First Hathaway Logistics Center
Local Transportation Analysis

City of Banning

March 14, 2023

Prepared for:

First Industrial Realty Trust, Inc.

Prepared by:

Stantec Consulting Services Inc.

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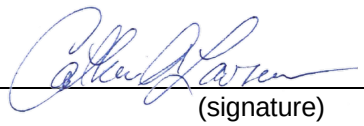
Prepared by  (signature)

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Executive Summary

Project Description

The proposed First Hathaway Logistics Center (Project) site is located on currently undeveloped land on the east side of Hathaway Street between the future extension of Wilson Street and Nicolet Street in the eastern area of the City of Banning. The Project consists of approximately 1.42 million square feet (MSF) of warehouse building space and associated truck docks, trailer, and office parking. Access to the Project's main building would be provided by one driveway on Hathaway Street, one driveway on the future extension of Wilson Street, and three driveways on the future extension of Nicolet Street. A parcel located on the south side of the future extension of Nicolet Street near Hathaway Street would be used for passenger vehicle parking, and another parcel near the future First Industrial Way would be used for truck trailer parking with two driveways located on Nicolet Street. The existing land use designation for the site is Business Park, and the proposed land use is Warehouse. The existing and proposed zoning designation is Business Park. The Project will not change the existing zoning designation.

Project Trip Generation Summary

The total trip generation for the site is 114 trips during the AM peak hour, 142 trips during the PM peak hour, and 1,989 daily trips based on the Institute of Transportation Engineers (ITE) High-Cube Transload and Short-Term Storage Warehouse trip rates. However, due to the expected operation of the proposed land use, a portion of the driveway trips would be four-axle trucks or larger; therefore, the City has identified a passenger car equivalent (PCE) factor of 3.0 be applied to truck trips to account for the larger impact of trucks on traffic flow. Consequently, the Project would generate 170 AM peak hour PCE trips, 170 PM peak hour PCE trips, and 2,615 daily PCE trips for use in the roadway level of service (LOS) analysis. **Table 1** summarizes the Project trip generation.

Table 1 Project Trip Generation Summary

Land Use	Amount	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Logistics Center								
Total Driveway Trips	1,420.72 TSF	85	29	114	43	99	142	1,989
Truck trips		14	14	28	7	7	14	313
Truck PCE Trips (3.0 PCE)[2]		*42*	*42*	*84*	*21*	*22*	*43*	*939*
Passenger Car Trips[3]		*71*	*15*	*86*	*36*	*91*	*127*	*1,676*
Total Truck PCE + Passenger Car Trips		**113**	**57**	**170**	**57**	**113**	**170**	**2,615**
Trip Rates								
High-Cube Warehouse[1]	TSF							
Total Vehicles		0.06	0.02	0.08	0.03	0.07	0.10	1.40
Trucks		0.01	0.01	0.02	0.005	0.005	0.01	0.22

Source:
[1] High-Cube Transload and Short-Term Storage Warehouse – ITE Trip Generation, 11th Edition Category 154
[2] Riverside County Transportation Analysis Guidelines, December 2020 – 4 or more axle trucks
[3] Total driveway trips less truck trips

ADT = Average daily traffic
TSF = Thousand square feet
PCE = Passenger car equivalents

Level of Service Analysis Summary

Eleven study intersections were included in the roadway LOS analysis, and potential Project effects were evaluated under Opening Year and Cumulative Conditions. The Project is consistent with the General Plan; therefore, a Horizon Year intersection impact analysis is not required.

Under Opening Year conditions, the Project would have an adverse effect on the operations of the following intersection:

- Hargrave Street and I-10 Eastbound Ramps

Table 2 summarizes the delay and LOS for the study intersections under Opening Year conditions. Under Opening Year conditions, the intersection of Hargrave Street and I-10 Eastbound would operate at an unacceptable LOS F during the AM peak hour and an unacceptable LOS E during the PM peak hour without Project traffic. The Project would increase the delay at this intersection by more than one second during the AM peak hour and by more than two seconds during the PM peak hour; therefore, the Project has an adverse effect on this deficient intersection. The remaining study intersections would operate at acceptable LOS D or better during the AM and PM peak hours under Opening Year conditions.

Table 2 Opening Year Plus Project Intersection Level of Service Summary

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		Delay	LOS	Project Increase	Delay	LOS	Project Increase
1. 8th & Ramsey	Signal	30.3 sec	C	0.2 sec	43.7 sec	D	0.1 sec
2. Hargrave & Nicolet	AWSC	9.3 sec	A	0.1 sec	9.5 sec	A	0.2 sec
3. Hargrave & Williams	TWSC	15.5 sec	C	0.4 sec	14.0 sec	B	0.5 sec
4. Hargrave & Ramsey	Signal	21.7 sec	C	0.5 sec	23.2 sec	C	1.3 sec
5. Hargrave & I-10 WB	TWSC	20.2 sec	C	2.1 sec	19.6 sec	C	1.6 sec
6. Hargrave & I-10 EB	TWSC	**179.6 sec**	**F**	**73.4 sec**	**48.9 sec**	**E**	**11.0 sec**
7. Hathaway & Wilson	AWSC	8.1 sec	A	0.1 sec	8.0 sec	A	0.0 sec
8. Hathaway & George	TWSC	11.0 sec	B	1.6 sec	11.2 sec	B	1.9 sec
9. Hathaway & Nicolet	TWSC	11.3 sec	B	1.9 sec	11.6 sec	B	2.2 sec
10. Hathaway & Williams	TWSC	10.2 sec	B	0.8 sec	10.6 sec	B	0.9 sec
11. Hathaway & Ramsey	Signal	17.7 sec	B	-0.4 sec	16.9 sec	B	-0.8 sec

Adverse Project effects shown in **bold** (see Table 2-2 for impact criteria)
AWSC = All-way stop control
TWSC = Two-way stop control
LOS = Level of service
sec = seconds of delay

Under Cumulative Conditions, the Project would have an adverse effect on the operations of the following intersections:

- Hargrave Street and I-10 Eastbound Ramps
- Hargrave Street and I-10 Westbound Ramps

Table 3 summarizes the delay and LOS under Cumulative Conditions. Under Cumulative Conditions, the intersection of Hargrave Street and I-10 Westbound would operate at an unacceptable LOS F during the AM peak hour and an unacceptable LOS E during the PM peak hour without Project traffic. The Project would increase the delay at Hargrave Street and I-10 Westbound by more than one second during the AM peak hour and by more than two seconds during the PM peak hour. The intersection of Hargrave Street and I-10 Eastbound would operate at an unacceptable LOS F during the AM and PM peak hours without Project traffic. The Project would increase the delay at Hargrave Street and I-10 Eastbound by more than one second during the AM and PM peak hours. The Project would have an adverse effect on the intersections of Hargrave Street at I-10 Westbound and Hargrave Street at I-10 Eastbound. The remaining study intersections would operate at acceptable LOS D or better during the AM and PM peak hours under Cumulative Conditions.

Table 3 Cumulative Conditions Plus Project Intersection Level of Service Summary

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		Delay	LOS	Project Increase	Delay	LOS	Project Increase
1. 8th & Ramsey	Signal	32.5 sec	C	0.2 sec	45.3 sec	D	0.1 sec
2. Hargrave & Nicolet	AWSC	9.4 sec	A	0.1 sec	9.6 sec	A	0.1 sec
3. Hargrave & Williams	TWSC	16.0 sec	C	0.4 sec	14.6 sec	B	0.5 sec
4. Hargrave & Ramsey	Signal	22.0 sec	C	0.7 sec	26.0 sec	C	2.0 sec
5. Hargrave & I-10 WB	TWSC	**81.1 sec**	**F**	**22.3 sec**	**61.4 sec**	**F**	**12.7 sec**
6. Hargrave & I-10 EB	TWSC	**568.0 sec**	**F**	**116.8 sec**	**235.3 sec**	**F**	**46.7 sec**
7. Hathaway & Wilson	AWSC	10.8 sec	B	10.8 sec	10.3 sec	B	10.3 sec
8. Hathaway & George	TWSC	13.3 sec	B	2.9 sec	13.1 sec	B	2.9 sec
9. Hathaway & Nicolet	TWSC	13.5 sec	B	3.0 sec	13.9 sec	B	3.6 sec
10. Hathaway & Williams	TWSC	11.5 sec	B	1.1 sec	12.0 sec	B	1.2 sec
11. Hathaway & Ramsey	Signal	20.1 sec	C	1.4 sec	16.4 sec	B	-0.2 sec

Adverse Project effects shown in **bold** (see Table 2-2 for impact criteria)
AWSC = All-way stop control
TWSC = Two-way stop control
LOS = Level of service
sec = seconds of delay per vehicle

Under Opening Year conditions, a potential improvement at Hargrave Street and I-10 Eastbound consists of installation of all-way stop control. Another potential improvement consists of installation of a roundabout. Either improvement would result in the intersection of Hargrave Street and I-10 Eastbound operating at an acceptable LOS during the peak hours. Since this location is part of the State highway system, Caltrans will make the final determination regarding the type of improvement(s) to implement.

Under Cumulative Conditions, potential improvements at Hargrave Street and I-10 Westbound and Hargrave Street and I-10 Eastbound consist of installation of traffic signals. Both intersections satisfy the Peak Hour Signal Warrant under Cumulative Conditions. Another potential improvement consists of installation of roundabouts. Either improvement would result in both intersections operating at an acceptable LOS during the peak hours. Since these locations are part of the State highway system, Caltrans will make the final determination regarding the type of improvement(s) to implement.

Operational Deficiencies and Potential Improvements

Table 4 summarizes the deficient intersections and LOS with potential improvements identified above. These locations are part of the State highway system; therefore, the improvements were evaluated to show that these alternatives would result in an acceptable LOS. Caltrans will make the final determination regarding the type of improvement(s) to implement.

Table 4 Operational Deficiencies and Potential Improvements

Intersection	Plus Project			
	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
Opening Year				
6. Hargrave & I-10 Eastbound				
Existing Two-Way Stop Control[1]	179.6 sec	F	48.9 sec	E
Improvement Option 1 – All-Way Stop Control	18.0 sec	C	12.9 sec	B
Improvement Option 2 – Roundabout	9.4 sec	A	7.6 sec	A
Cumulative Conditions				
5. Hargrave & I-10 Westbound				
Existing Two-Way Stop Control[1]	81.1 sec	F	61.4 sec	F
Improvement Option 3 – Traffic Signal	6.8 sec	A	6.7 sec	A
Improvement Option 2 – Roundabout	15.5 sec	C	18.4 sec	C
6. Hargrave & I-10 Eastbound				
Existing Two-Way Stop Control[1]	568.0 sec	F	235.3 sec	F
Improvement Option 3 – Traffic Signal	28.2 sec	C	23.3 sec	C
Improvement Option 2 – Roundabout	16.5 sec	C	10.3 sec	B

Notes:
[1] Delay incurred by the side street traffic controlled by a stop sign

LOS = Level of service
sec = seconds of delay per vehicle

The Project will be responsible for paying the WRCOG Transportation Uniform Mitigation Fee (TUMF) and the City's Development Impact Fee (DIF). The Project is contributing to otherwise deficient conditions at the Hargrave Street and I-10 ramp intersections, and potential improvement alternatives have been identified in this report. Since widening and signal improvements at the Hargrave Street and I-10 ramp intersections are included in the Traffic Component of the City's DIF, the Project is not responsible for additional fair share costs at these locations beyond its Traffic Component DIF payment.

The study intersections along Hathaway Street are identified as future signalized intersections based on the Banning General Plan Exhibit III-7; however, these intersections do not satisfy the Caltrans Peak Hour Signal Warrant under Existing, Opening Year, or Cumulative Conditions. The future Hathaway Street traffic signals are not included in the Traffic Component of the City's DIF; therefore, the Project shall be responsible for its fair share contribution toward the future buildout traffic signal improvements at

the locations along Hathaway Street based on the Banning General Plan Exhibit III-7. Based on Hathaway Street's classification as a Major Highway on the City's General Plan Street System, the LOS C roadway capacity of Hathaway Street will be 30,400 ADT. The Project would generate 2,615 daily PCE trips, which represents an 8.6 percent share of the future volume along Hathaway Street.

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has performed a traffic impact analysis for the proposed First Hathaway Logistics Center (Project). The Project is proposed for a site on the east side of Hathaway Street within the City of Banning. The site was previously referred to as the Stagecoach Business Park and a Traffic Impact Analysis was prepared for that project in April 2018. The previously proposed land use on the site was an on-line auto auction facility and industrial park, whereas the current Project proposes a logistics center. This current transportation analysis evaluates the same study area and analysis scenarios for the proposed Project as the previously analyzed project.

This report summarizes the analysis of the Project consistent with the Local Transportation Analysis (LTA) guidelines contained in the City's *Traffic Impact Analysis Guidelines for Local Transportation Analysis and Vehicle Miles Traveled Analysis* (October 2021).

1.1 PURPOSE AND STUDY OBJECTIVE

The purpose and objective of this LTA is to evaluate potential operational impacts at local intersections and, if necessary, to identify potential off-site improvements to enhance operations consistent with the City's General Plan.

1.2 PROJECT LOCATION AND DESCRIPTION

The Project site is located in the eastern area of the City of Banning on approximately 83 acres on the east side of Hathaway Street between Nicolet Street and the future extension of Wilson Street. The Project would extend Nicolet Street and Wilson Street from Hathaway Street to the eastern boundary of the Project site. **Figure 1-1** illustrates the project location and shows the study intersections.

The Project would consist of one 1.42 million square feet (MSF) warehouse building and associated truck docks, trailer, and office parking. The proposed site plan is illustrated in **Figure 1-2**.

The Project's main building would be accessed by five driveways, three located on the future extension of Nicolet Street, one on Hathaway Street, and one on the future extension of Wilson Street. There would be two parcels located on the south side of the future extension of Nicolet Street, one of which would be used for passenger vehicle parking with two driveways on Nicolet Street and the other which would be used for truck trailer parking with two driveways located on Nicolet Street.

The Project site is currently undeveloped. Residential homes are located west of the site, and vacant land is located on the north, east, and south sides of the Project site, with the exception of a Caltrans maintenance yard located south of the site. The Interstate 10 (I-10) freeway is located just south of the Project site.

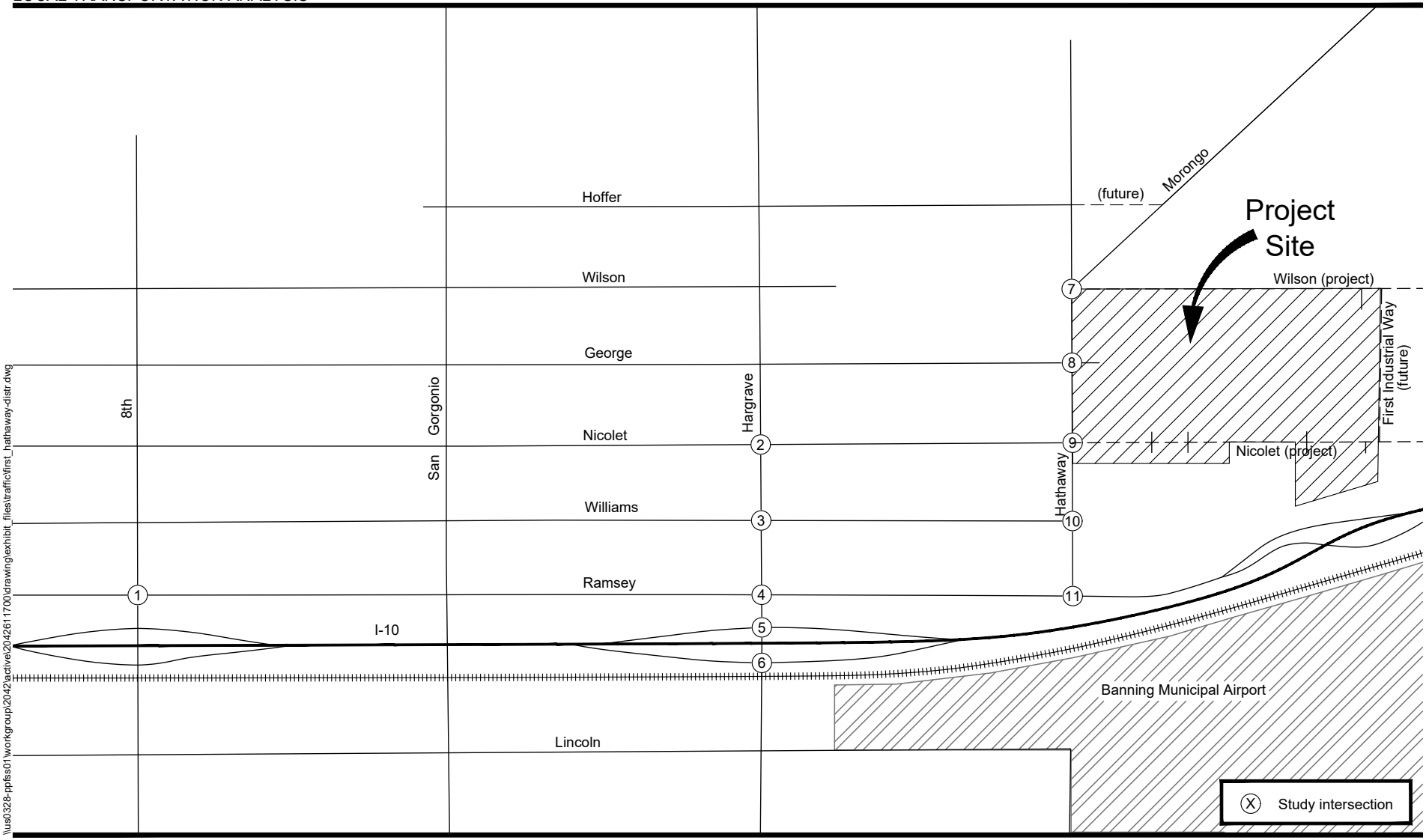
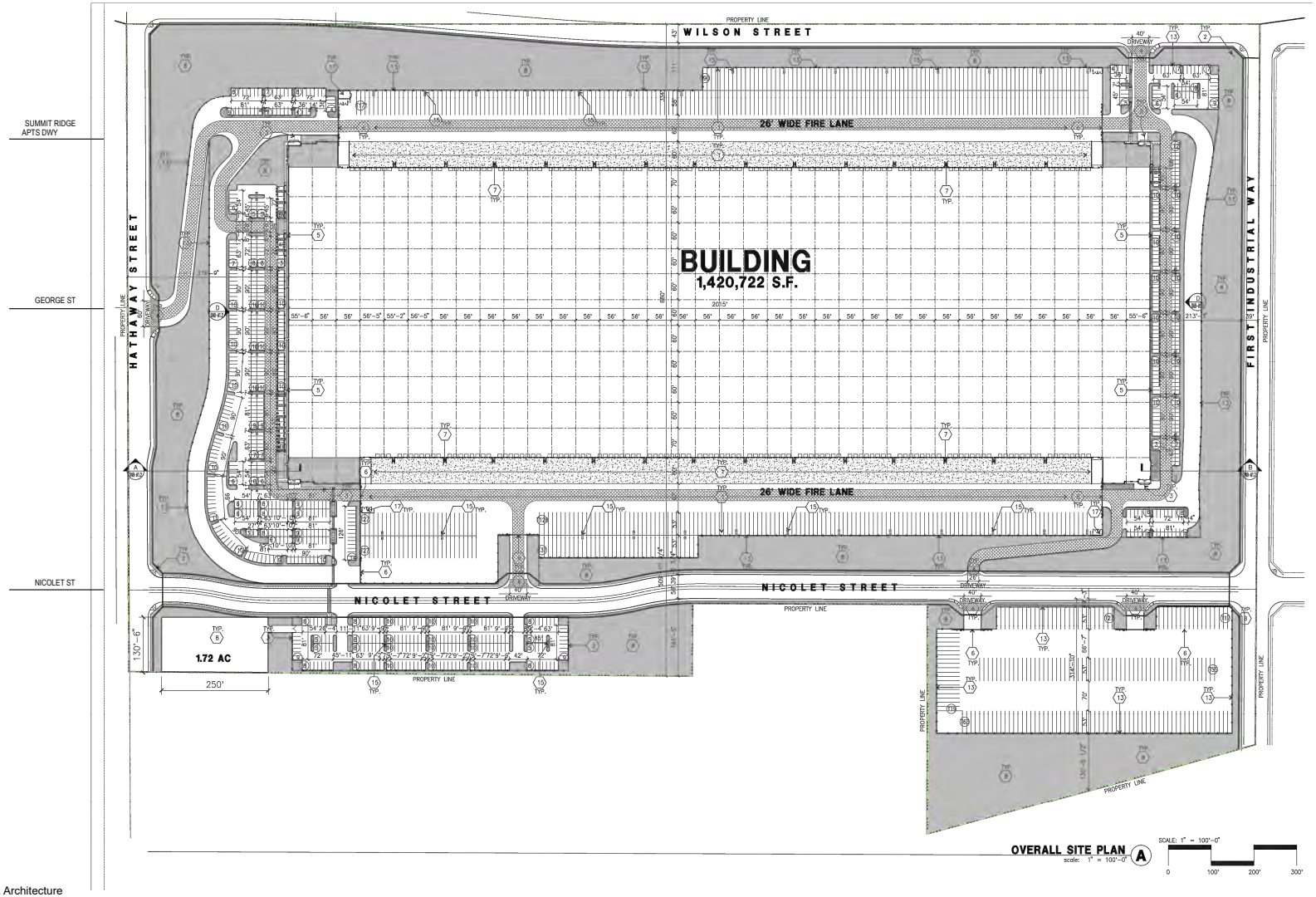


Figure 1-1
Project Location and Vicinity Map



Source: HPA Architecture

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Figure 1-2
Proposed Site Plan

1.3 EXISTING AND PROPOSED LAND USE AND ZONING

The Project site covers several parcels. The existing land use designation is Business Park, and the proposed land use is Warehouse. The existing and proposed zoning designation is Business Park. The Project will not change the existing zoning designation.

1.4 PROPOSED PROJECT OPENING YEAR AND ANALYSIS SCENARIOS

The expected opening year of the Project is 2023. The analysis would include the following scenarios:

1. Existing Conditions
2. Opening Year (2023)
3. Opening Year (2023) Plus Project
4. Cumulative Conditions (2023)
5. Cumulative Conditions (2023) Plus Project

The Project does not involve a General Plan Amendment or Change of Zone; therefore, an evaluation of long-range Horizon Year conditions in not required for this LTA.

Based on the proposed warehouse land use, the majority of trips are expected to be oriented toward the I-10 Freeway. Therefore, the study area was defined to include intersections generally between the Project site and the I-10 interchanges at Hargrave Street to the west and Ramsey Avenue to the east.

