lane V/C Ratio	0.288	0.576	0.403	0.299
HCM Control Delay	11.5	15.5	12.4	11.3
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	1.2	3.7	1.9	1.2

Intersection

Int Delay, s/veh 4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↔		↔		↔		↔		↔
Traffic Vol, veh/h	48	18	99	9	0	17	0	255	10	1	96	0
Future Vol, veh/h	48	18	99	9	0	17	0	255	10	1	96	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	56	56	56	56	56	56	56	56	56	56	56
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	32	177	16	0	30	0	455	18	2	171	0

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	654	648	171	744	639	464	171	0	0	473	0	0
Stage 1	175	175	-	464	464	-	-	-	-	-	-	-
Stage 2	479	473	-	280	175	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	380	389	873	331	394	598	1406	-	-	1089	-	-
Stage 1	827	754	-	578	564	-	-	-	-	-	-	-
Stage 2	568	558	-	727	754	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	360	388	873	247	393	598	1406	-	-	1089	-	-
Mov Cap-2 Maneuver	360	388	-	247	393	-	-	-	-	-	-	-
Stage 1	827	752	-	578	564	-	-	-	-	-	-	-
Stage 2	539	558	-	554	752	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	13.7	15.2			0			0.1				
HCM LOS	B	C										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1406	-	-	360	732	401	1089	-	-			
HCM Lane V/C Ratio	-	-	-	0.238	0.285	0.116	0.002	-	-			
HCM Control Delay (s)	0	-	-	18.1	11.9	15.2	8.3	0	-			
HCM Lane LOS	A	-	-	C	B	C	A	A	-			
HCM 95th %tile Q(veh)	0	-	-	0.9	1.2	0.4	0	-	-			

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	287	326	3	9	6
Future Vol, veh/h	2	287	326	3	9	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	312	354	3	10	7

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	357	0	-	0	672	356
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	316	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1202	-	-	-	421	688
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1202	-	-	-	420	688
Mov Cap-2 Maneuver	-	-	-	-	420	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1202	-	-	-	498
HCM Lane V/C Ratio	0.002	-	-	-	0.033
HCM Control Delay (s)	8	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	295	1	4	327	2	12
Future Vol, veh/h	295	1	4	327	2	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	321	1	4	355	2	13

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	322	0	685	322
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	363	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1238	-	414	719
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1238	-	412	719
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	701	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	0.1	10.7
HCM LOS		B	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	650	-	-	1238	-
HCM Lane V/C Ratio	0.023	-	-	0.004	-
HCM Control Delay (s)	10.7	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		A	B		
Traffic Vol, veh/h	0	9	3	13	25	9
Future Vol, veh/h	0	9	3	13	25	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	3	14	27	10

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	52	32	37	0	-	0
Stage 1	32	-	-	-	-	-
Stage 2	20	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	957	1042	1574	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	1003	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	955	1042	1574	-	-	-
Mov Cap-2 Maneuver	955	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	1003	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1574	-	1042	-	-
HCM Lane V/C Ratio	0.002	-	0.009	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	7	1	0	1
Future Vol, veh/h	1	2	7	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	8	1	0	1

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	9	0	-	0	13	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1611	-	-	-	1006	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1019	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1611	-	-	-	1005	1073
Mov Cap-2 Maneuver	-	-	-	-	1005	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1019	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1073
HCM Lane V/C Ratio	0.001	-	-	-	0.001
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection

Int Delay, s/veh 5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	N			
Traffic Vol, veh/h	117	34	16	100	36	24
Future Vol, veh/h	117	34	16	100	36	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	37	17	109	39	26

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	176	72	0	0	126
Stage 1	72	-	-	-	-
Stage 2	104	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	814	990	-	-	1460
Stage 1	951	-	-	-	-
Stage 2	920	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	792	990	-	-	1460
Mov Cap-2 Maneuver	792	-	-	-	-
Stage 1	951	-	-	-	-
Stage 2	895	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	4.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	829	1460	-
HCM Lane V/C Ratio	-	-	0.198	0.027	-
HCM Control Delay (s)	-	-	10.4	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	142	1	27	170	4	1	2	16	4	7	1
Future Vol, veh/h	1	142	1	27	170	4	1	2	16	4	7	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	169	1	32	202	5	1	2	19	5	8	1

Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	207	0	0	170	0	0	445	443	170	451	441	205
Stage 1	-	-	-	-	-	-	172	172	-	269	269	-
Stage 2	-	-	-	-	-	-	273	271	-	182	172	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1364	-	-	1407	-	-	523	509	874	519	510	836
Stage 1	-	-	-	-	-	-	830	756	-	737	687	-
Stage 2	-	-	-	-	-	-	733	685	-	820	756	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1364	-	-	1407	-	-	505	495	874	496	496	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	505	495	-	496	496	-
Stage 1	-	-	-	-	-	-	829	755	-	736	669	-
Stage 2	-	-	-	-	-	-	704	667	-	799	755	-

Approach	EB	WB			NB			SB					
HCM Control Delay, s	0.1	1			9.7			12.2					
HCM LOS					A			B					
<hr/>													
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	781	1364	-	-	1407	-	-	513					
HCM Lane V/C Ratio	0.029	0.001	-	-	0.023	-	-	0.028					
HCM Control Delay (s)	9.7	7.6	0	-	7.6	0	-	12.2					
HCM Lane LOS	A	A	A	-	A	A	-	B					
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1					

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	184	0	0	276	9	0	0	0	7	0	21
Future Vol, veh/h	9	184	0	0	276	9	0	0	0	7	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	211	0	0	317	10	0	0	0	8	0	24