2.0 LEVEL OF SERVICE ANALYSIS METHODOLOGY AND STANDARDS

Intersection and roadway analyses have been prepared consistent with the methodologies prescribed in the City's LTA guidelines. Defined performance criteria are utilized to determine if a proposed project would cause intersection operations to be adversely affected. Performance criteria are typically based on two primary measures. The first is "capacity," which establishes the vehicle carrying ability of a roadway, and the second is "volume." The volume measure is either a traffic count (in the case of existing volumes) or a forecast for a future point in time. For arterial roadways, the intersection of two roadways will typically be the limiting factor regarding the overall capacity of the roadway network.

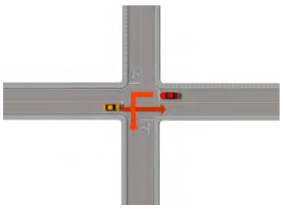
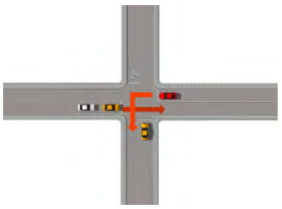
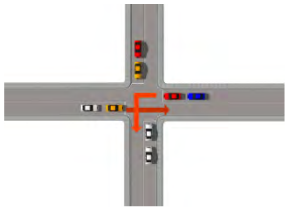
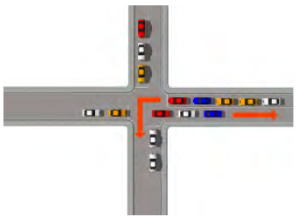
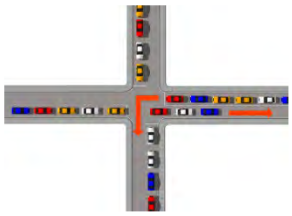
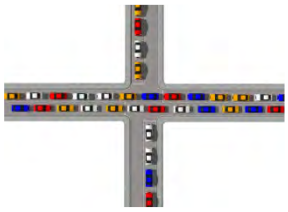
Methodology outlined in the Highway Capacity Manual, Sixth Edition (HCM 6) produces estimates of average vehicle delay as a function of intersection capacity and the volume of traffic passing through the intersections and is the methodology specified in the City's guidelines. From this a corresponding level of service (LOS) is defined. Traffic LOS is designated "A" through "F" with LOS A representing free flow conditions and LOS F representing severe traffic congestion. **Table 2-1** summarizes the ranges of vehicle delay that correspond to LOS A through LOS F for arterial roads and intersections. The ranges are those defined in the HCM and are used by the City of Banning for estimating intersection LOS.

While average daily traffic (ADT) is a useful measure to show general levels of traffic on a facility and to provide data for other related aspects such as noise and greenhouse gas (GHG) emissions, congestion is largely a peak hour or peak period occurrence, and ADT does not reflect peak period conditions very effectively. Because of this, this evaluation focuses on the parts of the day when such congestion can occur, specifically the AM and PM peak hours. In addition, an ADT evaluation of roadway segments is also provided.

For the arterial system, the peak hour is the accepted time period used for impact evaluation and a number of techniques are available to define intersection LOS. Both the level of delay and the LOS are used in determining adverse effects. Certain LOS values are deemed undesirable by the City and increases in delay that cause or contribute to the LOS being undesirable are defined as an adverse effect. These definitions and procedures are established by individual local jurisdictions, such as the City of Banning.

Levels of service for arterial roadway intersections are determined based on operating conditions during the AM and PM peak hours and the geometric configuration of the intersection. HCM delay methodology was used to analyze both the signalized intersections and the stop-controlled intersections. Synchro software was used to calculate the intersection delay and LOS. For signalized intersections, signal timing

Table 2-1 Level of Service Descriptions for Signalized and Unsignalized Intersections

LOS	Traffic Flow Description		Signal Control Delay (sec/veh)	Stop Control Delay (sec/veh)
A		Minimal or no vehicle delay	≤ 10	≤ 10
B		Slight delay to vehicles	> 10 – 20	> 10 – 15
C		Moderate vehicle delays, traffic flow remains stable	> 20 – 35	> 15 – 25
D		More extensive delays at intersections	> 35 – 55	> 25 – 35
E		Long queues create lengthy delays	> 55 – 80	> 35 – 50
F		Severe delays and congestion	> 80	> 50

Source: HCM 6 Motorized Vehicle Mode
Delay = average seconds of delay per vehicle

and cycle lengths are based on existing timings provided by City staff. The result of these calculations is an estimate of average vehicle delay at the intersection. The delay calculation methodology utilized by Synchro is based on the intersection capacity analysis methodology outlined in the HCM 6.

At the all-way stop-controlled study intersections, the reported delay is the average for the entire intersection. At the two-way stop-controlled study intersections, the reported delay is based on the delay incurred by the side street traffic controlled by a stop sign since the through movements on the main street do not experience delay.

The HCM 6 calculation methodology and associated LOS performance standards used in this analysis are summarized in **Table 2-2**.

A large portion of Project traffic is anticipated to use I-10 freeway for regional access to the study area; therefore, a freeway ramp queuing analysis was prepared.

Table 2-2 Arterial Intersection Performance Criteria

Delay Methodology

Calculation Methodology

Level of service based on "average vehicle delay" calculated as follows:

- Synchro/HCM delay-based intersection methodology for traffic signals
- HCM 6 delay-based intersection methodology for stop sign control

Performance Standard

Acceptable level of service D defined as follows:

- Stopped delay not to exceed 55 seconds for signalized intersections
- Stopped delay not to exceed 35 seconds for stop sign control

Adverse Project Effect Thresholds

Operational improvements would be required at study intersections if the Project would result in either of the following conditions:

A. Cause the intersection LOS to degrade from an acceptable LOS D or better to an unacceptable LOS E or F
B. Addition of project traffic causes the peak hour delay to increase as follows:
    - LOS A/B by 10 seconds
    - LOS C by 8 seconds
    - LOS D by 5 seconds
    - LOS E by 2 seconds
    - LOS F by 1 second

3.0 EXISTING CONDITIONS

This chapter identifies the study area and discusses the existing traffic conditions in the area.

3.1 EXISTING CIRCULATION NETWORK

The study area is located in the eastern end of the City of Banning. Study intersections were identified based on the anticipated distribution of Project trips. Intersections where the Project would add 50 or more peak hour trips were included as study intersections. Eleven existing intersections located along Ramsey Street, Hargrave Street, and Hathaway Street were selected as study intersections, two of which are signalized and nine are stop-controlled.

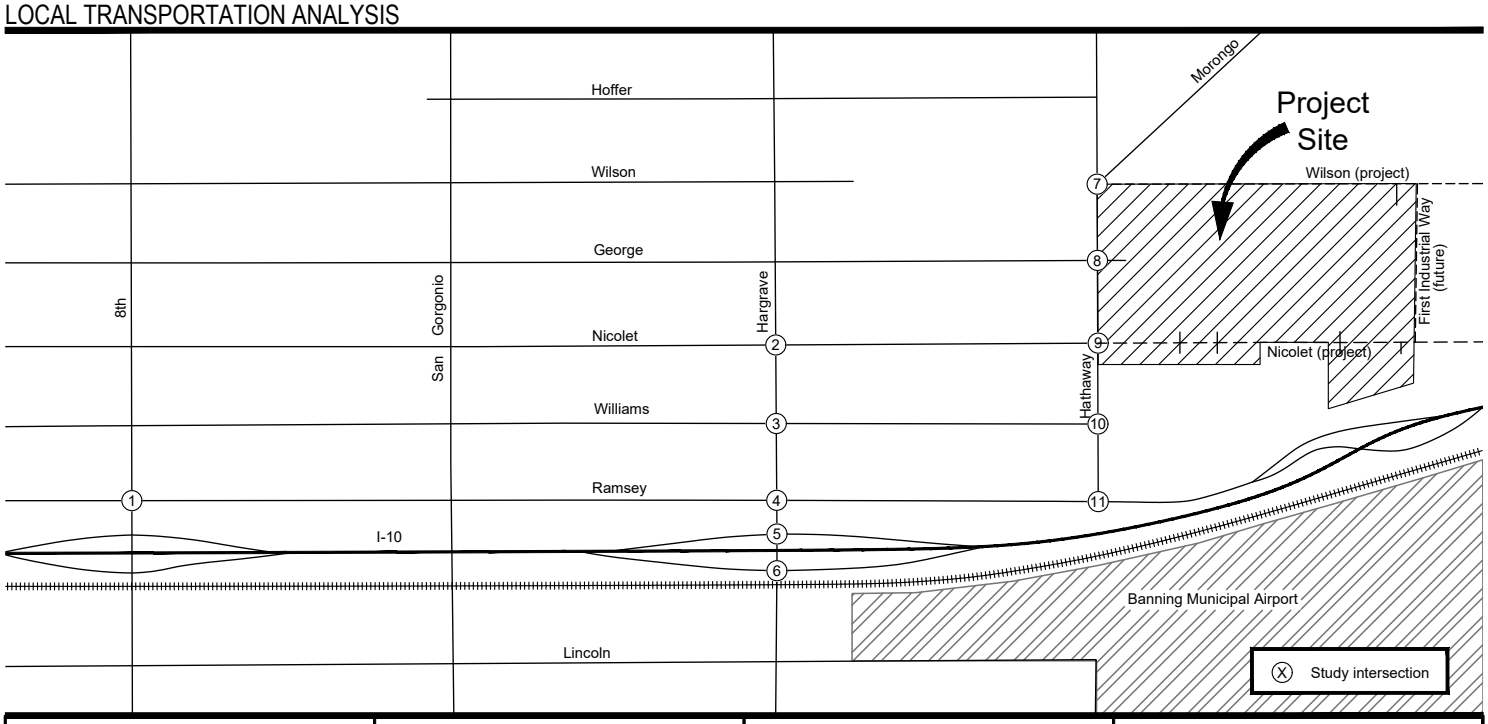
The following signalized, all-way stop-control (AWSC), and two-way stop-control (TWSC) intersections are identified as the study intersections:

1. 8th Street & Ramsey Street (signal)
2. Hargrave Street & Nicolet Street (AWSC)
3. Hargrave Street & Williams Street (TWSC)
4. Hargrave Street & Ramsey Street (signal)
5. Hargrave Street & I-10 Westbound (TWSC)
6. Hargrave Street & I-10 Eastbound (TWSC)
7. Hathaway Street & Morongo Road (AWSC)
8. Hathaway Street & George Street (TWSC)
9. Hathaway Street & Nicolet Street (TWSC)
10. Hathaway Street & Williams Street (TWSC)
11. Hathaway Street & Ramsey Street (TWSC)

Figure 3-1 illustrates the lane geometrics and traffic controls at the existing study intersections. These intersection lane geometrics and traffic controls were verified in the field by a Stantec employee in April 2022. Several intersections have wide through lanes (i.e., 20 feet or more) which act as a through lane and a defacto right-turn lane; however, at the direction of the City for this analysis, the defacto right-turn lanes are not included in the lane configurations shown since they are not striped.

Hathaway Street – Hathaway Street is a north-south street with the northern section of the roadway separated from the southern section by the I-10 Freeway and the Banning Municipal Airport. The Project site is located along the northern portion of Hathaway Street. The northern portion of Hathaway Street is classified as a four-lane Major Highway, consisting of 100 feet of right of way with a 76-foot street section per the Banning General Plan, from Morongo Road to Ramsey Street on the City's General Plan Street System (General Plan Exhibit III-6), although it is currently two lanes.

The west side of Hathaway Street between Morongo Road and George Street has been improved to its ultimate width with curb, gutter, and sidewalks. Between George Street and Williams Street, the west side of the roadway has been improved with curb and gutter, but no sidewalk. South of Williams Street, the



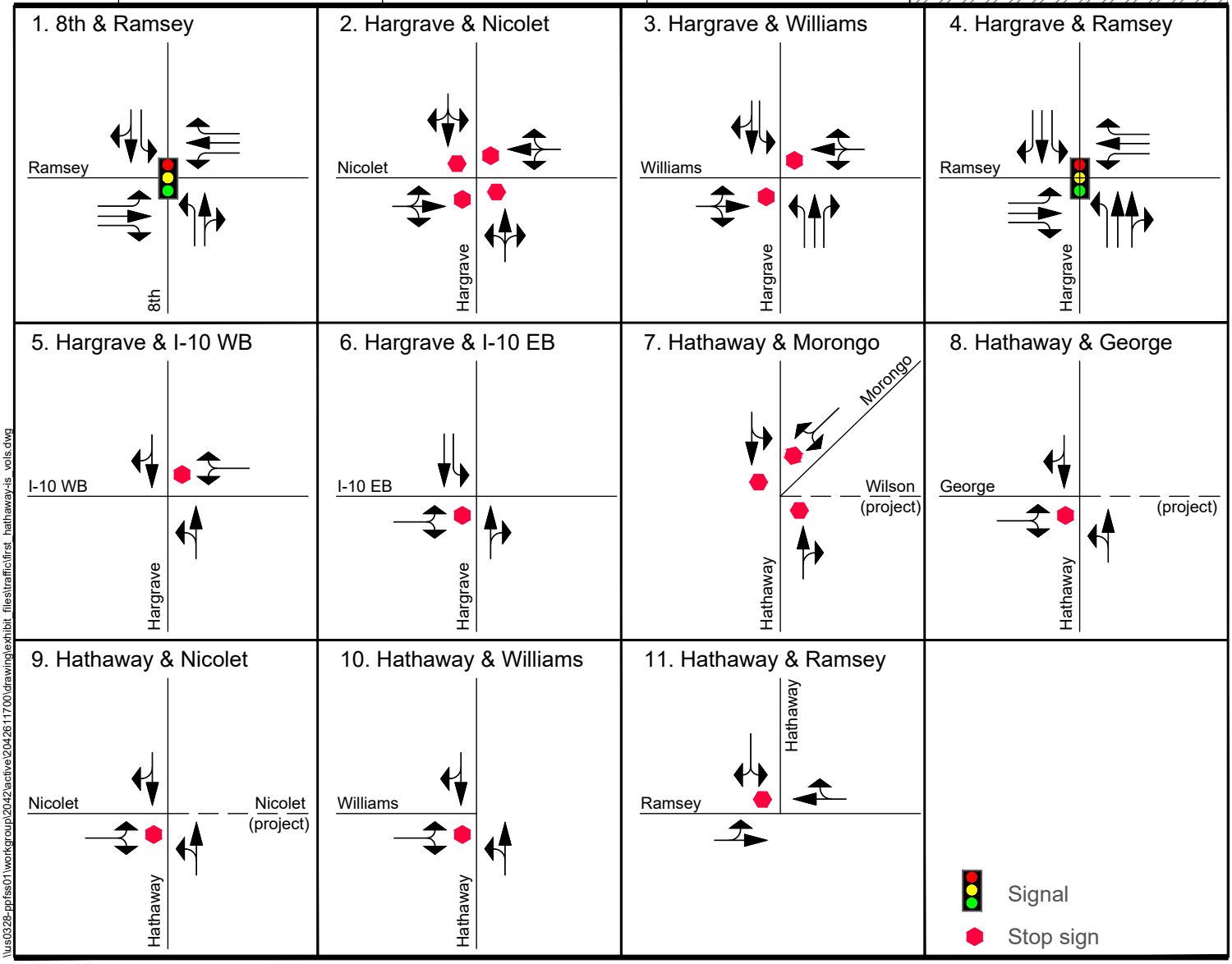


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Figure 3-1
Existing Intersection Lane Geometry and Traffic Controls

west side of the roadway is unimproved. The east side of the roadway is unimproved from Morongo Road to Ramsey Street. The northern portion of Hathaway Street ends at the T-intersection at Ramsey Street. The west side of Hathaway Street is developed with residential uses and the east side is largely vacant. The speed limit on Hathaway Street is 35 mph.

Hargrave Street – Hargrave Street from Wilson Street to Ramsey Street and south of Lincoln Street is classified as a four-lane Secondary Highway consisting of 88 feet of right of way with a 64-foot street section per the Banning General Plan. Between Ramsey Street and Lincoln Street, where the I-10 interchange is located, Hargrave Street is classified as a four-lane Major Highway. It is currently two lanes with on-street parking and low-density residential north of Williams Street. Hargrave Street has a speed limit of 25 mph.

Ramsey Street – Ramsey Street from Highland Springs Avenue to east of Hathaway Street is classified as a four-lane Major Highway consisting of 100 feet of right of way with 76-foot street section. West of 8th Street, Ramsey Street is four lanes with left-turn pockets, on-street bike lanes, and sidewalks. East of 8th Street, Ramsey Street is two lanes with left-turn pockets at the larger intersections and bike sharrows and sidewalks west of San Gorgonio Avenue. East of San Gorgonio Avenue, there are no bike facilities and some segments without sidewalks. The land use along Ramsey Street in the study area is mostly commercial. The Banning Civic Center is located on Ramsey Street at San Gorgonio Avenue. The speed limit on Ramsey Street is 40 mph west of 8th Street, 25 mph between 8th Street and Hargrave Street, and 40 mph east of Hargrave Street.

Wilson Street – Wilson Street is classified as a Major Highway through the City consisting of 100 feet of right of way with a 76-foot street section. Wilson Street currently ends at North Blanchard Street, although it is shown on the City's General Plan Street System map with a future extension east to the future Cottonwood Road. The roadway width varies, and the number of lanes varies from two lanes to four lanes with turn pockets. Land use along Wilson Street consists of single family residential, mobile home parks, schools and churches, and undeveloped land. Bike lanes are provided for a short one-half mile section east of Highland Springs Avenue, and bike sharrows are striped east of 8th Street. There are many sections without sidewalks.

Collector Streets – George Street, Nicolet Street, and Williams Street are classified as Collector Highways consisting of 66 feet of right of way with a 44-foot street section per the Banning General Plan. These streets are generally 40 feet wide with on-street parking allowed and no centerline stripe. Many portions are unimproved and are without sidewalks. The land use along these streets is mostly residential.

I-10 Freeway – I-10 freeway passes through the City of Banning just south of the Project site. I-10 is currently eight general purpose lanes with no high-occupancy vehicles (HOV) lanes in the vicinity. Interchanges in Banning are provided at Highland Springs Avenue, Sunset Avenue, 22nd Street, 8th Street, Hargrave Street, and at the eastern terminus of Ramsey Street. A future interchange east of the Project site is shown on the City's General Plan Street System at the future Cottonwood Road.

Figure 3-2 shows the General Plan Street System in the study area.

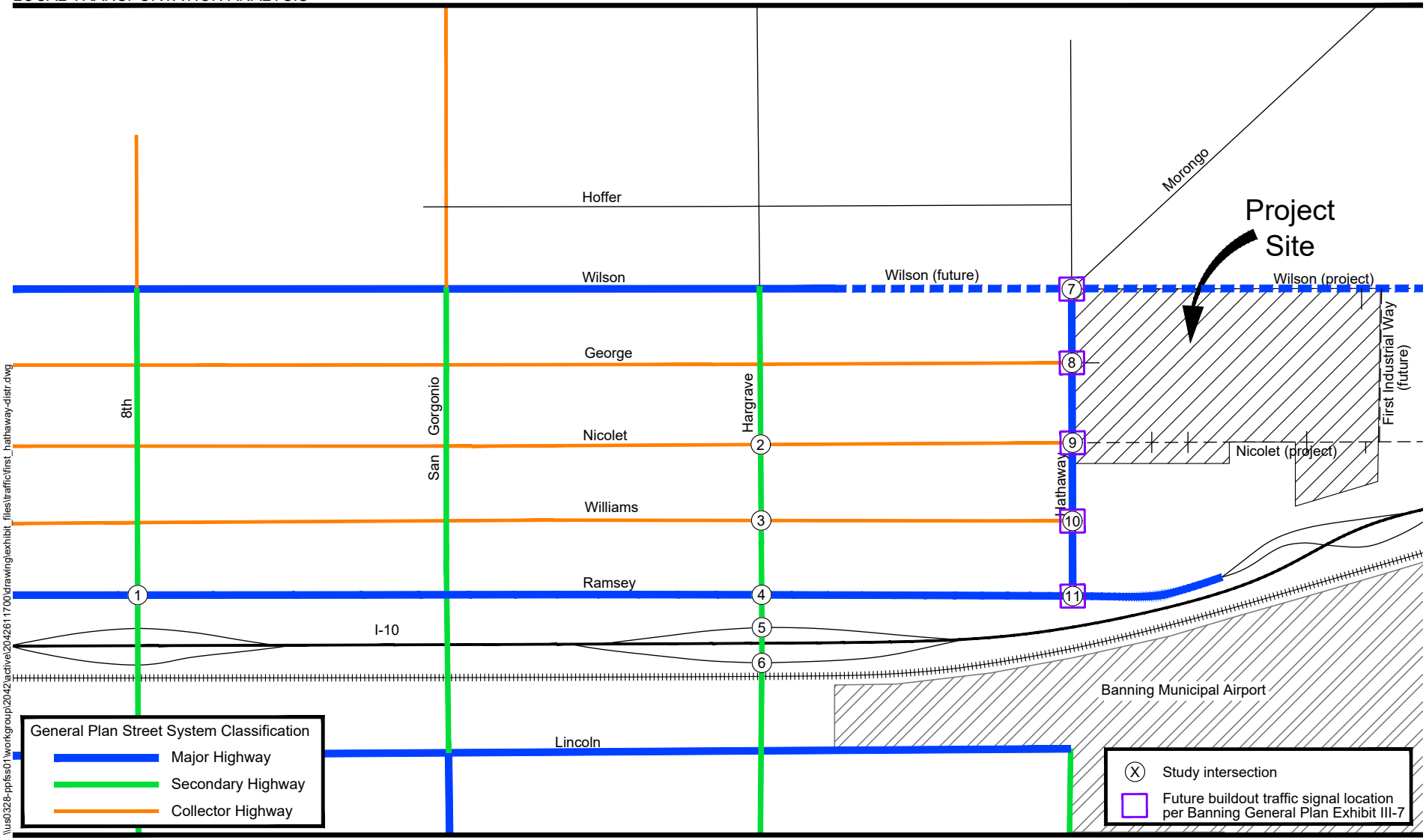


Figure 3-2
General Plan Street System

3.2 EXISTING TRAFFIC VOLUMES

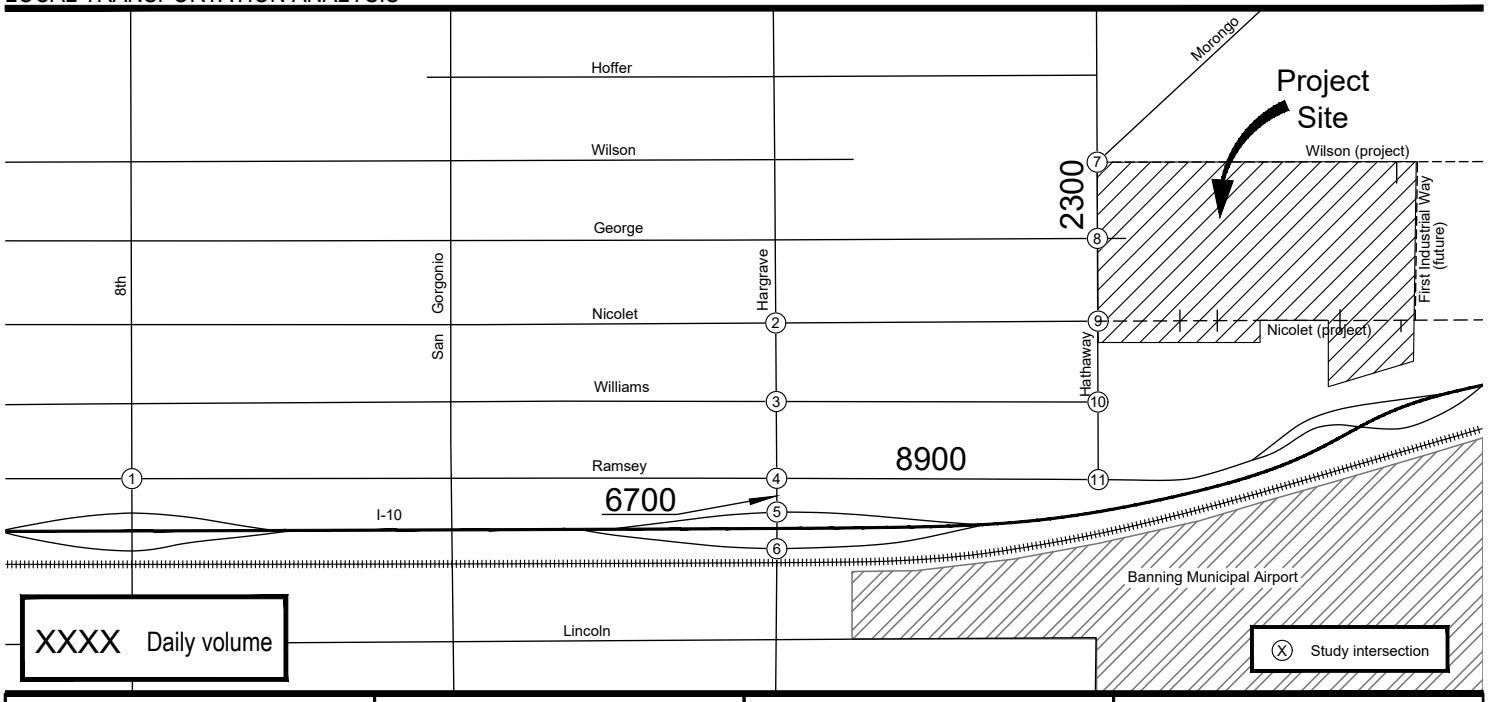
Existing traffic volumes at the study intersections, as well as at select mid-block locations, were collected in March 2018 for the traffic study prepared for the previously proposed use for the site. The COVID-19 pandemic has changed travel behavior patterns since March 2020 and since traffic conditions under the recent COVID-19 restrictions may not represent typical traffic conditions current peak hour traffic counts were not collected at all of the study intersections. Instead, new peak hour counts were collected at four select study intersections in July 2021 at the I-10 freeway ramps along Hargrave Street and at the study intersections along Ramsey Street at Hargrave Street and at Hathaway Street for comparison to pre-COVID-19 conditions. The new 2021 counts were found to be low compared with the 2018 counts, which were increased by 6 percent (2 percent per year) to approximate "typical" 2021 conditions—specifically, an average of 26 percent low during the AM peak hour and 19 percent low during the PM peak hour; therefore, these new counts were factored to represent "typical" 2021 levels. The 2018 volumes at the remaining study intersections were similarly factored to approximate 2021 levels as noted above. This procedure for estimating the existing traffic conditions was reviewed and approved by City staff. Traffic count collection data is included in **Appendix A**.

Figure 3-3 illustrates the existing (2021 conditions) ADT volumes and AM peak hour intersection volumes in the study area. **Figure 3-4** illustrates the existing PM peak hour intersection volumes at the study intersections.

As discussed in Chapter 2.0, the City of Banning uses the HCM delay methodology for identifying intersection deficiencies. Synchro software was used to calculate intersection delay and corresponding LOS. Per the City TIA guidelines, the acceptable LOS for intersections in the City is LOS D.

Table 3-1 summarizes the delay and LOS for the study intersections during the AM and PM peak hours based on the existing volumes and existing lane configurations (actual delay calculations are included in **Appendix B**). As discussed previously, several intersections have wide through lanes (i.e., 20 feet or more) which drivers treat as a through lane and a defacto right-turn lane; however, at the direction of the City for this analysis, only striped turn lanes are factored into the delay analysis calculations. As this table shows, the existing LOS at the signalized study intersections is at an acceptable LOS D or better during the AM and PM peak hours, and the existing LOS at the stop-controlled intersections is at an acceptable LOS C or better with the exception of Hargrave Street at I-10 Eastbound. The stop-controlled eastbound off-ramp movement at the intersection of Hargrave Street and I-10 Eastbound is currently operating at an unacceptable LOS F during the AM peak hour.

The Project is consistent with the City's General Plan; therefore, the roadway segment LOS analysis included as a part of the General Plan remains applicable and an update is not required for this Project.



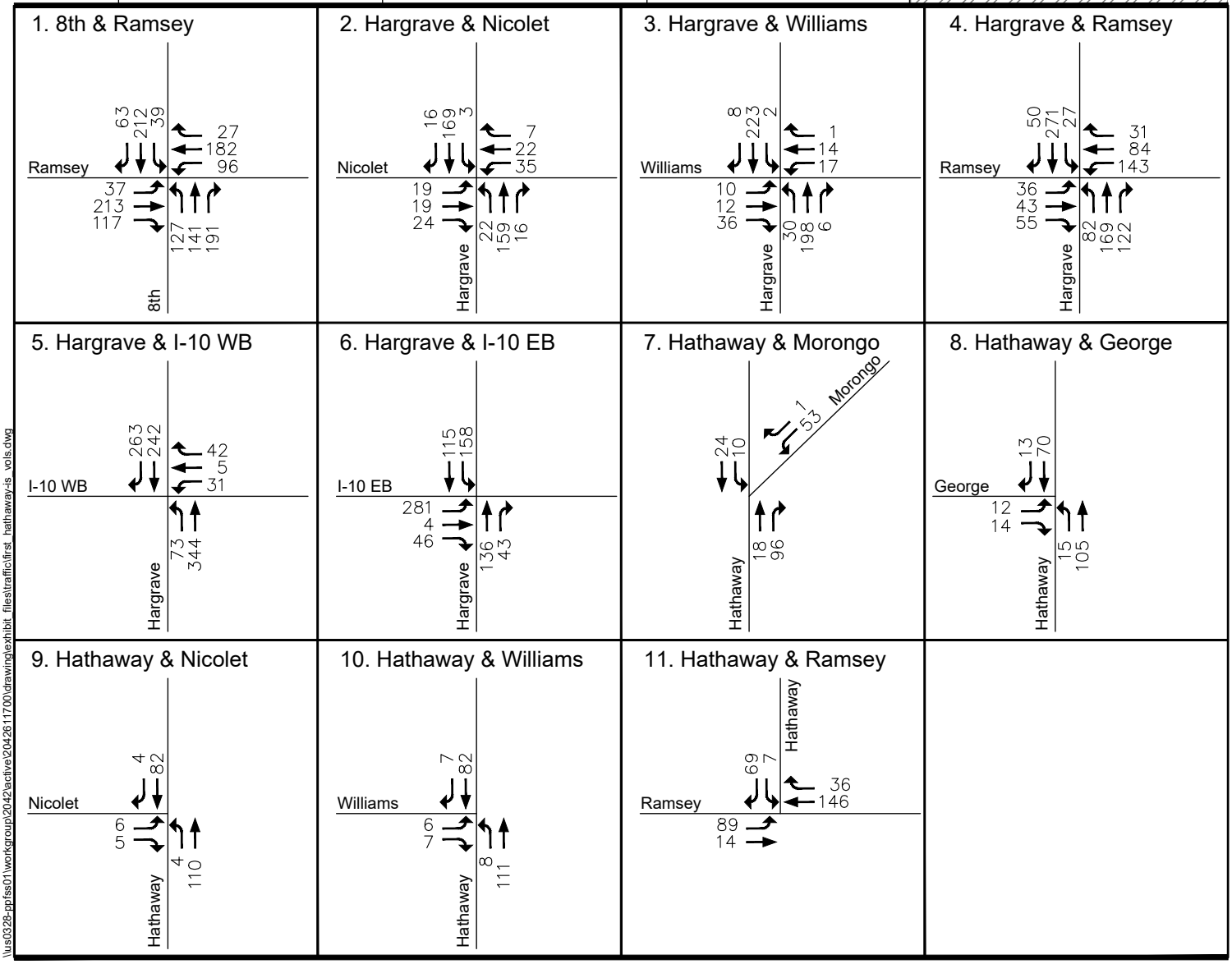


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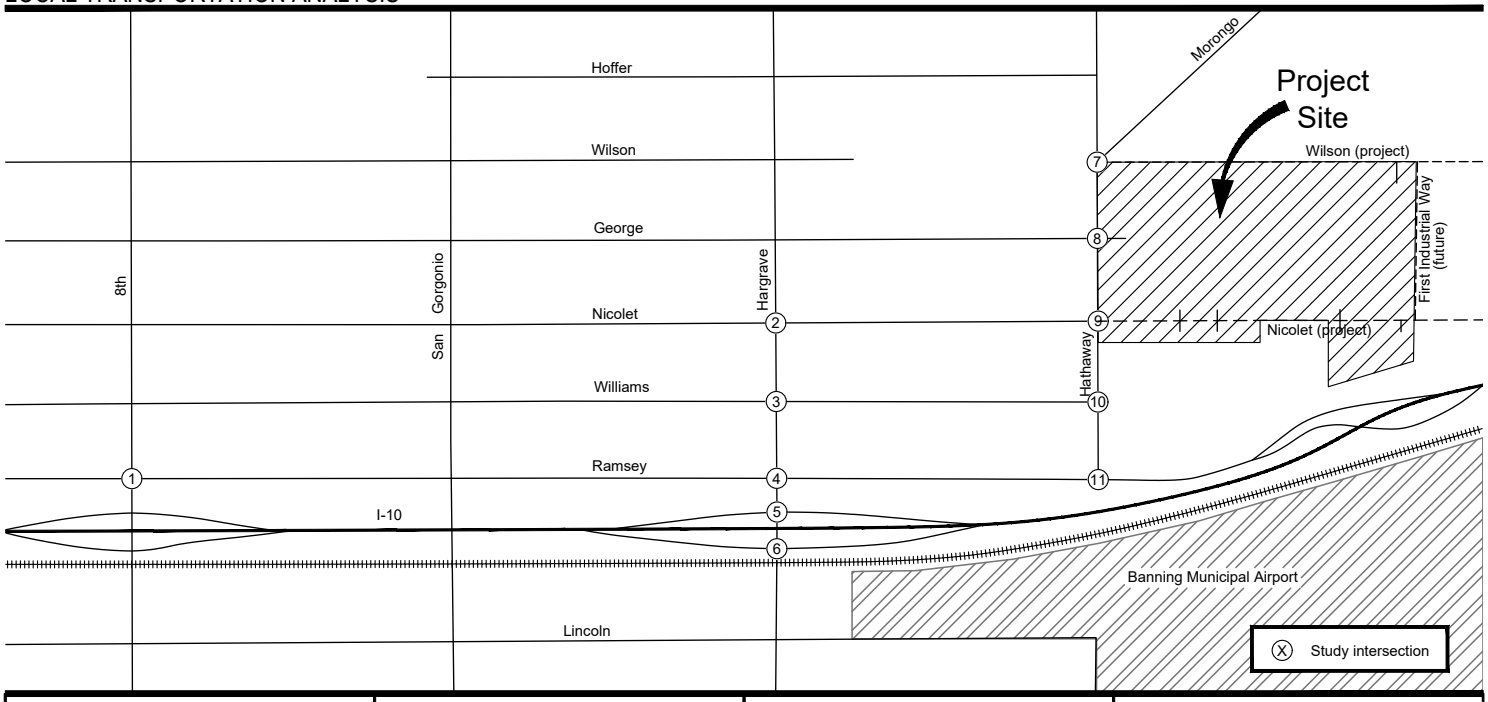
Figure 3-3
Existing (2021) AM Peak Hour Turning Movement and ADT Volumes



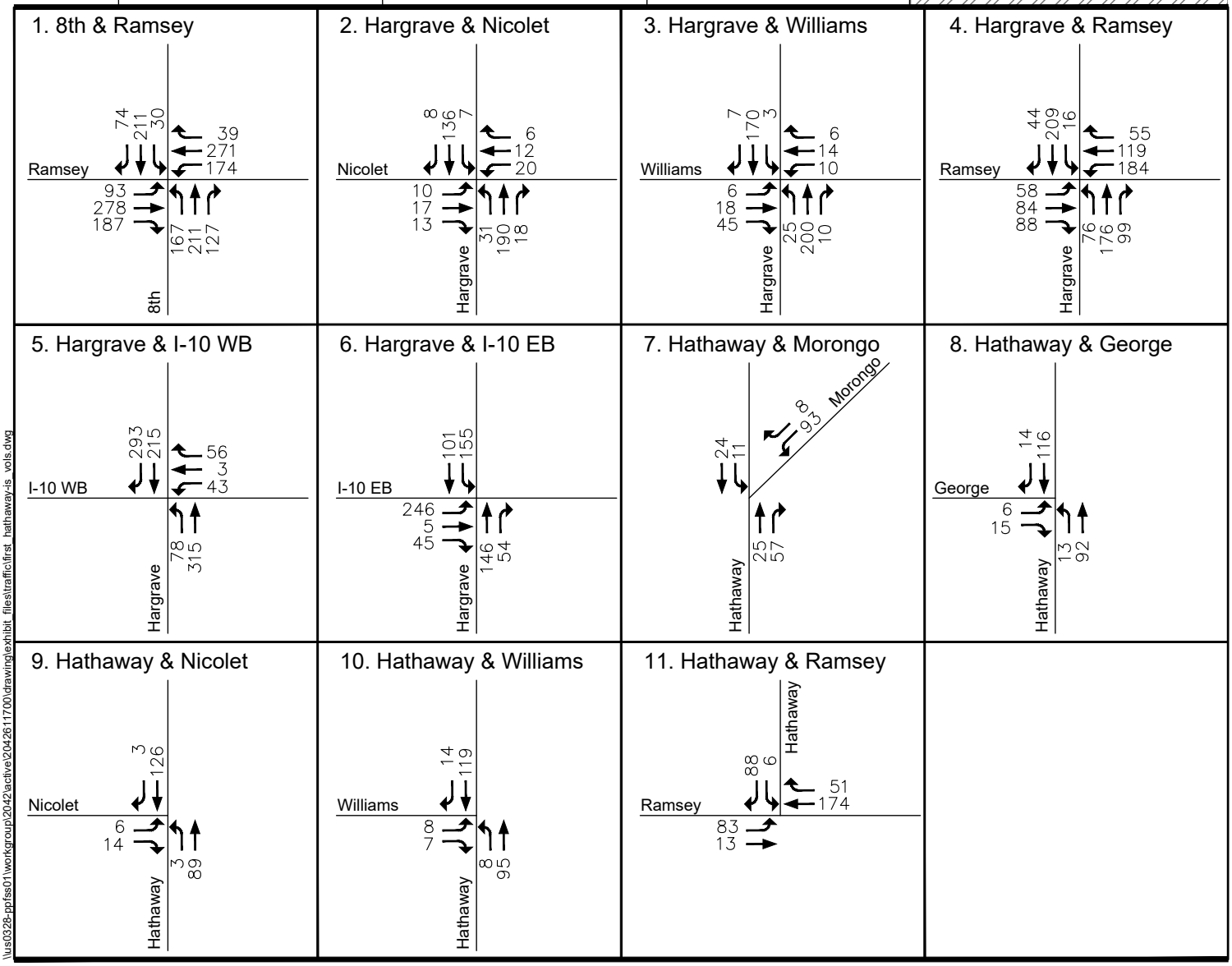


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Figure 3-4

Existing (2021) PM Peak Hour Turning Movement Volumes

Table 3-1 Existing Intersection Delay and Level of Service Summary

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. 8th & Ramsey	Signal	29.2 sec	C	40.9sec	D
2. Hargrave & Nicolet	AWSC	9.0 sec	A	9.2 sec	A
3. Hargrave & Williams	TWSC	14.7 sec	B	13.2 sec	B
4. Hargrave & Ramsey	Signal	20.8 sec	C	21.7 sec	C
5. Hargrave & I-10 WB	TWSC	17.2 sec	C	17.0 sec	C
6. Hargrave & I-10 EB	TWSC	76.9 sec	F	32.1 sec	D
7. Hathaway & Morongo	AWSC	8.0 sec	A	8.0 sec	A
8. Hathaway & George	TWSC	9.4 sec	A	9.3 sec	A
9. Hathaway & Nicolet	TWSC	9.4 sec	A	9.4 sec	A
10. Hathaway & Williams	TWSC	9.3 sec	A	9.6 sec	A
11. Hathaway & Ramsey	TWSC	10.6 sec	B	10.9 sec	B
AWSC = All-way stop control TWSC = Two-way stop control LOS = Level of service sec = seconds of delay					

3.3 ACTIVE TRANSPORTATION AND PUBLIC TRANSIT

In the vicinity of the Project, a sidewalk is only located on the west side of Hathaway Street between George Street and Morongo Road. The rest of Hathaway Street lacks sidewalks on both sides of the street. Sidewalks are present along the north side of Ramsey Street west of Hathaway Street, although they are missing along a portion on the south side west of Hargrave Street. Sidewalks are also provided on both sides of Hargrave Street in the study area. Sidewalks are provided intermittently along the residential streets George Street, Nicolet Street, and Williams Street.

Bike lanes are provided on Ramsey Street west of 8th Street, and bike sharrows are striped between 8th Street and San Gorgonio Avenue. East of San Gorgonio Avenue, there are no bike facilities on Ramsey Street. There are no bicycle facilities on the other streets in the study area. **Figure 3-5** illustrates the bicycle facilities in the study area.

The City's General Plan Active Transportation includes consideration of pedestrian, equestrian, bicycle, and golf cart facilities. Policy 25 of the Circulation Element identifies future Class I bikeways and sidewalks on Wilson Street, Ramsey Street, and Lincoln Street, Class II bikeways and sidewalks on all existing arterial streets that have sufficient width to safely accommodate bicycle travel lanes, and Class III bikeways where Class I and Class II facilities are not feasible. Policy 27 states that the City shall provide for a comprehensive, interconnected recreational trails system suitable for bicycles, equestrians, or pedestrians.

Transit service in the area is provided by Banning Connect Transit System. Four fixed route bus services run along Ramsey Street in the Project study area, three of which provide stops along Hathaway Street near the Project site—Route 5, Route 6, and Combination Route 5/6. **Figure 3-6** illustrates the transit facilities in the study area.