Major/Minor	Major1	Major2		Minor1		Minor2						
Conflicting Flow All	327	0	0	211	0	0	565	558	211	553	553	322
Stage 1	-	-	-	-	-	-	231	231	-	322	322	-
Stage 2	-	-	-	-	-	-	334	327	-	231	231	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1233	-	-	1360	-	-	436	438	829	444	441	719
Stage 1	-	-	-	-	-	-	772	713	-	690	651	-
Stage 2	-	-	-	-	-	-	680	648	-	772	713	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1233	-	-	1360	-	-	419	434	829	441	437	719
Mov Cap-2 Maneuver	-	-	-	-	-	-	419	434	-	441	437	-
Stage 1	-	-	-	-	-	-	765	707	-	684	651	-
Stage 2	-	-	-	-	-	-	657	648	-	765	707	-

Approach	EB	WB		NB		SB		
HCM Control Delay, s	0.4	0		0		11.1		
HCM LOS				A		B		
<hr/>								
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1233	-	-	1360	-	-	621
HCM Lane V/C Ratio	-	0.008	-	-	-	-	-	0.052
HCM Control Delay (s)	0	7.9	0	-	0	-	-	11.1
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2

Intersection

Intersection Delay, s/veh 10.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	28	159	32	33	221	18	46	64	27	20	46	33
Future Vol, veh/h	28	159	32	33	221	18	46	64	27	20	46	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	177	36	37	246	20	51	71	30	22	51	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				1			1			1	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				1			1			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	1				1			1			1	
HCM Control Delay	10.7				11.6			10.1			9.6	
HCM LOS	B				B			B			A	

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	13%	12%	20%
Vol Thru, %	47%	73%	81%	46%
Vol Right, %	20%	15%	7%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	219	272	99
LT Vol	46	28	33	20
Through Vol	64	159	221	46
RT Vol	27	32	18	33
Lane Flow Rate	152	243	302	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.231	0.342	0.421	0.166
Departure Headway (Hd)	5.459	5.053	5.019	5.431
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	658	715	719	660
Service Time	3.495	3.062	3.027	3.47
HCM Lane V/C Ratio	0.231	0.34	0.42	0.167
HCM Control Delay	10.1	10.7	11.6	9.6
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.9	1.5	2.1	0.6

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗ ↗											
Traffic Vol, veh/h	7	1	9	10	0	2	0	129	17	4	142	0
Future Vol, veh/h	7	1	9	10	0	2	0	129	17	4	142	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	1	11	12	0	2	0	155	20	5	171	0

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	347	356	171	352	346	165	171	0	0	175	0	0
Stage 1	181	181	-	165	165	-	-	-	-	-	-	-
Stage 2	166	175	-	187	181	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	607	570	873	603	577	879	1406	-	-	1401	-	-
Stage 1	821	750	-	837	762	-	-	-	-	-	-	-
Stage 2	836	754	-	815	750	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	603	568	873	593	575	879	1406	-	-	1401	-	-
Mov Cap-2 Maneuver	603	568	-	593	575	-	-	-	-	-	-	-
Stage 1	821	747	-	837	762	-	-	-	-	-	-	-
Stage 2	834	754	-	800	747	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB				
HCM Control Delay, s	10.1	10.9			0			0.2				
HCM LOS	B	B										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1406	-	-	603	829	627	1401	-	-			
HCM Lane V/C Ratio	-	-	-	0.014	0.015	0.023	0.003	-	-			
HCM Control Delay (s)	0	-	-	11.1	9.4	10.9	7.6	0	-			
HCM Lane LOS	A	-	-	B	A	B	A	A	-			
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	0	-	-			

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	177	268	13	8	2
Future Vol, veh/h	4	177	268	13	8	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	192	291	14	9	2
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	305	0	-	0	498	298
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	200	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1256	-	-	-	532	741
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	834	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1256	-	-	-	530	741
Mov Cap-2 Maneuver	-	-	-	-	530	-
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	834	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.2	0	11.5			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1256	-	-	-	562	
HCM Lane V/C Ratio	0.003	-	-	-	0.019	
HCM Control Delay (s)	7.9	0	-	-	11.5	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection

Int Delay, s/veh 0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	183	2	17	280	1	10
Future Vol, veh/h	183	2	17	280	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	199	2	18	304	1	11

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	201	0	540	200
Stage 1	-	-	-	-	200	-
Stage 2	-	-	-	-	340	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1371	-	503	841
Stage 1	-	-	-	-	834	-
Stage 2	-	-	-	-	721	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1371	-	495	841
Mov Cap-2 Maneuver	-	-	-	-	495	-
Stage 1	-	-	-	-	834	-
Stage 2	-	-	-	-	709	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	0.4	9.6
HCM LOS		A	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	791	-	-	1371	-
HCM Lane V/C Ratio	0.015	-	-	0.013	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		A	B		
Traffic Vol, veh/h	0	6	10	8	22	0
Future Vol, veh/h	0	6	10	8	22	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	11	9	24	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	55	24	24	0	-	0
Stage 1	24	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	953	1052	1591	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1052	1591	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s 8.4

HCM LOS A

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1591	-	1052	-	-
HCM Lane V/C Ratio	0.007	-	0.006	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	4	5	1	0	2
Future Vol, veh/h	2	4	5	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	4	5	1	0	2

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	6	0	-	0	14	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1615	-	-	-	1005	1077
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1615	-	-	-	1004	1077
Mov Cap-2 Maneuver	-	-	-	-	1004	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	8.3
HCM LOS		A	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1615	-	-	-	1077
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Control Delay (s)	7.2	0	-	-	8.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0