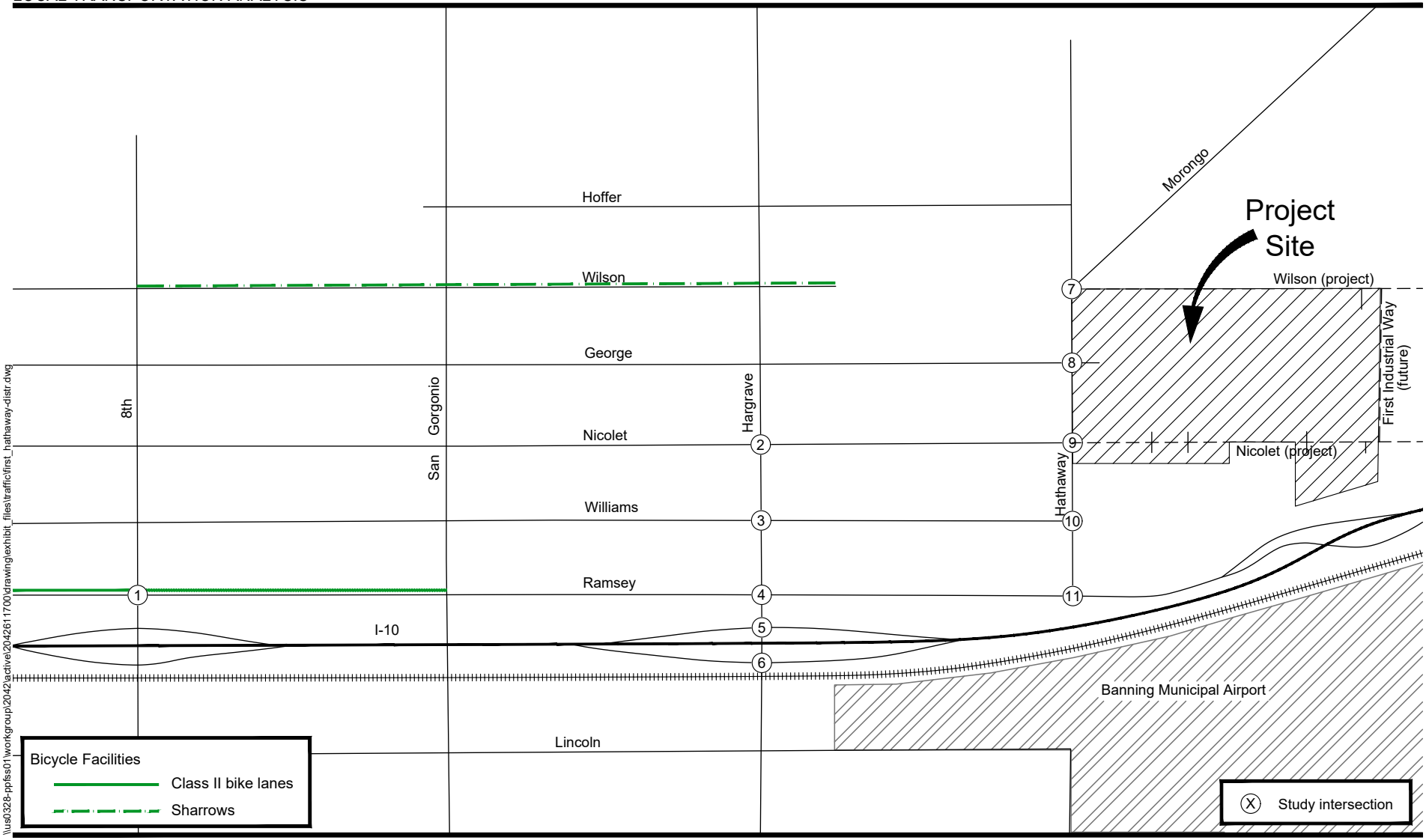

Figure 3-5
Existing Bicycle Facilities

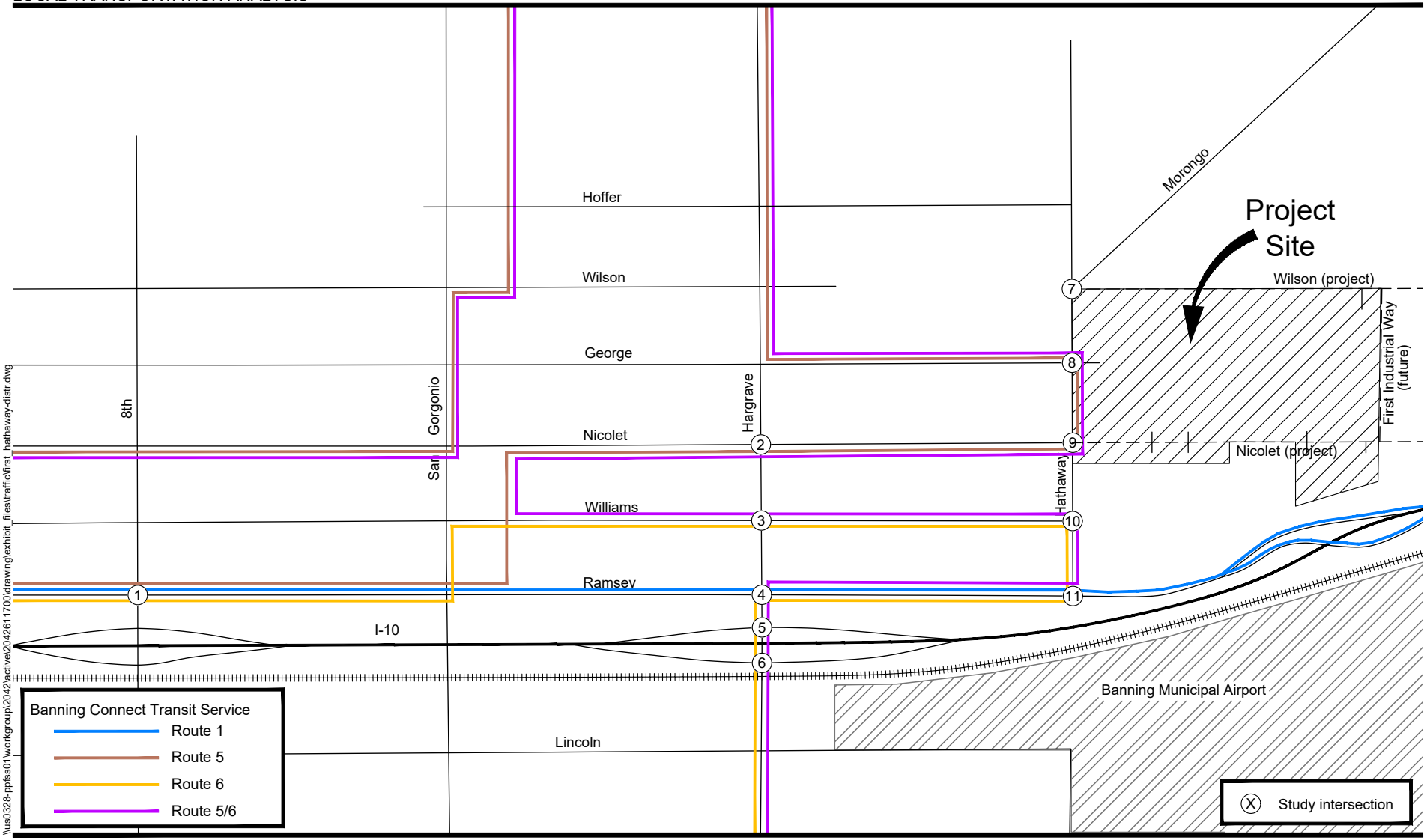

Figure 3-6
Existing Transit Facilities

4.0 PROJECT TRAFFIC

This chapter summarizes the trip generation characteristics of the proposed Project and presents the distribution and assignment of Project trips to the study area street system.

4.1 TRIP GENERATION

As discussed in Chapter 1.0, the Project consists of a 1.42 MSF warehouse logistics center on approximately 83 acres. The trip rates applied to the proposed Project were obtained from the High-Cube Transload and Short-Term Storage Warehouse category (Category 154) found in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*. Trip rates per total vehicles as well as per truck are provided.

The total trip generation for the site is 114 trips during the AM peak hour, 142 trips during the PM peak hour, and 1,989 daily trips. During the AM peak hour, the truck trip rate is approximately 25 percent of the total AM peak hour trip rate. During the PM peak hour, the truck trip rate is approximately 10 percent of the total PM peak hour rate, and on a daily basis the truck trip rate is approximately 16 percent of the total trip rate. The trucks are estimated to generate 28 AM peak hour trips, 14 PM peak hour trips, and 313 daily trips. The remaining 86 AM peak hour trips, 128 PM peak hour trips, and 1,676 daily trips would be generated by passenger vehicles.

The truck trips are expected to consist of four-axle trucks or larger; therefore, the City has identified a passenger car equivalent (PCE) factor of 3.0 be applied to truck trips to account for the larger impact of trucks on traffic flow. Therefore, the trucks generate 84 AM peak hour PCE trips, 42 PM peak hour PCE trips, and 939 daily PCE trips.

Due to the nature of the proposed land use, no pass-by trip allowance was applied to the Project trip generation estimates. Furthermore, no credit for existing uses on-site was applied to the trip generation estimates.

Table 4-1 summarizes the peak hour and daily trip rates and the resulting trip generation for the proposed Project. As this table shows, the Project would generate 170 AM peak hour PCE trips, 170 PM peak hour PCE trips, and 2,615 daily PCE trips.

4.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The passenger car and truck trips have different distribution characteristics. The truck trips are expected to travel on the I-10 Freeway with 60 percent oriented toward the west and 40 percent toward the east, while the passenger cars are expected to distribute to City streets as well as on the I-10 Freeway with the majority of passenger car trips on the freeway. **Figure 4-1** illustrates the truck trip distribution, and **Figure 4-2** illustrates the passenger car trip distribution under near-term network conditions.

Table 4-1 Project Trip Generation Summary

Land Use	Amount	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Logistics Center								
Total Driveway Trips	1,420.72 TSF	85	29	114	43	99	142	1,989
Truck trips		14	14	28	7	7	14	313
Truck PCE Trips (3.0 PCE)[2]		*42*	*42*	*84*	*21*	*21*	*42*	*939*
Passenger Car Trips[3]		*71*	*15*	*86*	*36*	*92*	*128*	*1,676*
Total Truck PCE + Passenger Car Trips		**113**	**57**	**170**	**57**	**113**	**170**	**2,615**
Trip Rates								
High-Cube Warehouse[1]	TSF							
Total Vehicles		0.06	0.02	0.08	0.03	0.07	0.10	1.40
Trucks		0.01	0.01	0.02	0.005	0.005	0.01	0.22

Source:
[1] High-Cube Transload and Short-Term Storage Warehouse – ITE Trip Generation, 11th Edition Category 154
[2] Riverside County Transportation Analysis Guidelines, December 2020 – 4 or more axle trucks
[3] Total driveway trips less truck trips

ADT = Average daily traffic
TSF = Thousand square feet
PCE = Passenger car equivalents

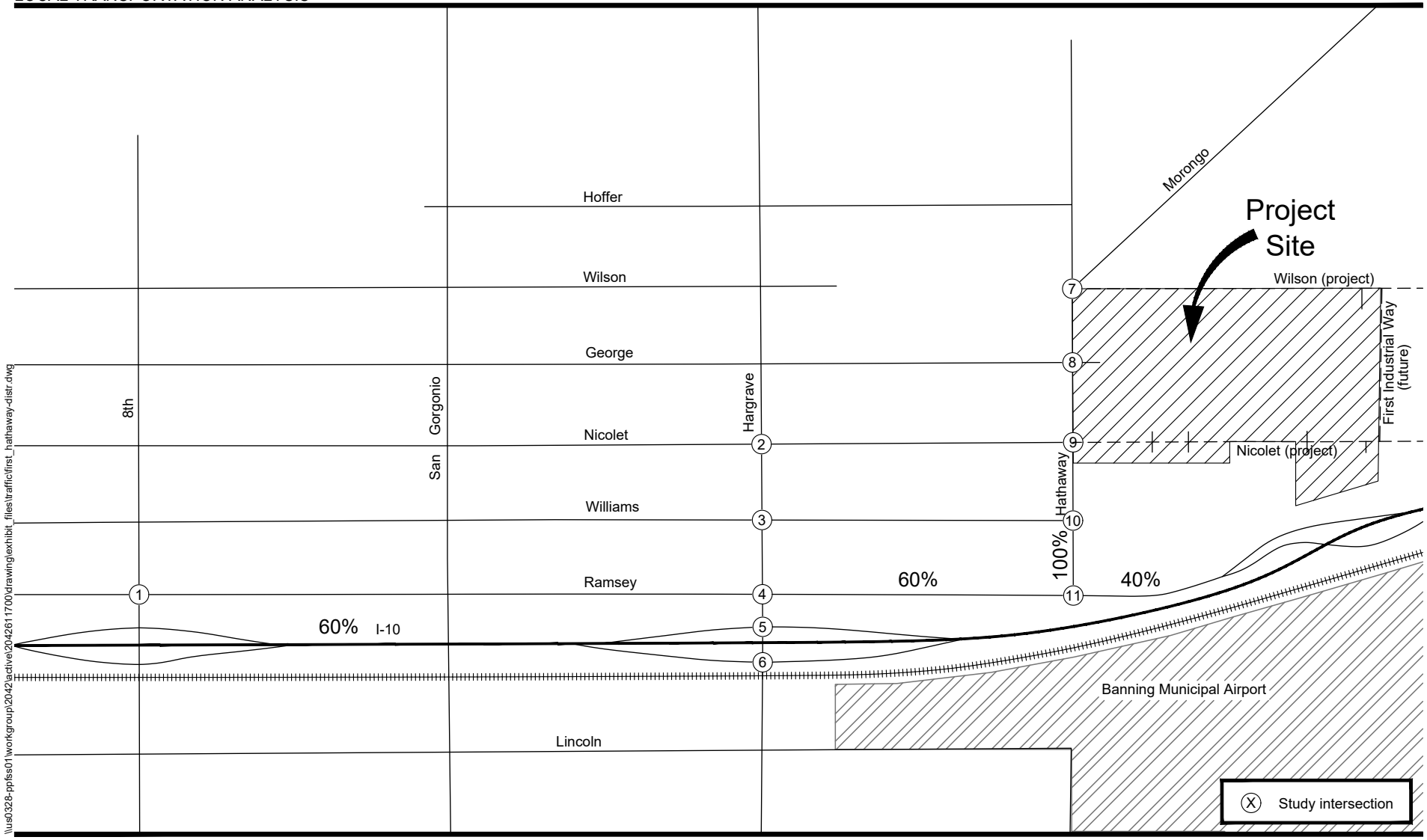

Figure 4-1
Trip Distribution - Trucks

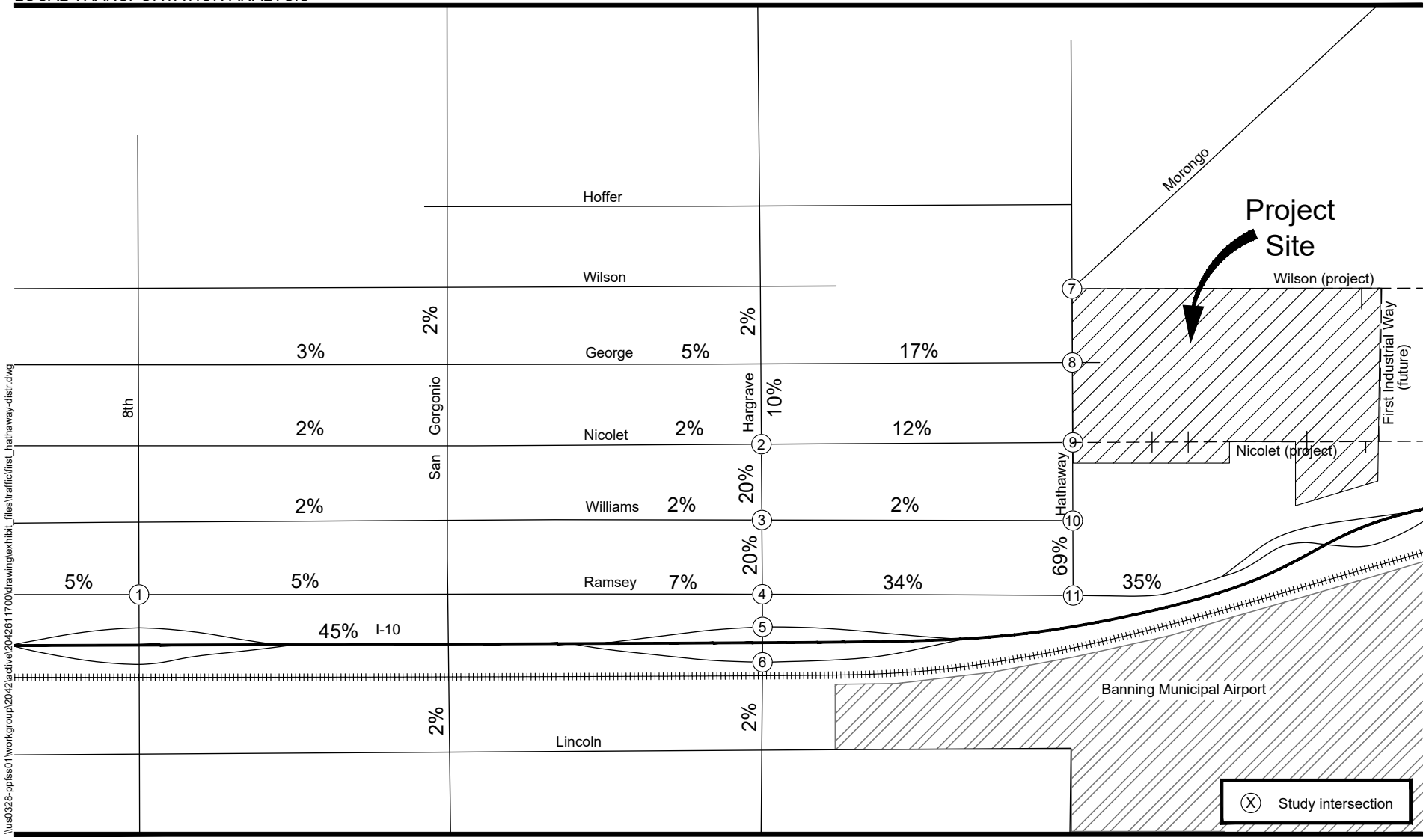

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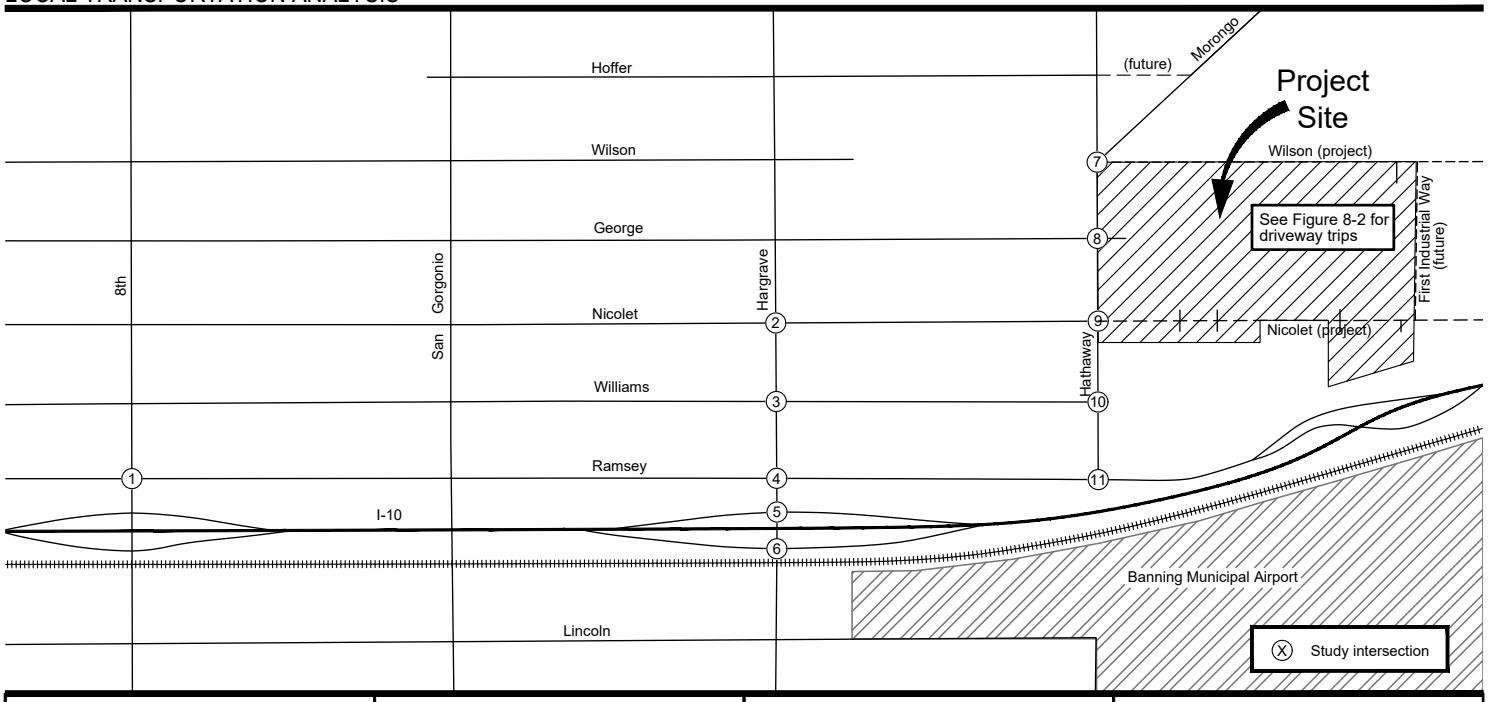
Figure 4-2

Trip Distribution - Passenger Vehicles

The Project peak hour truck PCE and passenger car trips were assigned to the study intersections based on the distribution patterns presented above. **Figure 4-3** illustrates the total AM peak hour PCE trips at the study intersections, and **Figure 4-4** illustrates the total PM peak hour PCE trips. Individual truck PCE and passenger car trips are provided in **Appendix C**.



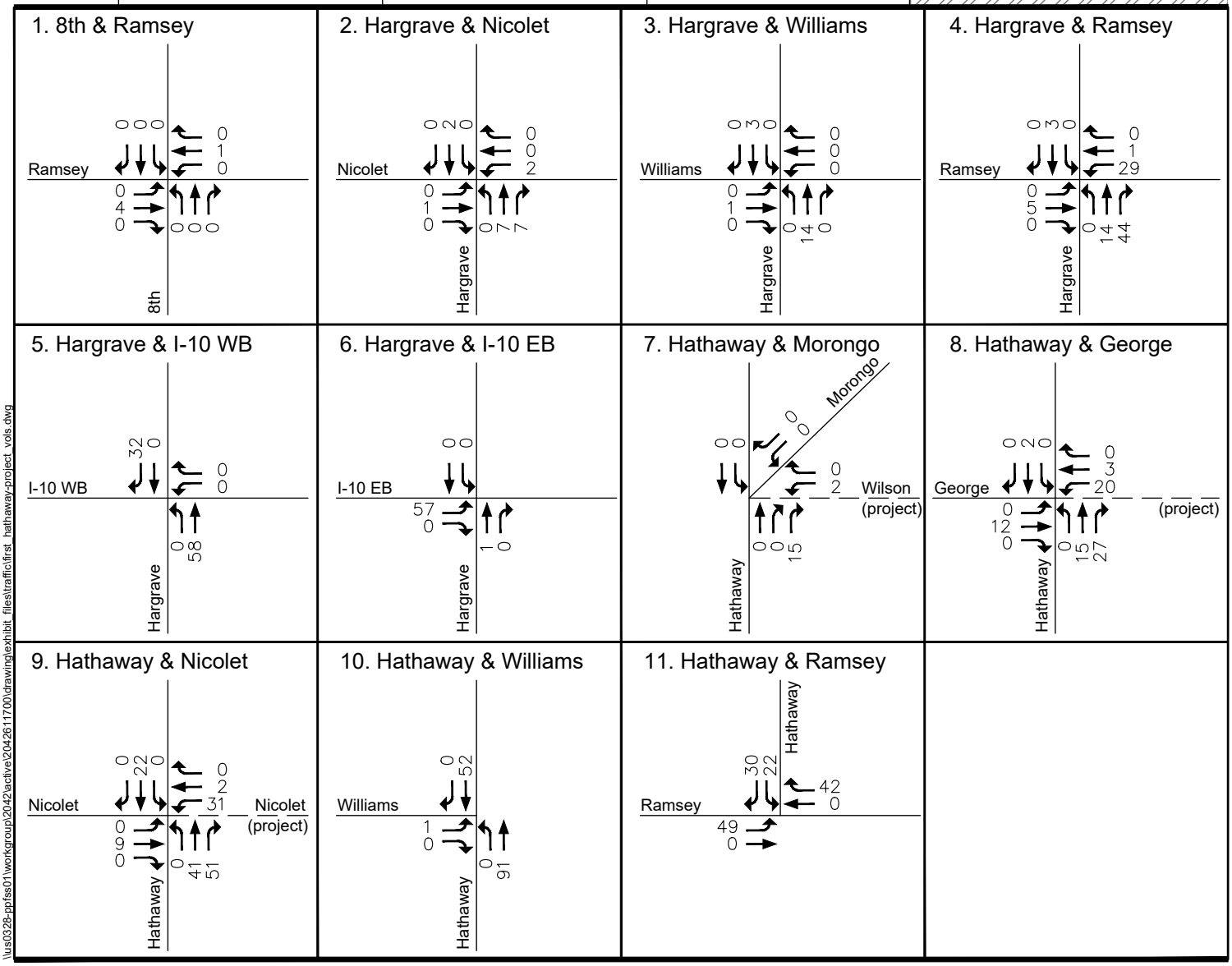


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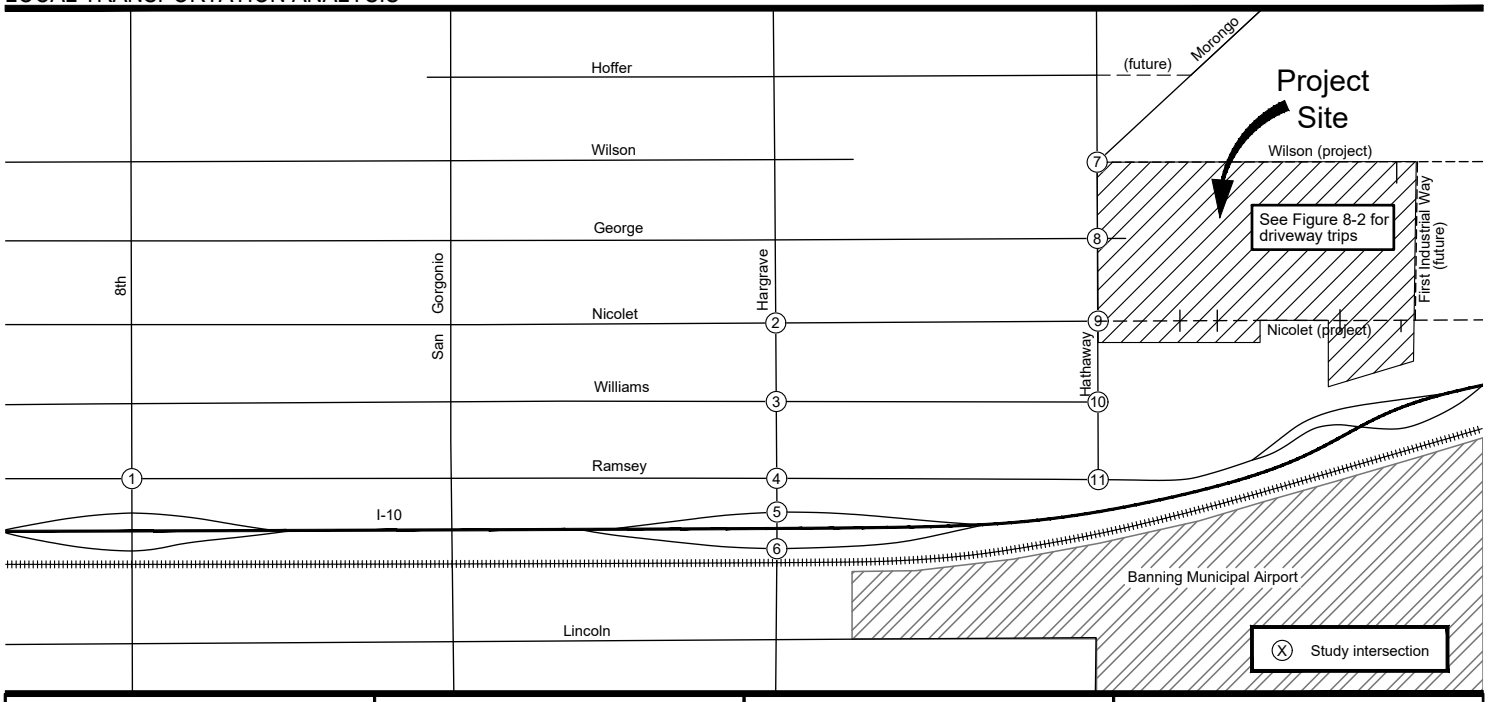
Figure 4-3
Project AM Peak Hour Turning Movement Trips - Total PCE



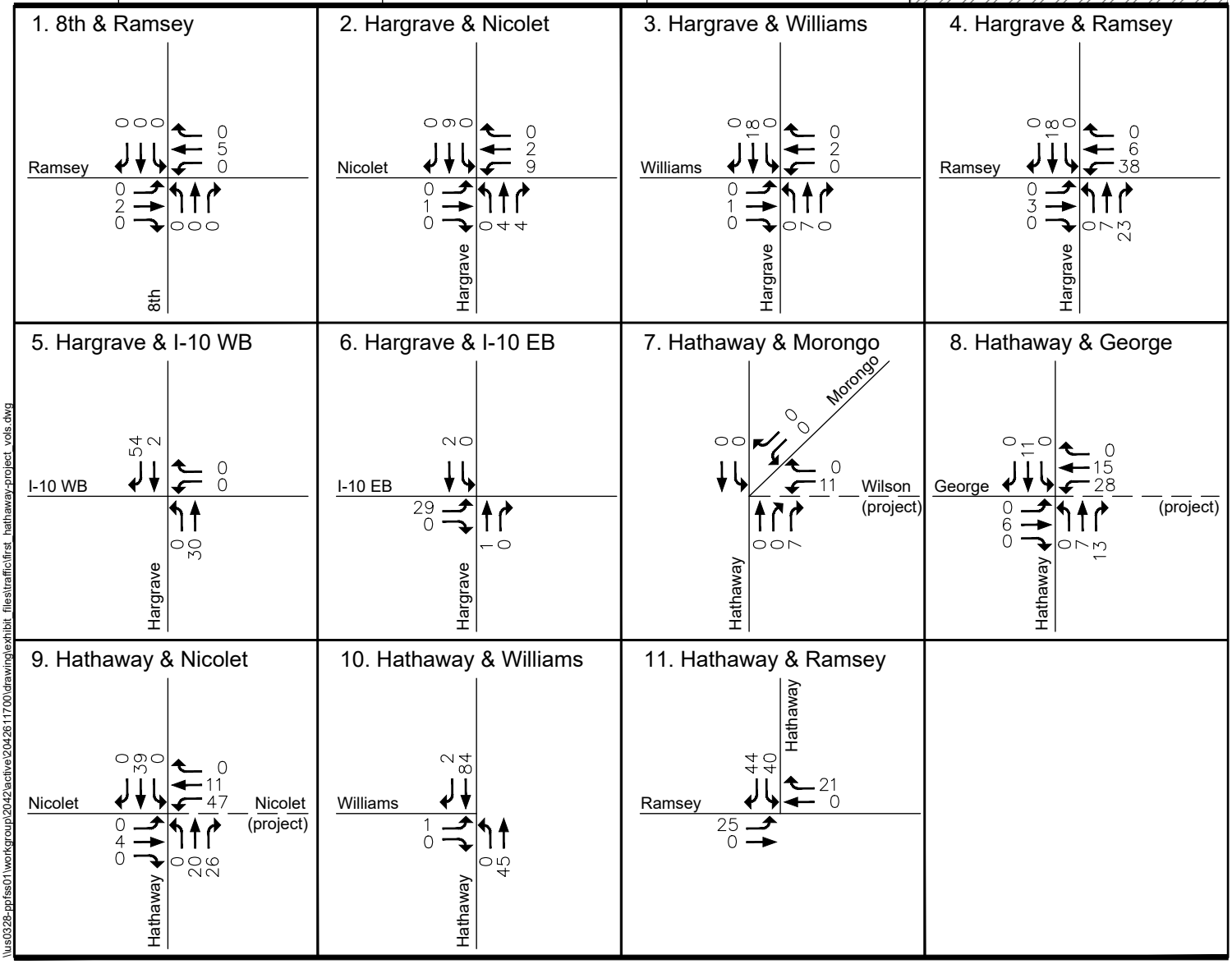


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Figure 4-4

Project PM Peak Hour Turning Movement Trips - Total PCE

5.0 OPENING YEAR CONDITIONS

In this chapter the proposed Project is evaluated against forecasted traffic in the study area under Opening Year traffic conditions.

5.1 OPENING YEAR WITHOUT PROJECT ANALYSIS

The Opening Year for the Project is anticipated to be 2023. To obtain Opening Year background traffic volumes, an ambient growth rate of two percent per year, consistent with the City's TIA guidelines and approved by City staff, was added to the 2021 peak hour intersection volumes for a total increase of four percent to produce the Opening Year Without Project volumes. The AM and PM peak hour Opening Year Without Project volumes are illustrated in **Figure 5-1** and **Figure 5-2**, respectively.

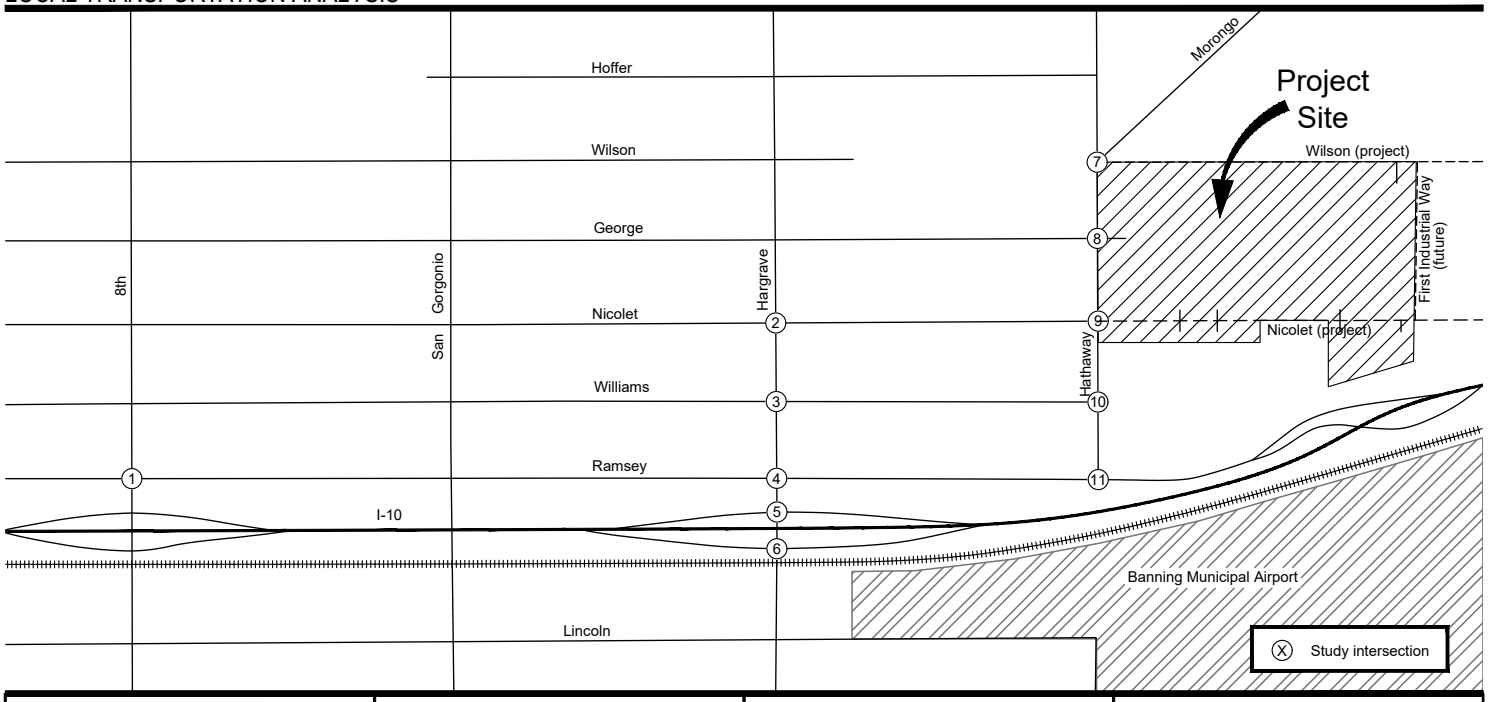
5.1.1 Committed (Funded) Roadway Improvements

Improvements at the intersection of Hathaway Street and Ramsey Street are currently under construction, which includes widening of the roadway and installation of a median on Ramsey Street, widening of Hathaway Street north of the intersection, restriping, and installation of a traffic signal. These improvements are assumed to be completed in the Opening Year Conditions.

It should be noted that the I-10 Bypass – Banning to Cabazon project was not included under Opening Year conditions since the new roadway project is undergoing environmental review and construction is not expected to begin until after the Opening Year time frame. Alternative 12 has been identified as the preferred alignment for the I-10 Bypass – Banning to Cabazon project. Once the bypass is complete, this alternative to the I-10 freeway would potentially alter traffic patterns in the study area and relieve some traffic from the Hargrave Street/I-10 interchange.

Table 5-1 summarizes the Opening Year Without Project peak hour intersection delay and LOS for the study intersections assuming existing intersection traffic control and lane geometrics, with the exception of the Hathaway Street and Ramsey Street improvements discussed here. As this table shows, the stop-controlled intersection of Hargrave Street and I-10 Eastbound would operate at an unacceptable LOS F during the AM peak hour. The intersection of Hargrave Street and I-10 Eastbound would operate at an unacceptable LOS E during the PM peak hour. Delay calculations are included in **Appendix B**.

The remaining stop-controlled study intersections would operate at an acceptable LOS C or better during the AM and PM peak hours. The signalized study intersections along Ramsey Street would operate at an acceptable LOS D or better during the AM and PM peak hours.



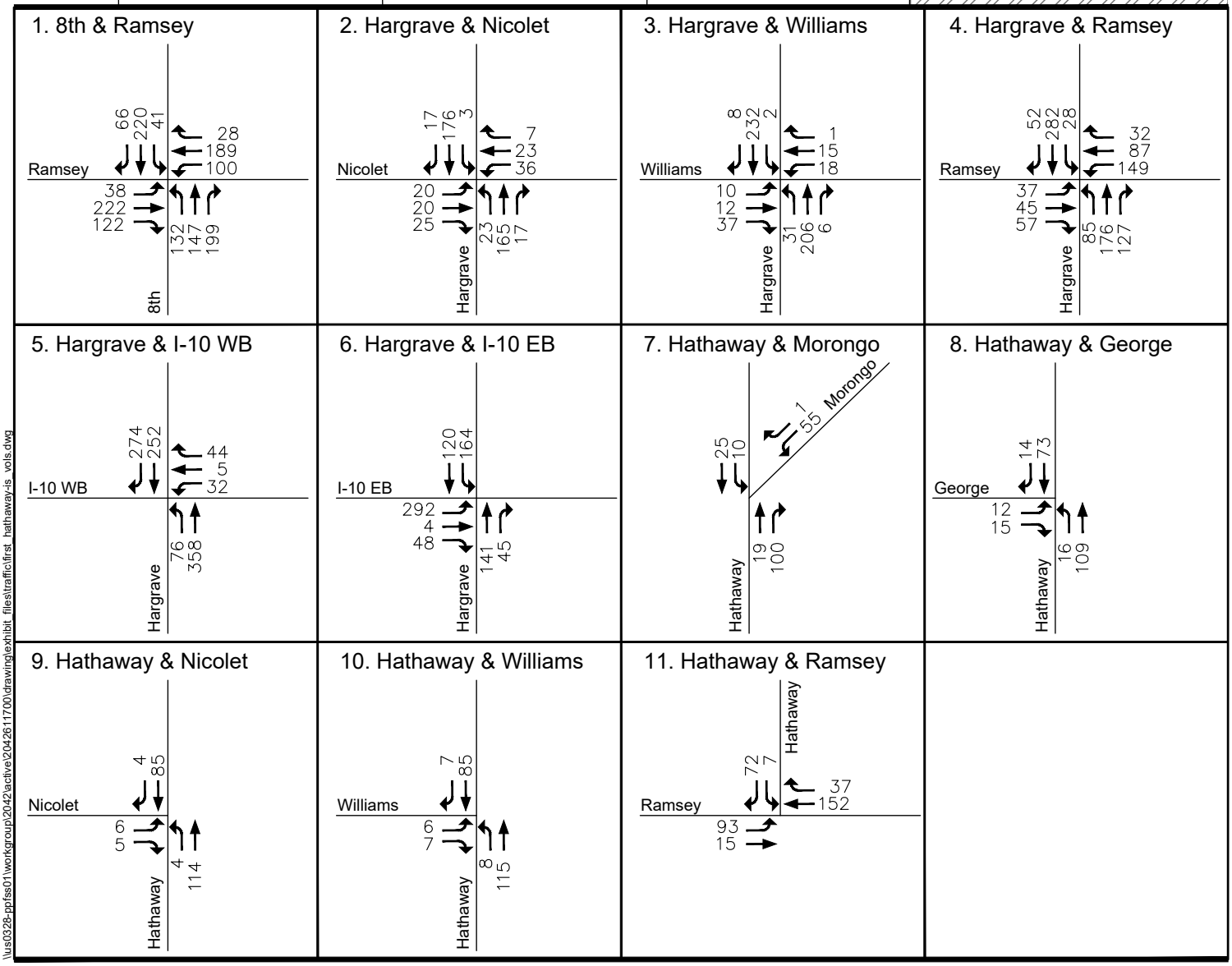


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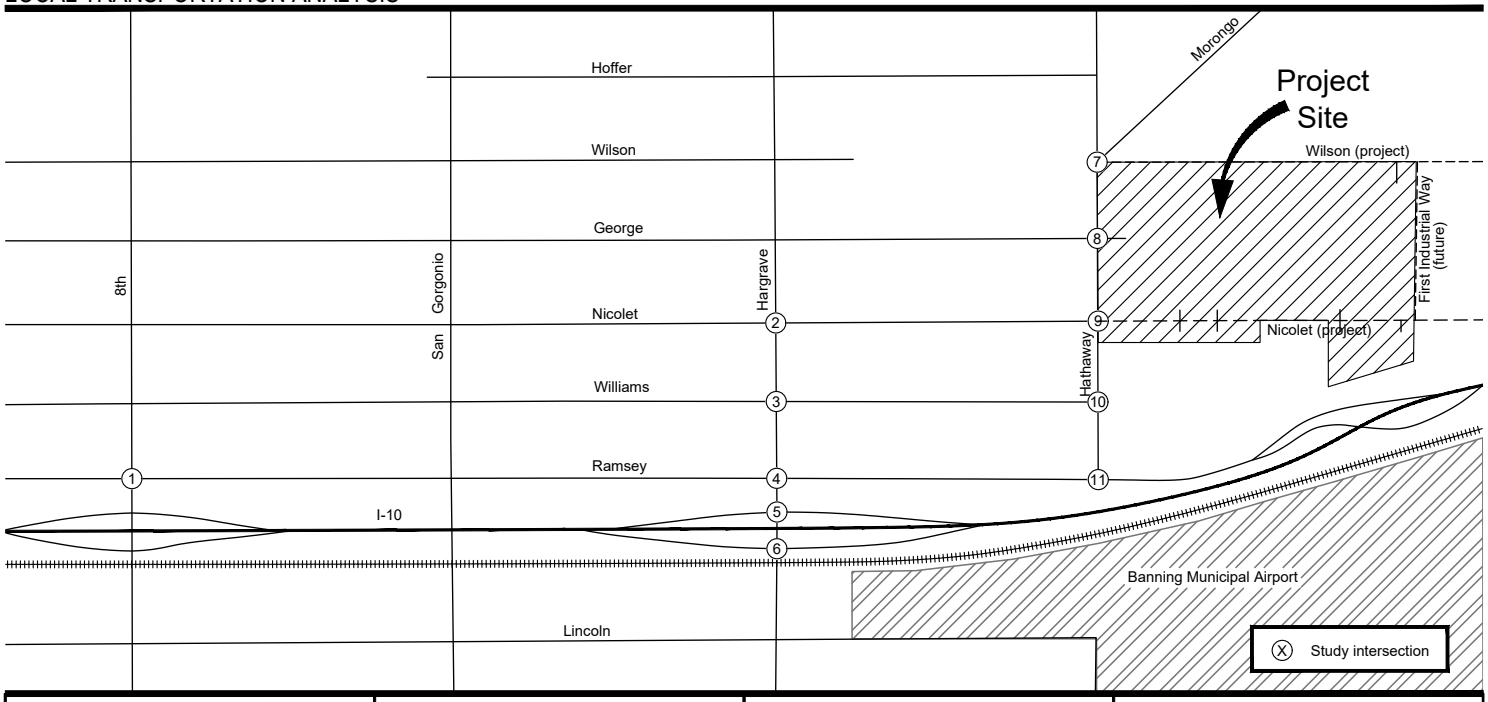
Figure 5-1

Opening Year Without Project AM Peak Hour Turning Movement Volumes



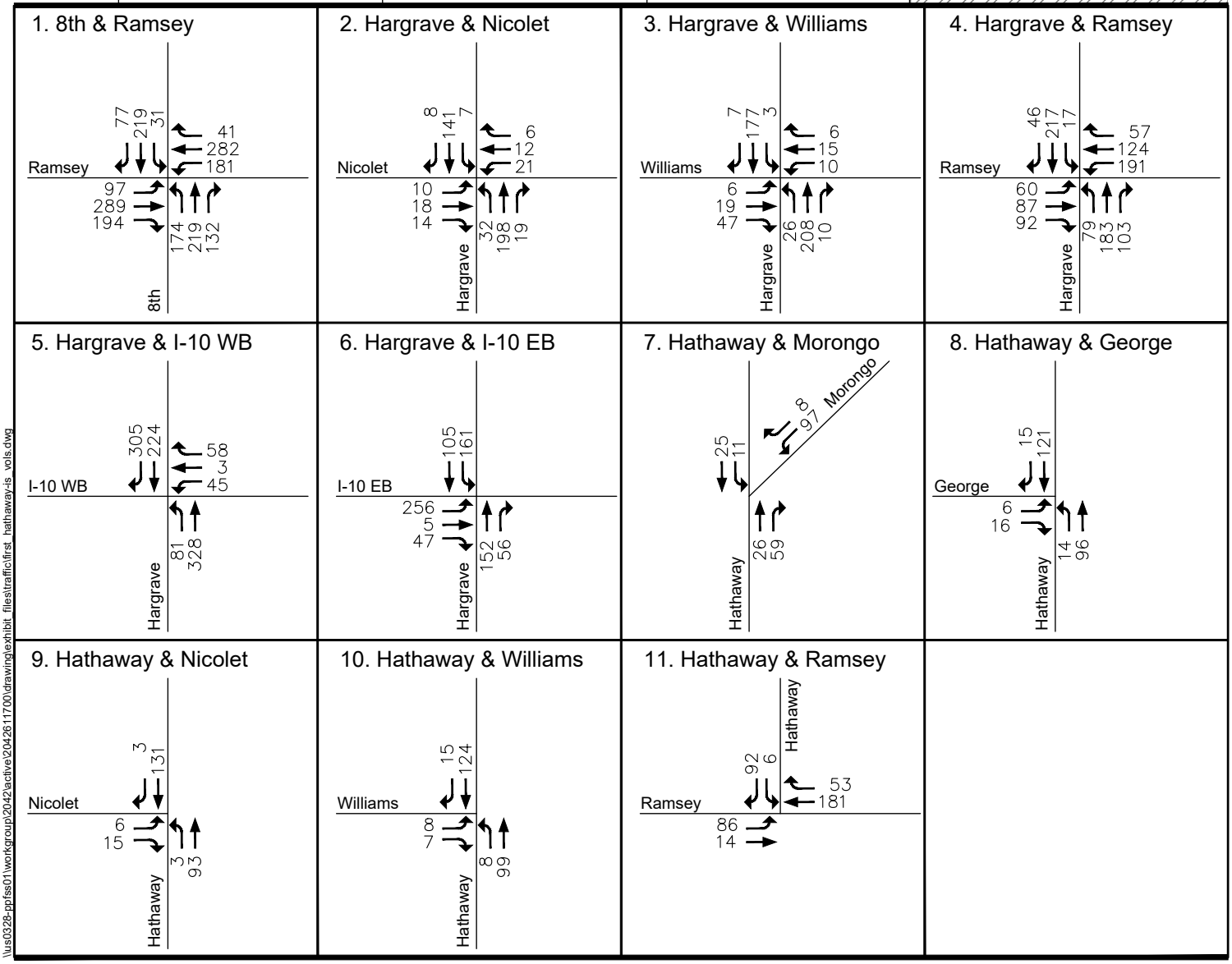


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Figure 5-2

Opening Year Without Project PM Peak Hour Turning Movement Volumes

Table 5-1 Opening Year Without Project Intersection Level of Service Summary

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. 8th & Ramsey	Signal	30.1 sec	C	43.6 sec	D
2. Hargrave & Nicolet	AWSC	9.2 sec	A	9.3 sec	A
3. Hargrave & Williams	TWSC	15.1 sec	C	13.5 sec	B
4. Hargrave & Ramsey	Signal	21.2 sec	C	21.9 sec	C
5. Hargrave & I-10 WB	TWSC	18.1 sec	C	18.0 sec	C
6. Hargrave & I-10 EB	TWSC	106.2 sec	F	37.9 sec	E
7. Hathaway & Morongo	AWSC	8.0 sec	A	8.0 sec	A
8. Hathaway & George	TWSC	9.4 sec	A	9.3 sec	A
9. Hathaway & Nicolet	TWSC	9.4 sec	A	9.4 sec	A
10. Hathaway & Williams	TWSC	9.4 sec	A	9.7 sec	A
11. Hathaway & Ramsey	Signal	18.1 sec	B	17.7 sec	B

AWSC = All-way stop control
TWSC = Two-way stop control
LOS = Level of service
sec = seconds of delay per vehicle

5.2 OPENING YEAR PLUS PROJECT ANALYSIS

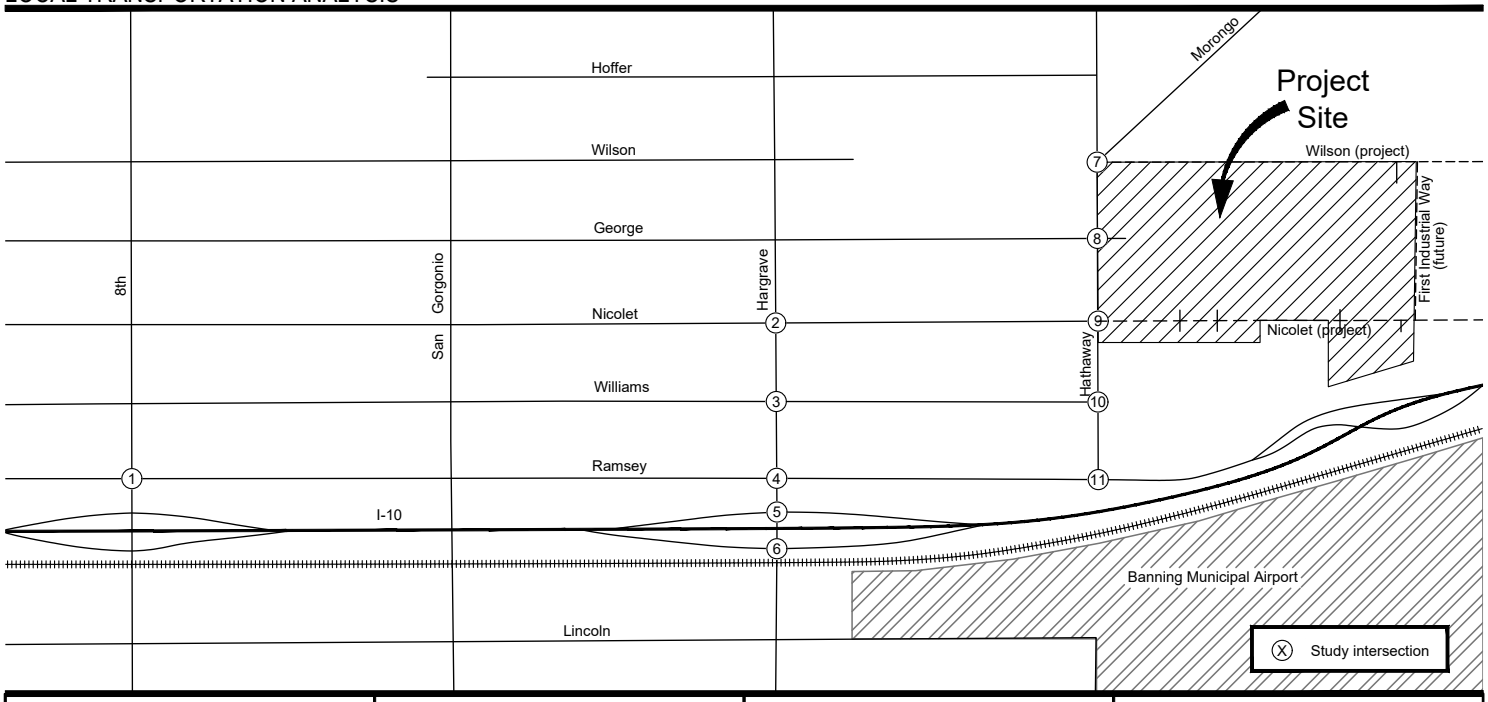
The Project peak hour PCE trips presented in Chapter 4.0 were added to the Opening Year Without Project peak hour volumes to produce Opening Year Plus Project conditions. The AM and PM peak hour Opening Year Plus Project volumes are illustrated in **Figure 5-3** and **Figure 5-4**, respectively.

With the development of the Project, a new east leg along the northern boundary of the Project site (Wilson Street) would be constructed in accordance with the City's General Plan. The new street would intersect with Hathaway Street at the location of the current Hathaway Street/Morongo Road intersection. Morongo Road currently ends at Hathaway Street at an approximately 45-degree angle; therefore, the new east leg would create a non-typical four-leg intersection. However, Morongo Road is currently planned to be relocated to form a new intersection with Hathaway Street to the north of the new Wilson Street as a separate project by the Morongo Medical Clinic. The timing of the relocation is not certain but is anticipated to occur before construction of the Project. However, given the uncertainty of timing for the Morongo Road relocation, for this analysis Morongo Road is evaluated based at its current location for Opening Year with Project conditions.

The Project driveway on Hathaway Street would be aligned with George Street to form a four-legged intersection. In addition, a new east leg would be added opposite Nicolet Street at Hathaway Street in the southern portion of the Project site to form a conventional four-legged intersection.

Table 5-2 summarizes the Opening Year Plus Project peak hour intersection delay and LOS for the study intersections (delay calculations are included in **Appendix B)**. As this table shows, the intersection of Hargrave Street and I-10 Eastbound would continue to operate at LOS F during the AM peak hour and at LOS E during the PM peak hour with the addition of Project trips. The remaining study intersections would operate at an acceptable LOS D or better during the AM and PM peak hours.

It should be noted that the signalized and the all-way stop control intersection delay represents the weighted average for all movements at the intersection; therefore, when trips are added to a movement with low delay, such as a through or right-turn movement in the non-critical direction, the average delay for the intersection can decrease by a small amount under with-project conditions. This situation occurs at the intersection of Hathaway Street and Morongo Road/Wilson Street during the PM peak hour. The addition of a fourth leg adds traffic with a low delay which slightly decreases the overall average delay at the intersection. The intersection operates at LOS A under Opening Year conditions, and the Project causes a decrease of 0.1 seconds during the PM peak hour. This situation also occurs at Hathaway Street and Ramsey Street during the AM and PM peak hours. The intersection operates at LOS B under Opening Year conditions, and the Project causes a decrease of 0.4 seconds during the AM peak hour and 0.8 seconds during the PM peak hour.



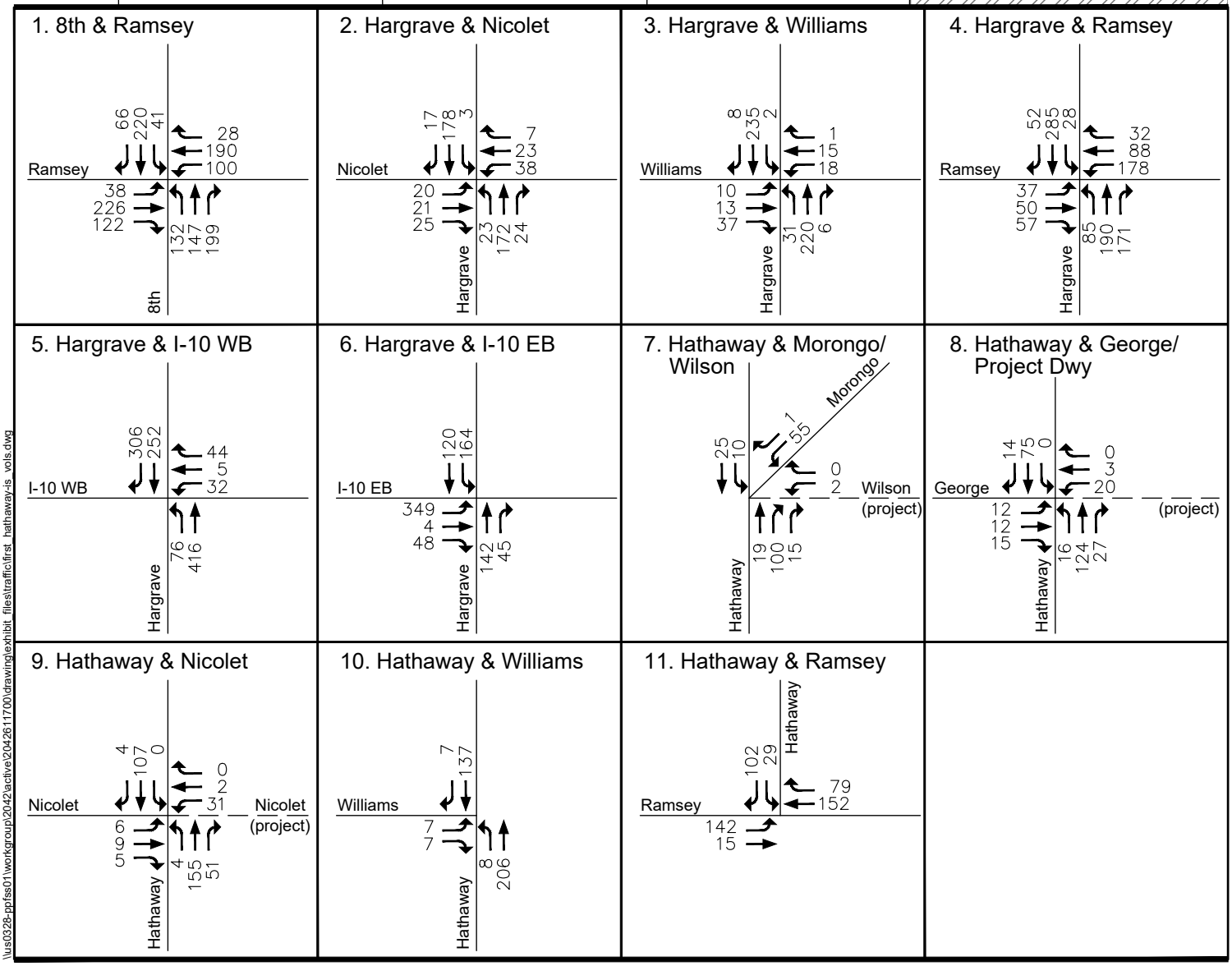


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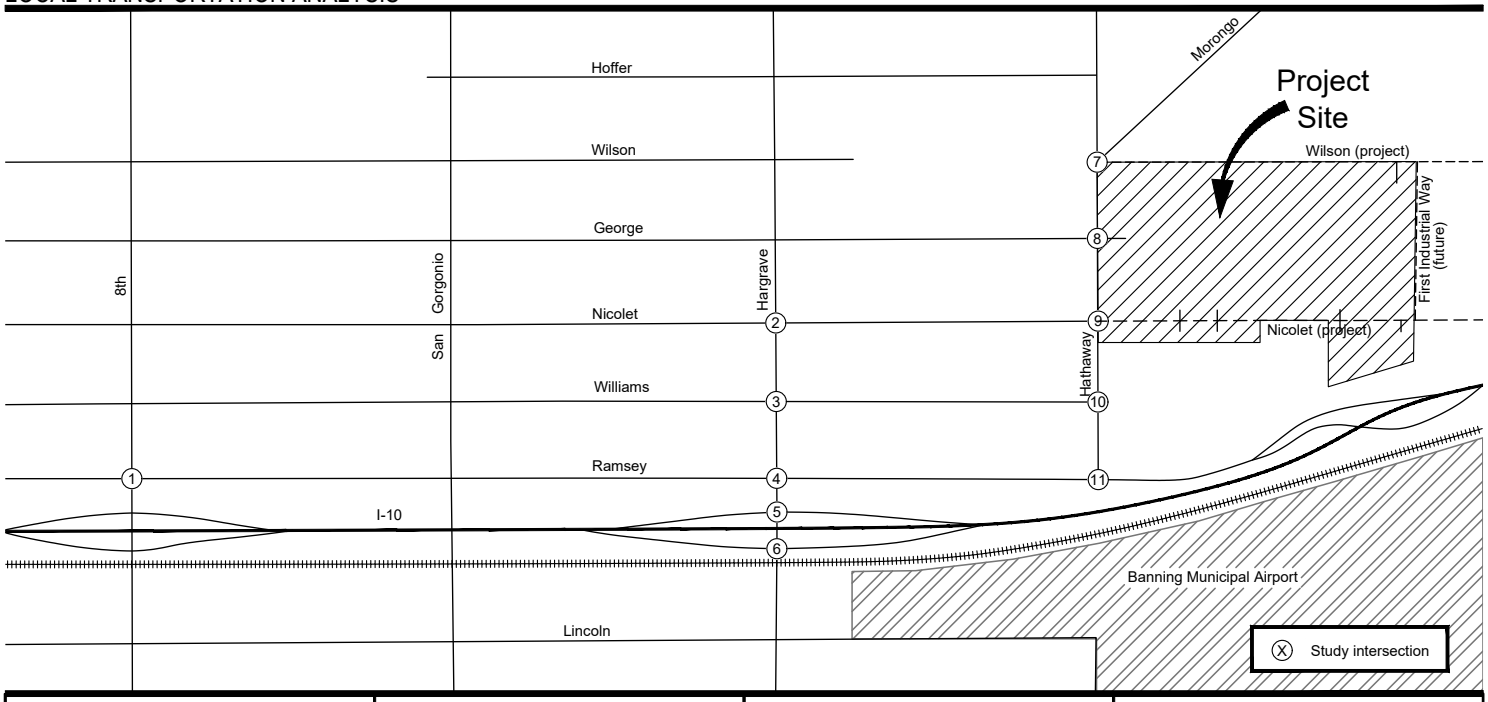
Figure 5-3

Opening Year Plus Project AM Peak Hour Turning Movement Volumes



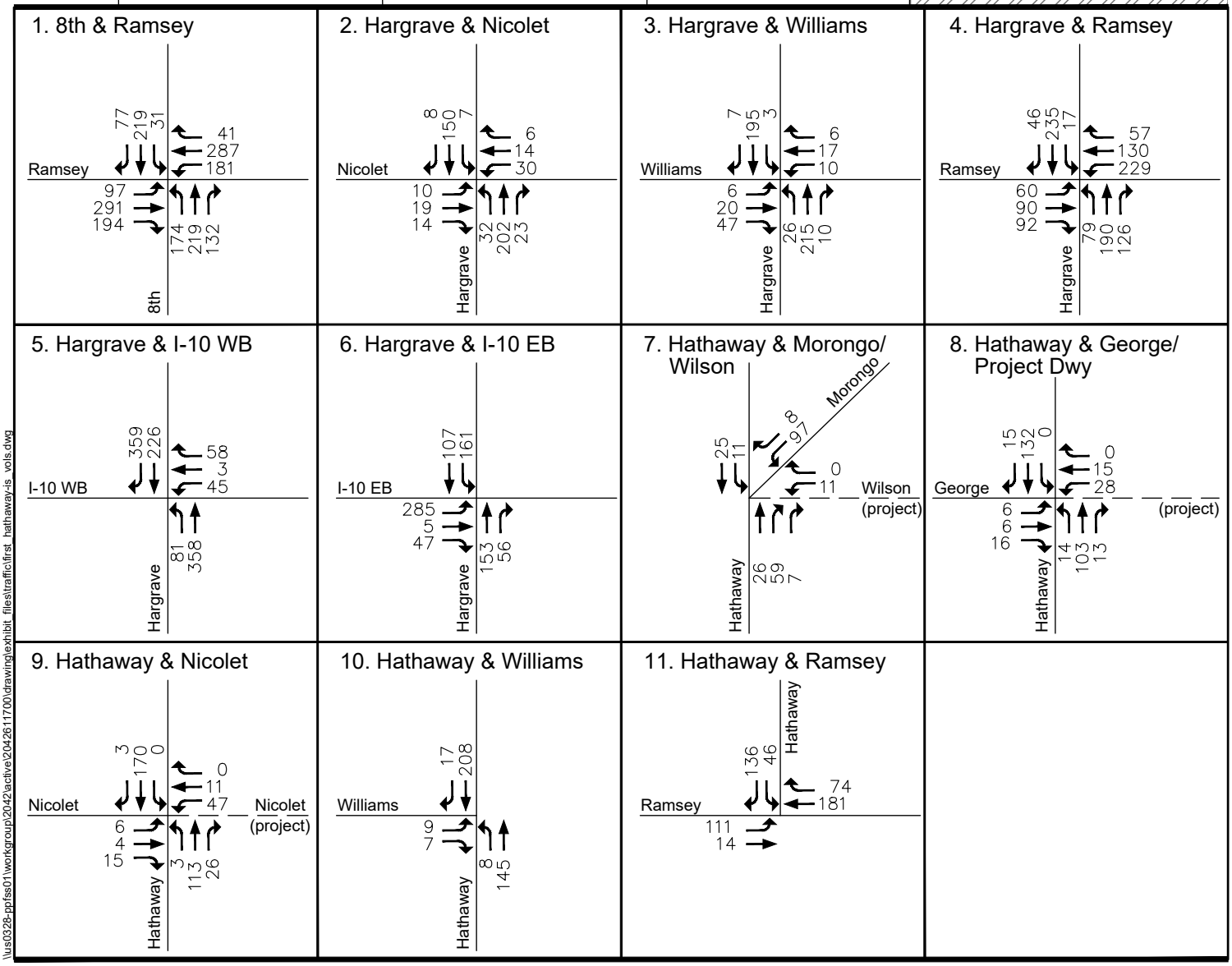


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Figure 5-4

Opening Year Plus Project PM Peak Hour Turning Movement Volumes

Table 5-2 Opening Year Plus Project Intersection Level of Service Summary

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		Delay	LOS	Project Increase	Delay	LOS	Project Increase
1. 8th & Ramsey	Signal	30.3 sec	C	0.2 sec	43.7 sec	D	0.1 sec
2. Hargrave & Nicolet	AWSC	9.3 sec	A	0.1 sec	9.5 sec	A	0.2 sec
3. Hargrave & Williams	TWSC	15.5 sec	C	0.4 sec	14.0 sec	B	0.5 sec
4. Hargrave & Ramsey	Signal	21.7 sec	C	0.5 sec	23.2 sec	C	1.3 sec
5. Hargrave & I-10 WB	TWSC	20.2 sec	C	2.1 sec	19.6 sec	C	1.6 sec
6. Hargrave & I-10 EB	TWSC	**179.6 sec**	**F**	**73.4 sec**	**48.9 sec**	**E**	**11.0 sec**
7. Hathaway & Morongo/Wilson	AWSC	8.1 sec	A	0.1 sec	8.0 sec	A	0.0 sec
8. Hathaway & George	TWSC	11.0 sec	B	1.6 sec	11.2 sec	B	1.9 sec
9. Hathaway & Nicolet	TWSC	11.3 sec	B	1.9 sec	11.6 sec	B	2.2 sec
10. Hathaway & Williams	TWSC	10.2 sec	B	0.8 sec	10.6 sec	B	0.9 sec
11. Hathaway & Ramsey	Signal	17.7 sec	B	-0.4 sec	16.9 sec	B	-0.8 sec

Adverse Project effects shown in **bold** (see Table 2-2 for impact criteria)
AWSC = All-way stop control
TWSC = Two-way stop control
LOS = Level of service
sec = seconds of delay

5.2.1 Identification of Intersection Deficiencies

Based on the City's criteria, the stop-controlled intersection of Hargrave Street and I-10 Eastbound would operate at unacceptable LOS during the AM and PM peak hours with the addition of Project traffic. The proposed Project would increase the AM peak hour LOS F delay by more than 1.0 second and would increase the PM peak hour LOS E delay by more than 2.0 seconds; therefore, the Project would contribute to deficient conditions under Opening Year conditions at the intersection of Hargrave Street and I-10 Eastbound.

The remaining study intersections would operate at acceptable LOS D or better, and the Project has no adverse effect on these intersections based on the City's criteria outlined in Table 2-2.

5.2.2 Freeway Ramp Queuing Analysis

A freeway ramp queuing analysis was performed at the I-10 interchange at Hargrave Street to determine if peak hour off-ramp traffic would back up and potentially affect mainline freeway traffic. The SimTraffic component of the Synchro software was used to estimate the queue lengths based on the existing lane geometrics and traffic control during the AM and PM peak hours under Opening Year conditions. The average 95th percentile queue was determined based on five simulation runs.

Table 5-3 summarizes the 95th percentile queue lengths at the Hargrave Street/I-10 interchange off-ramps under Without Project and Plus Project conditions (actual queue length calculation results are included in **Appendix D**).

Table 5-3 Opening Year Freeway Ramp Queuing Analysis Summary

	95th Percentile Queue (feet)			
	No Project		Plus Project	
Off-Ramp	AM	PM	AM	PM
Hargrave/I-10 WB off-ramp	47	58	48	67
Hargrave/I-10 EB off-ramp	169	134	187	157

The eastbound and westbound off-ramps at Hargrave Street are both approximately 1,000 feet long. As this table shows, the queues are not expected to exceed the available storage during the AM or PM peak hour under Opening Year Without Project and Plus Project conditions.

The Ramsey Street off-ramp from westbound I-10 is a free-flowing movement and queues would not affect mainline traffic flow; therefore, the Ramsey Street off-ramp is not included in the freeway ramp queuing analysis.

6.0 CUMULATIVE CONDITIONS

Traffic from approved but not built and pending development projects in the vicinity of the Project site was added to the Opening Year volumes to produce Cumulative Conditions Without Project traffic.

6.1 CUMULATIVE CONDITIONS WITHOUT PROJECT ANALYSIS

A list of cumulative projects was obtained from the City in 2018 and updated for use in this analysis. Trips from those cumulative projects that add traffic to the study intersections were estimated, distributed to the circulation system, and added to the Opening Year Without Project peak hour traffic volumes to produce Cumulative Conditions Without Project traffic.

Table 6-1 summarizes the list of cumulative projects in the City. This list includes projects located at the far west end of the City which would add a negligible amount of peak hour traffic to the study intersections. **Figure 6-1** illustrates the locations of the cumulative projects that are likely to add traffic to the study intersections, and **Table 6-2** summarizes the trip generation for these projects. **Figures 6-2** and **6-3** illustrate the AM and PM peak hour cumulative project trips added to the Opening Year Without Project peak hour volumes, respectively.

Total Cumulative Conditions Without Project AM peak hour volumes are illustrated in **Figure 6-4**, and PM peak hour volumes are illustrated in **Figure 6-5**.

6.1.1 Committed (Funded) Roadway Improvements

The Morongo Medical Clinic cumulative project is located northeast of the intersection of Hathaway Street and Morongo Road north of the Project site. Currently Morongo Road ends at Hathaway Street at an approximately 45-degree angle. The Morongo Medical Clinic project would realign Morongo Road to form a right angle with Hathaway Street opposite Hoffer Street. The realignment of Morongo Road opposite Hoffer Street is included in the Cumulative Conditions roadway network. Current traffic to and from Morongo Road has been redistributed to the new location at the intersection of Hathaway Street and Hoffer Street/Morongo Road.

In addition, the improvements previously discussed for Opening Year analysis conditions at the Hathaway Street and Ramsey Street intersection have been included under Cumulative Conditions.

The traffic study for the Banning Industrial Center cumulative project recommended off-site improvements at the Hargrave Street/I-10 intersections to mitigate short-term project impacts. These improvements consist of installing all-way stop control at each ramp intersection. However, the traffic study for the Banning Industrial Center project identified the project's responsibility for the cost of the improvement as a fair share, and it is not clear if the improvement is fully funded or approved by Caltrans. Therefore, the existing two-way stop control is assumed for this analysis of the Hargrave Street/I-10 ramp intersections under Cumulative Conditions.

Table 6-1 Cumulative Projects List

Project	Location	Description	Traffic Added to Study Intersections
1. Butterfield-Pardee Homes Specific Plan	NW of Highland Home & Wilson	4862 DU 36 acre Commercial	No
2. Loma Linda-Banning Bench Specific Plan	NE of Sunset & Wilson	944 DU 10 acre Commercial	No
3. Little Europe Specific Plan	SW of Sunset & Jacinto View	39.7 TSF Commercial 40 Room Hotel	No
4. Rancho San Gorgonio Specific Plan	SW of San Gorgonio & Westward	598 DU 500 Stu Elem School (Phase 3 - 2022)	Yes
5. Silverstone	NE of Highland Spring & Sun Lakes	47.1 acre Commercial	No
6. La Quinta Inn	NW of Hargrave & Ramsey	91 Room Hotel 4.0 TSF Fast Food	Yes
7. Work Lofts	SW of Hathaway & Lincoln	24 DU, 9.9 TSF Office 26.95 TSF Warehouse	Yes
8. Anderson Equipment	NW of Hathaway & Charles	2.24 TSF Office 8 TSF Warehouse	Yes
9. Smart & Final	SE of Highland Spring & Ramsey	30 TSF Grocery	No
10. Fiesta Development	SW of Mountain & Evergreen	303 DU	No
11. Nordquist	NW of Mountain & Wilson	19 DU	No
12. St. Boniface	NW of Wyte & Gilman	65 DU	Yes
13. Banning Distribution Center	SE of I-10 & Banning Airport	1,000 TSF Warehouse	Yes
14. Kohavi	SW of Hargrave & Nicolet	4 DU	Yes
15. Our Savior Lutheran	SW of 12th & Ramsey	5 TSF Day Care	Yes
16. Diversified Pacific	NW of Sunrise & Wilson	98 DU	No
17. Robertsons Ready Mix Quarry	1990 N Hargrave	23-acre expansion	Yes
18. Downing Construction Corp Office/Yard	Galleher Way e/o San Gorgonio	9.32 TSF Office	Yes
19. Lawrence Equipment Expansion	1879 Lincoln	146. 9 TSF Warehouse 73.4 TSF Industrial	Yes
20. Morongo Medical Clinic *	NW of Hathaway & Morongo	49.9 TSF Medical Clinic	Yes

* Located on Morongo Tribal Land – preliminary information only

NW = Northwest
NE = Northeast
SW = Southwest
SE = Southeast
DU = Dwelling units
TSF = Thousand square feet
Stu = Students

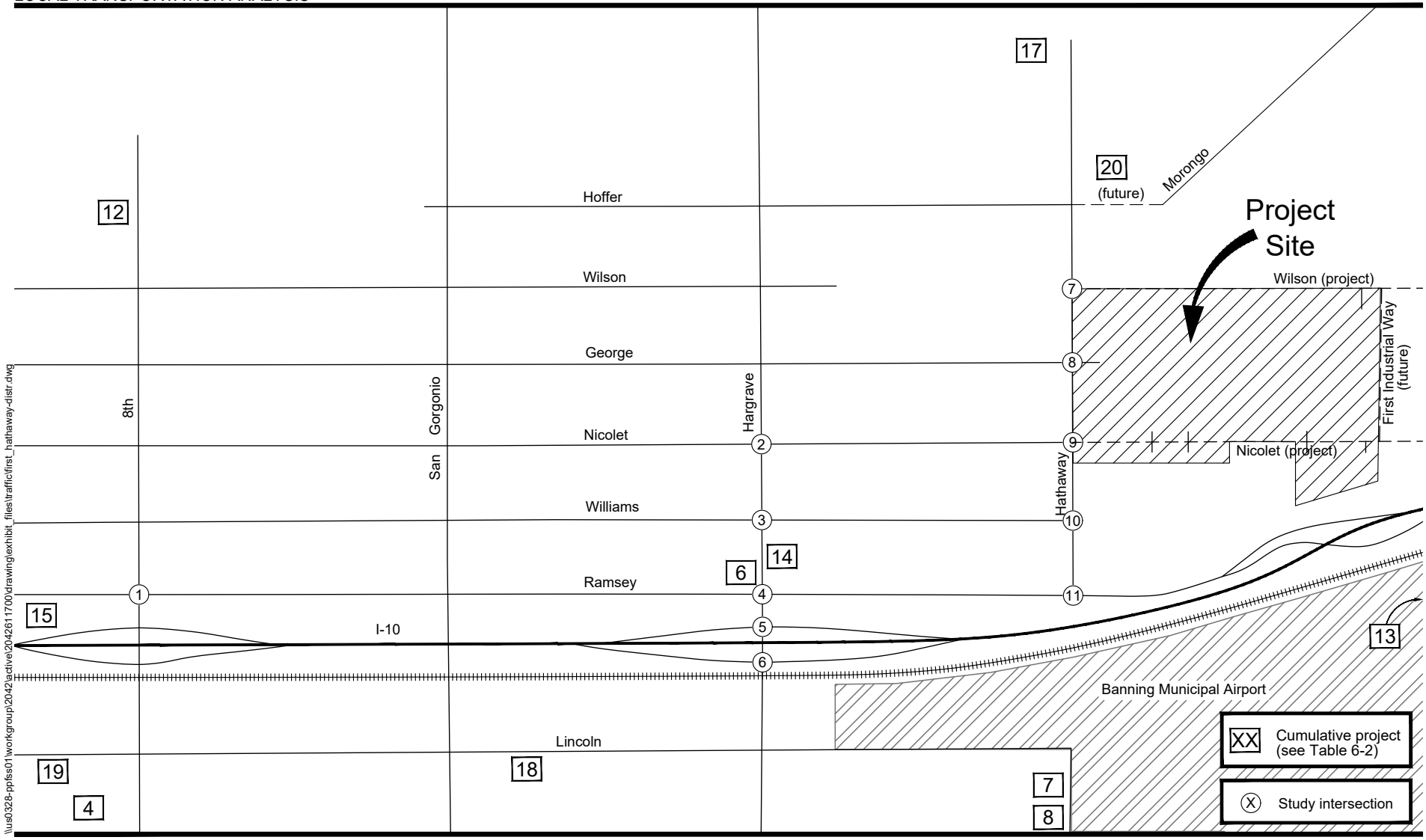
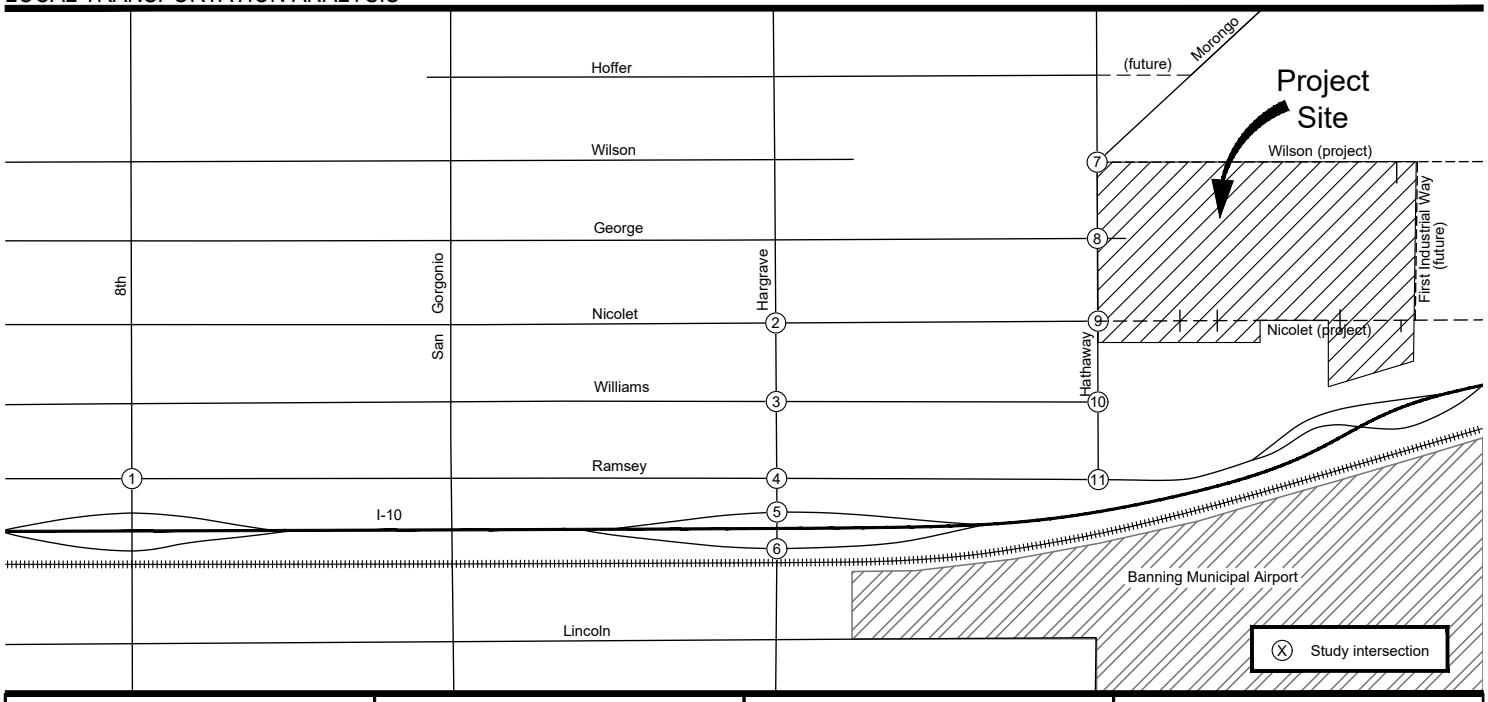


Figure 6-1
Cumulative Projects Location Map

Table 6-2 Cumulative Projects Trip Generation Summary

Land Use	Amount	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
4. Rancho San Gorgonio SP	1,042 DU, 800 Stu Elem School [1]	397	743	1,140	713	449	1,162	10,952
6. La Quinta Inn	91 Room Hotel, 4 TSF Food	86	57	143	85	83	168	2,146
7. Work Lofts	24 DU, 9.9 TSF Office 26.95 TSF Warehouse [2]	9	8	17	9	11	20	185
8. Anderson Equipment	2.24 TSF Office, 8 TSF Warehouse	3	1	4	1	3	4	36
12. St. Boniface	65 DU	12	36	48	40	24	64	614
13. Banning Distribution Center	1,000 TSF Warehouse	109	47	156	55	126	181	2,652
14. Kohavi	4 DU	1	2	3	2	1	3	38
15. Our Savior Lutheran	5 TSF Day Care	29	26	55	26	29	55	238
17. Robertsons Ready Mix Quarry	23-acre expansion	2	4	6	4	4	8	679
18. Downing Construction Corp Office	9.32 TSF Office	9	1	10	2	9	11	91
19. Lawrence Equip Exp	146. 9 TSF Warehouse 73.4 TSF Industrial	43	12	55	13	44	57	503
20. Morongo Med Clinic	49.9 TSF Medical Clinic	144	40	184	48	116	164	1,904
Trip Rates								
Residential (ITE 210)	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Office (ITE 710)	TSF	1.00	0.16	1.16	0.18	0.97	1.15	9.74
Commercial (ITE 820)	TSF	0.58	0.36	0.94	1.83	1.98	3.81	37.75
Hotel (ITE 310)	Room	0.28	0.19	0.47	0.31	0.26	0.60	8.36
Day Care Center (ITE 565)	TSF	5.83	5.17	11.00	5.23	5.89	11.12	47.62
Warehouse (ITE 150)	TSF	0.13	0.04	0.17	0.05	0.14	0.19	1.74
Fast Food (ITE 933)	TSF	15.06	10.04	25.10	14.17	14.17	28.34	346.23
Industrial Park (ITE 130)	TSF	0.32	0.08	0.40	0.08	0.32	0.40	3.37
Medical Clinic (ITE 630)	TSF	2.88	0.81	3.69	0.95	2.33	3.28	38.16

Source: ITE Trip Generation, 10th Edition
Notes:
[1] Phase 3 – 2022
[2] Assumes 50% internal trip allowance for live/work units
ADT = Average daily traffic
TSF = Thousand square feet
Stu = Students



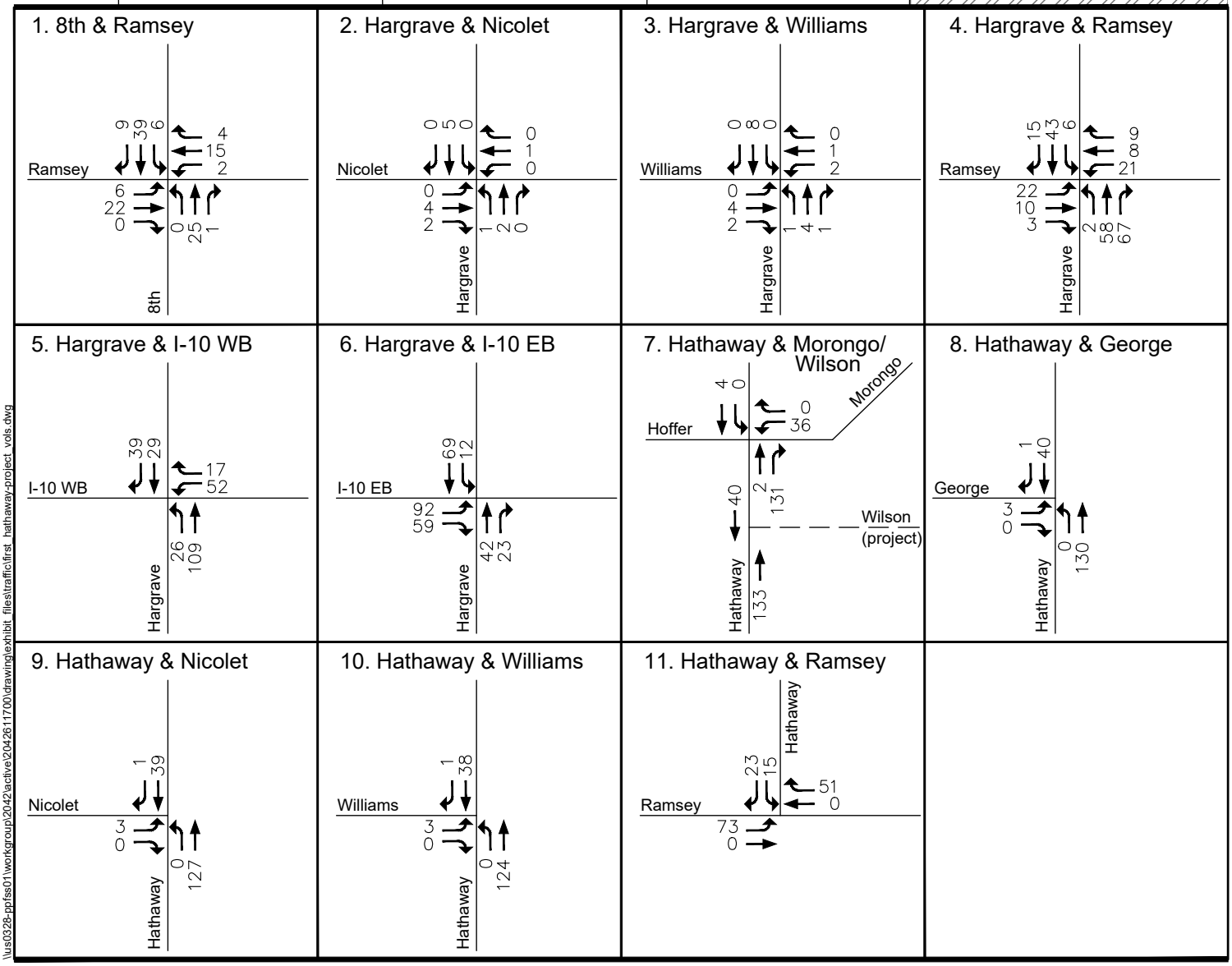


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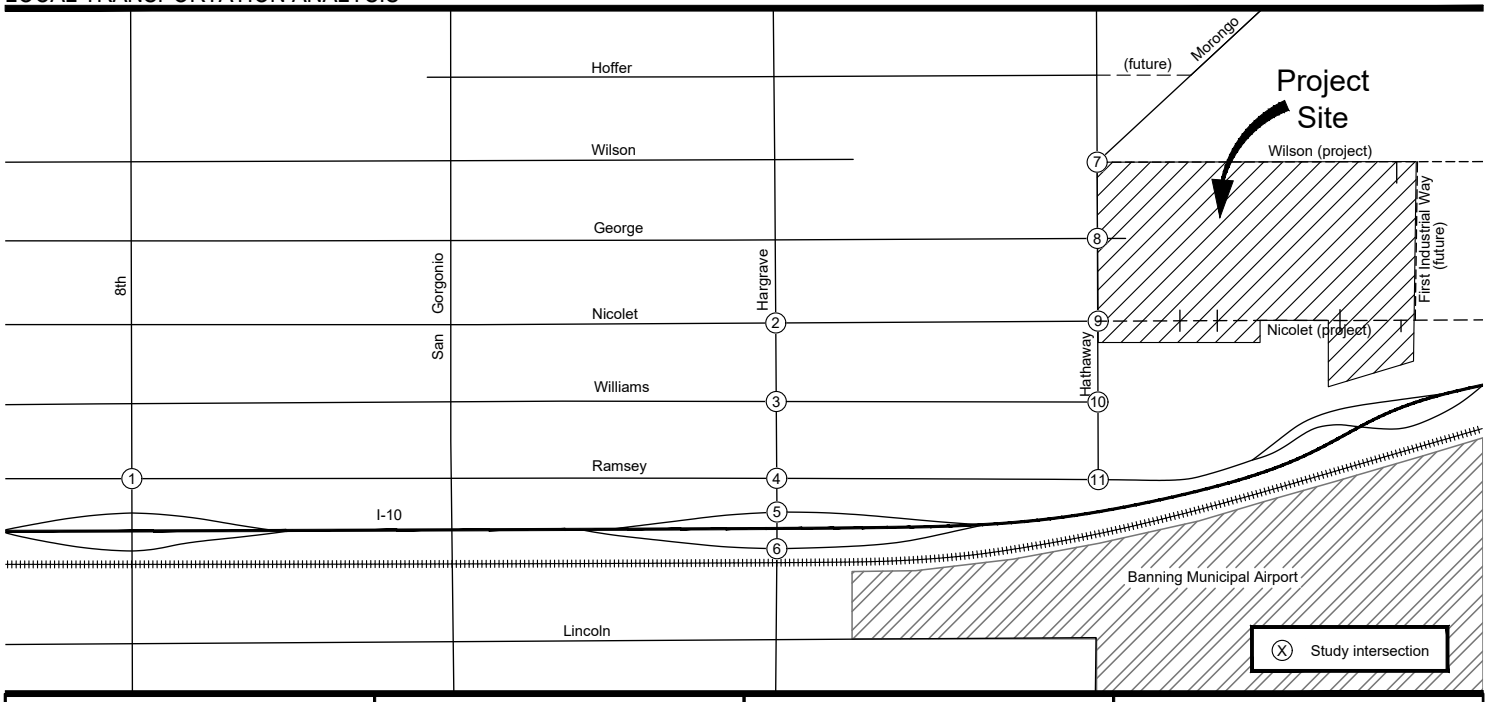
Figure 6-2
Cumulative Projects AM Peak Hour Turning Movement Trips



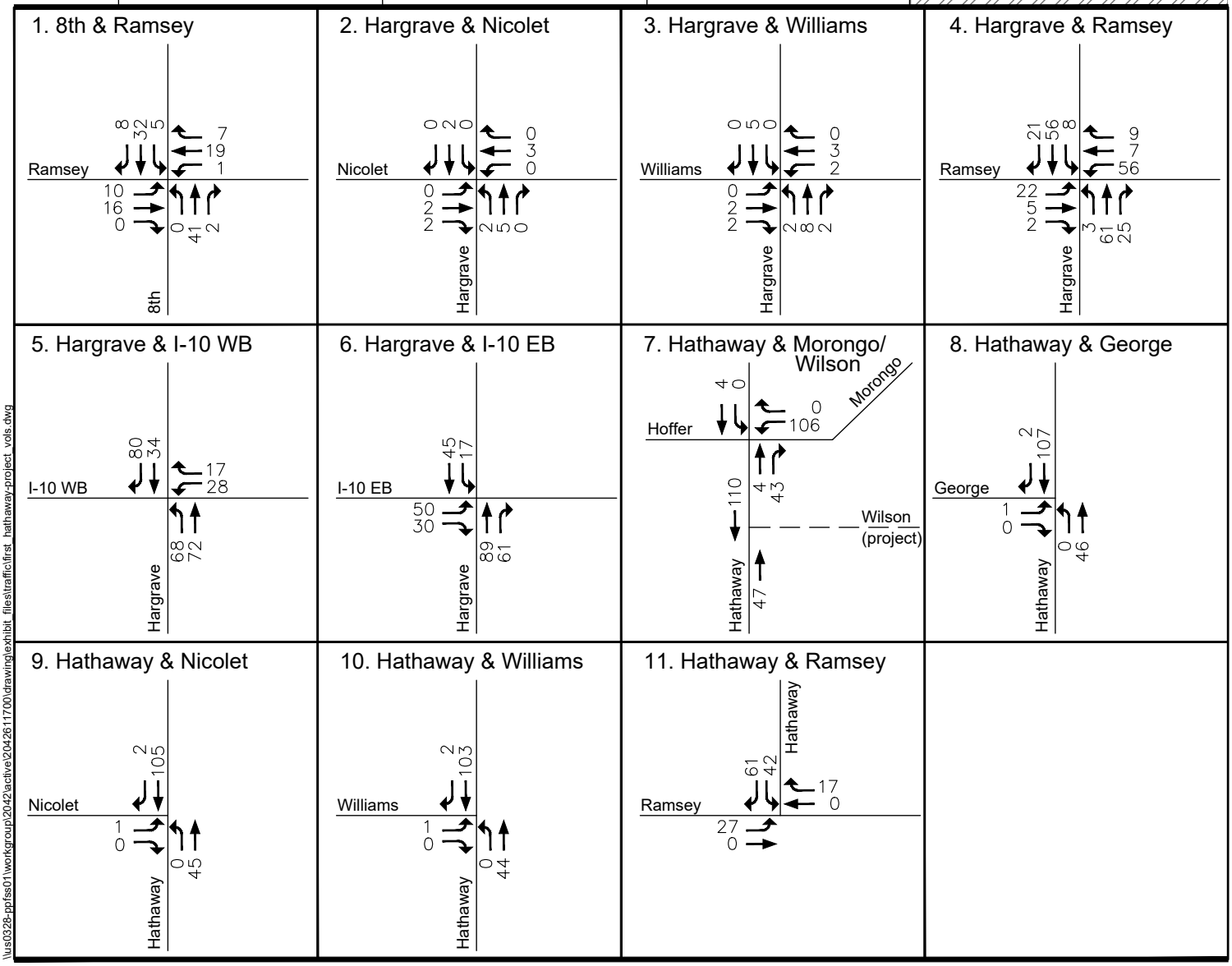


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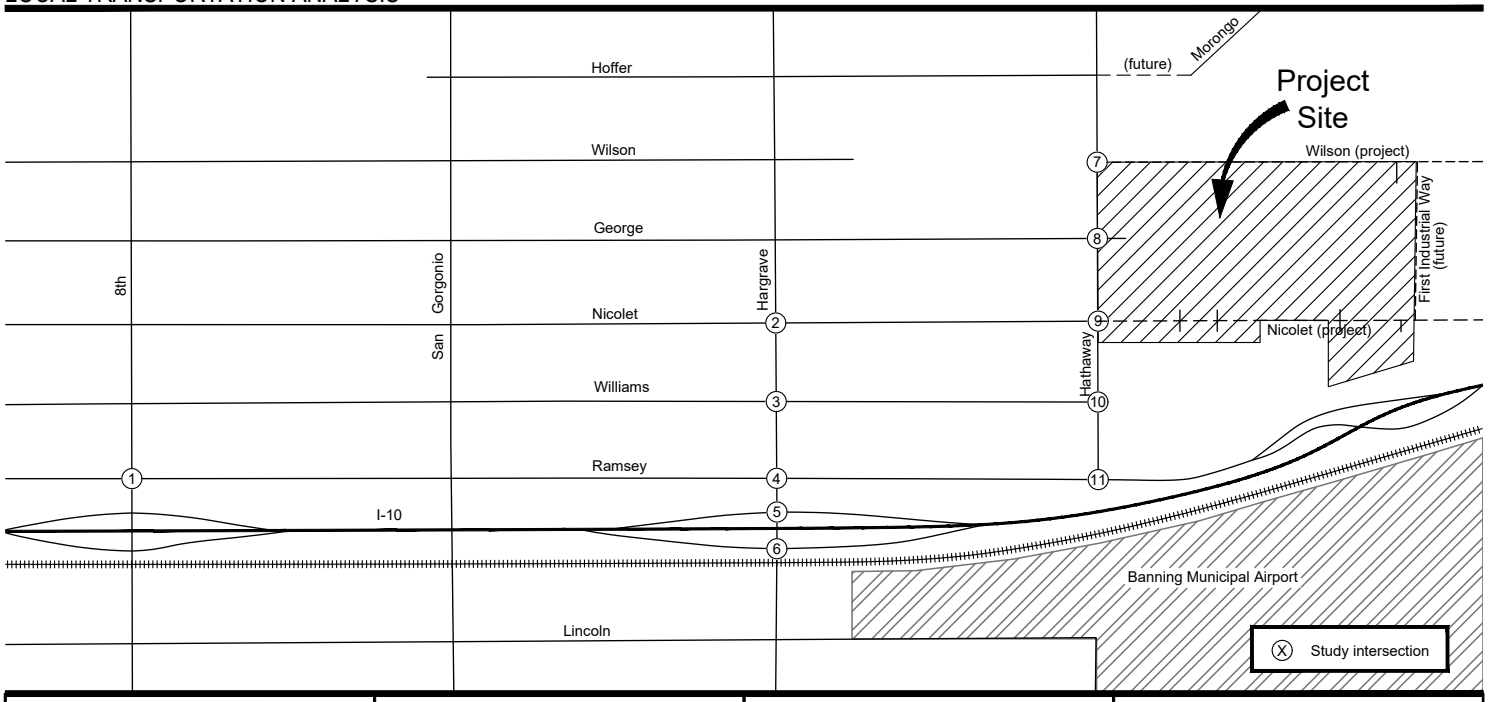
Figure 6-3
Cumulative Projects PM Peak Hour Turning Movement Trips



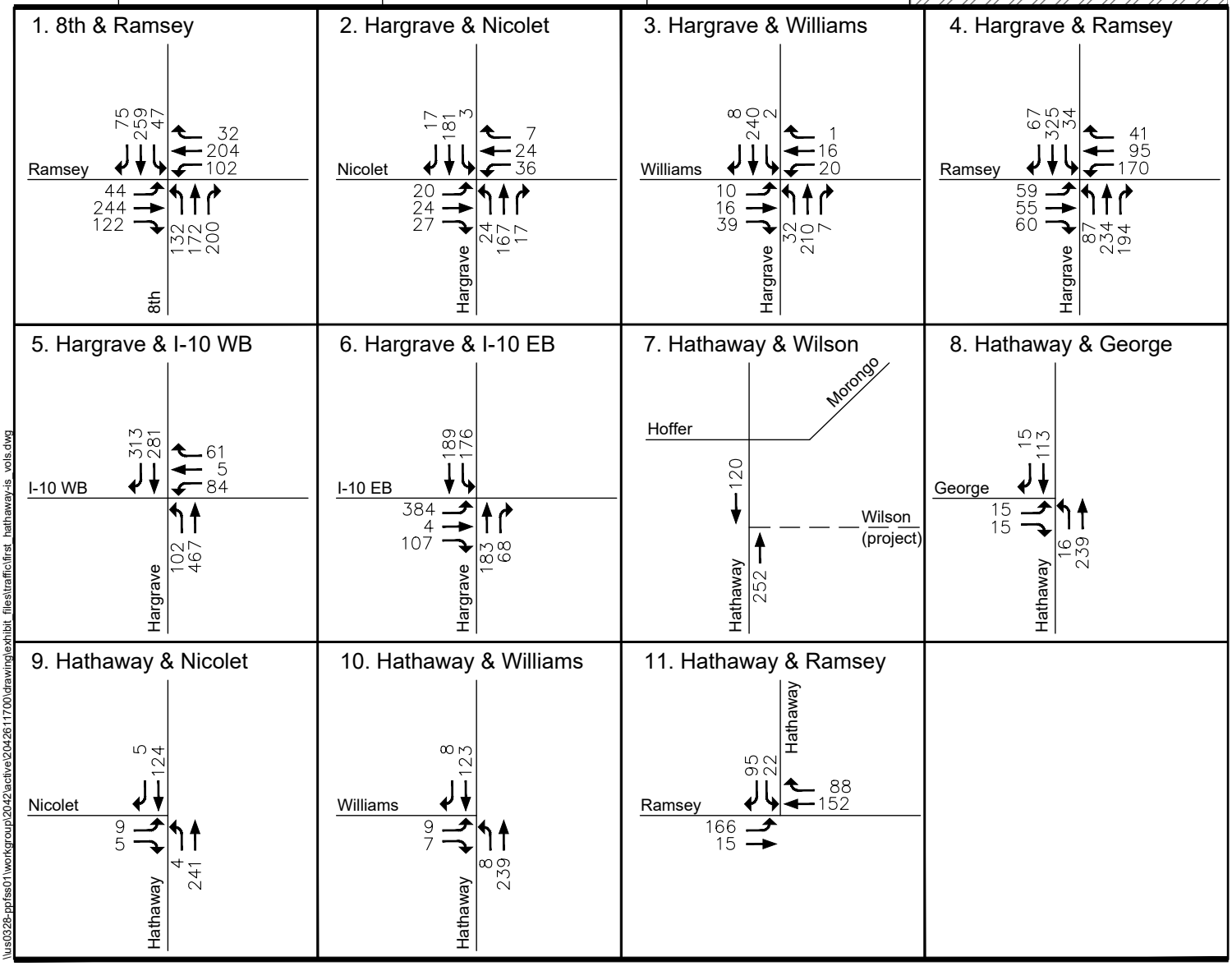


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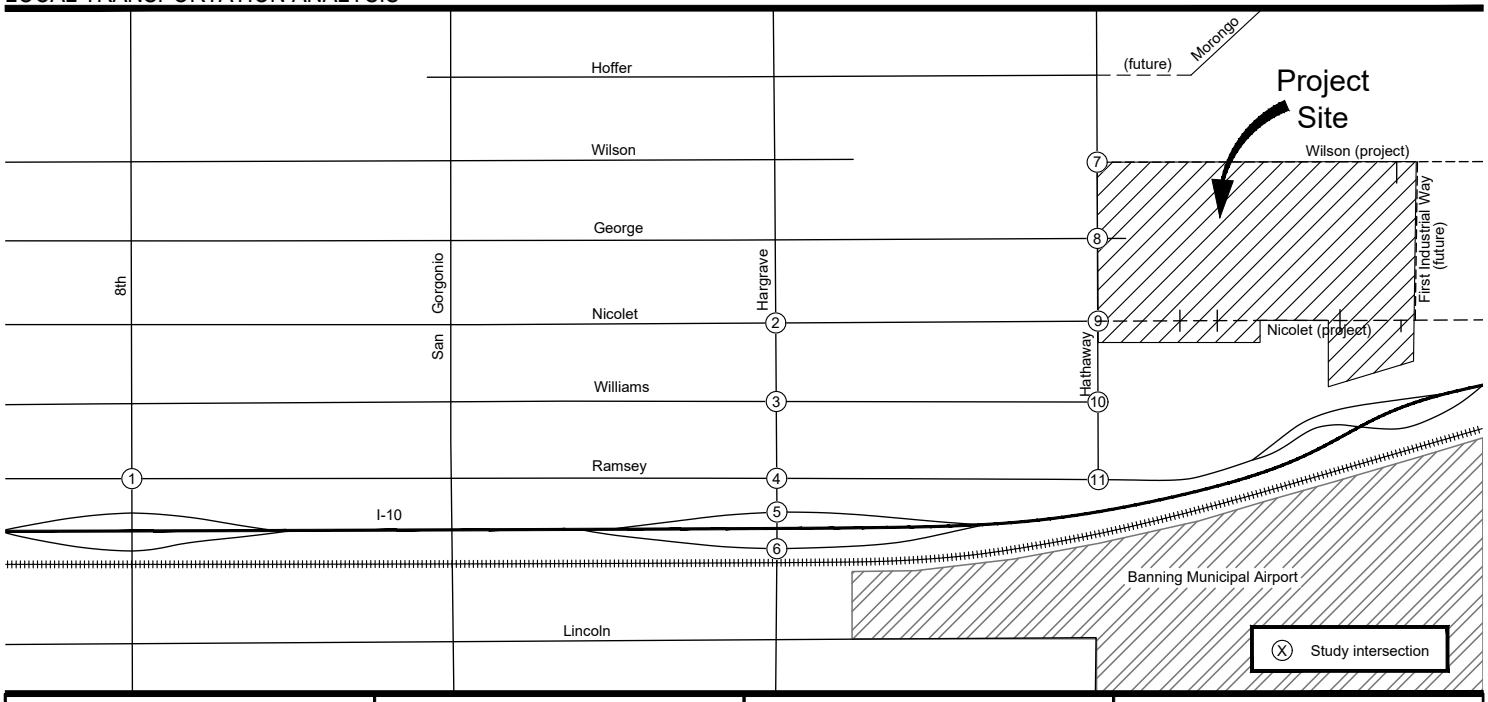
Figure 6-4

Cumulative Conditions No-Project AM Peak Hour Volumes



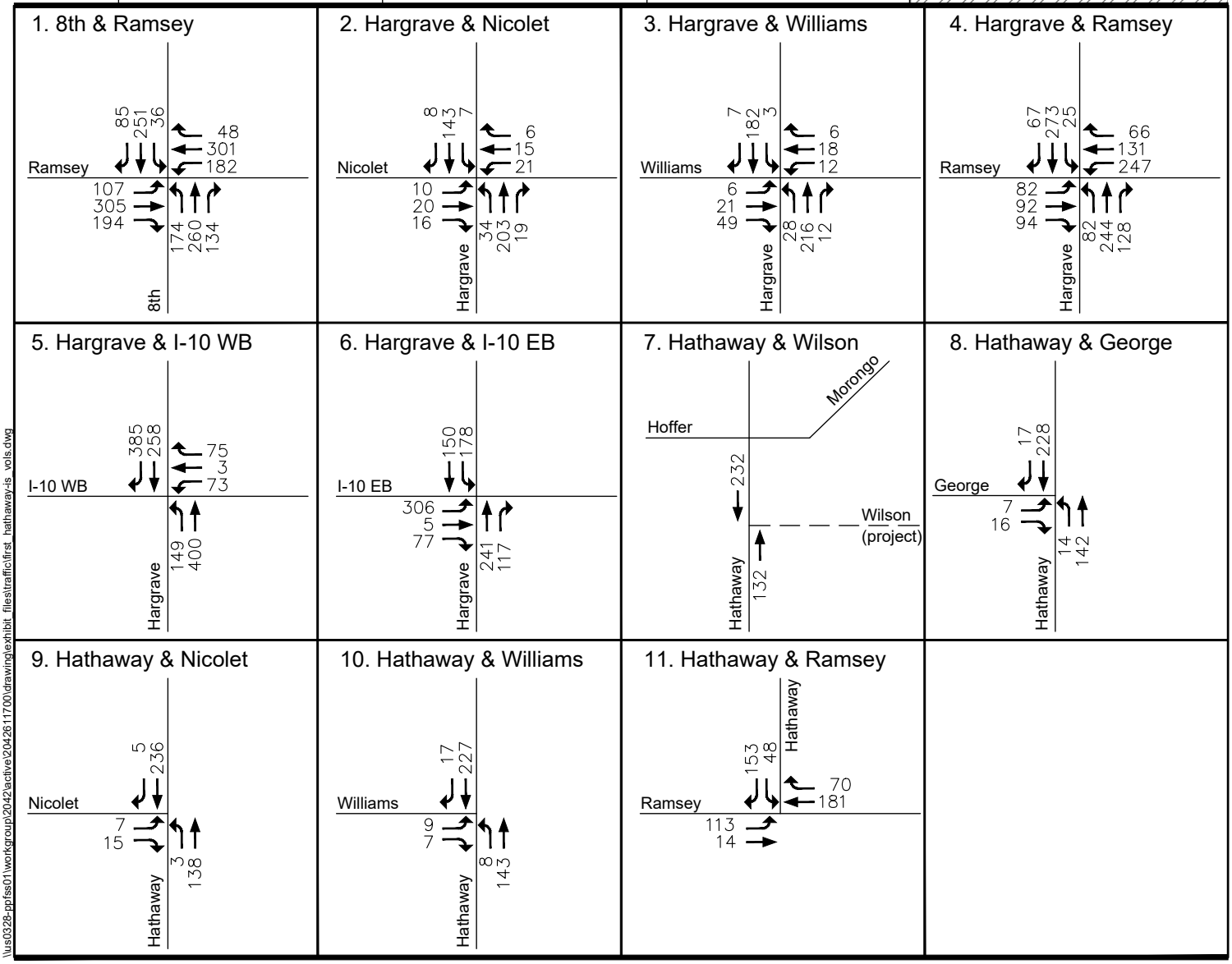


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Figure 6-5
Cumulative Conditions No-Project PM Peak Hour Volumes

Table 6-3 summarizes the Cumulative Conditions Without Project delay and LOS with existing and committed roadway conditions (delay calculations are included in **Appendix B**). As this table shows, the stop-controlled intersection of Hargrave Street and I-10 Westbound would operate at an unacceptable LOS F during the AM peak hour and at unacceptable LOS E during the PM peak hour under the Cumulative Conditions Without Project scenario. The stop-controlled intersection of Hargrave Street and I-10 Eastbound would operate at an unacceptable LOS F during the AM and PM peak hours under the Cumulative Conditions Without Project scenario.

The remaining stop-controlled study intersections would operate at acceptable LOS C or better during the AM and PM peak hours. The signalized study intersections would operate at acceptable LOS D or better during the AM and PM peak hours.

6.2 CUMULATIVE CONDITIONS PLUS PROJECT ANALYSIS

The distributed and assigned peak hour Project PCE trips presented in Chapter 4.0 were added to the Cumulative Conditions Without Project intersection volumes to produce Cumulative Conditions Plus Project volumes. The AM and PM peak hour Cumulative Conditions Plus Project intersection volumes are illustrated in **Figures 6-6** and **6-7**, respectively. These volumes were used to determine the Cumulative Conditions Plus Project delay and LOS.

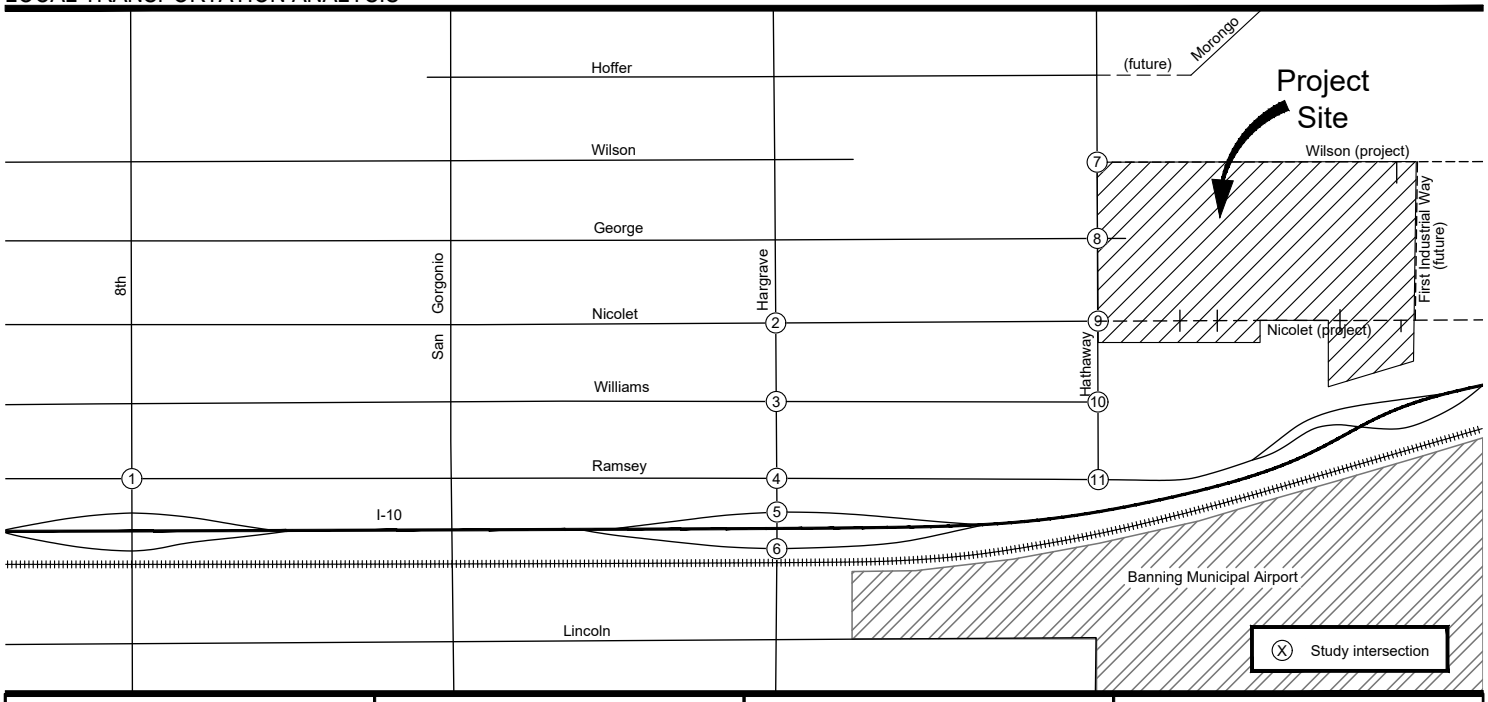
As discussed previously, the Project would construct a new east leg along the northern boundary of the Project site to intersect with Hathaway Street at the current location of Morongo Road and would be referred to as Wilson Street. Since the Morongo Road leg would be realigned to opposite Hoffer Street under cumulative conditions, the Hathaway Street and Wilson Street intersection would become a typical all-way stop T-intersection; however, the Project would only be responsible for constructing the south half of Wilson Street along the Project frontage. Under near-term Cumulative Conditions, the Wilson Street roadway adjacent to the Project site would be striped as a two-lane road. In addition, as previously discussed, the Project would add a new east leg opposite Nicolet Street at Hathaway Street at the southern boundary of the Project site.

Table 6-4 summarizes the Cumulative Conditions Plus Project peak hour intersection delay and LOS for the study intersections (delay calculations are included in **Appendix B**). As this table shows, the stop-controlled intersection of Hargrave Street and I-10 Westbound would operate at unacceptable LOS F during the AM and PM peak hours. The stop-controlled intersection of Hargrave Street and I-10 Eastbound would operate at unacceptable LOS F during the AM and PM peak hours. Both of these intersections are controlled by a stop sign on the ramp approach.

The remaining stop-controlled intersections would operate at acceptable LOS C or better during the AM and PM peak hours. The signalized study intersections would operate at acceptable LOS D or better during the AM and PM peak hours.

Table 6-3 Cumulative Conditions Without Project Intersection Level of Service Summary

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. 8th & Ramsey	Signal	32.3 sec	C	45.2 sec	D
2. Hargrave & Nicolet	AWSC	9.3 sec	A	9.5 sec	A
3. Hargrave & Williams	TWSC	15.6 sec	C	14.1 sec	B
4. Hargrave & Ramsey	Signal	21.3 sec	C	24.0 sec	C
5. Hargrave & I-10 WB	TWSC	58.8 sec	F	48.7 sec	E
6. Hargrave & I-10 EB	TWSC	451.2 sec	F	188.6 sec	F
8. Hathaway & George	TWSC	10.4 sec	B	10.2 sec	B
9. Hathaway & Nicolet	TWSC	10.5 sec	B	10.3 sec	B
10. Hathaway & Williams	TWSC	10.4 sec	B	10.8 sec	B
11. Hathaway & Ramsey	Signal	18.7 sec	B	16.6 sec	B
AWSC = All-way stop control TWSC = Two-way stop control LOS = Level of service sec = seconds of delay					



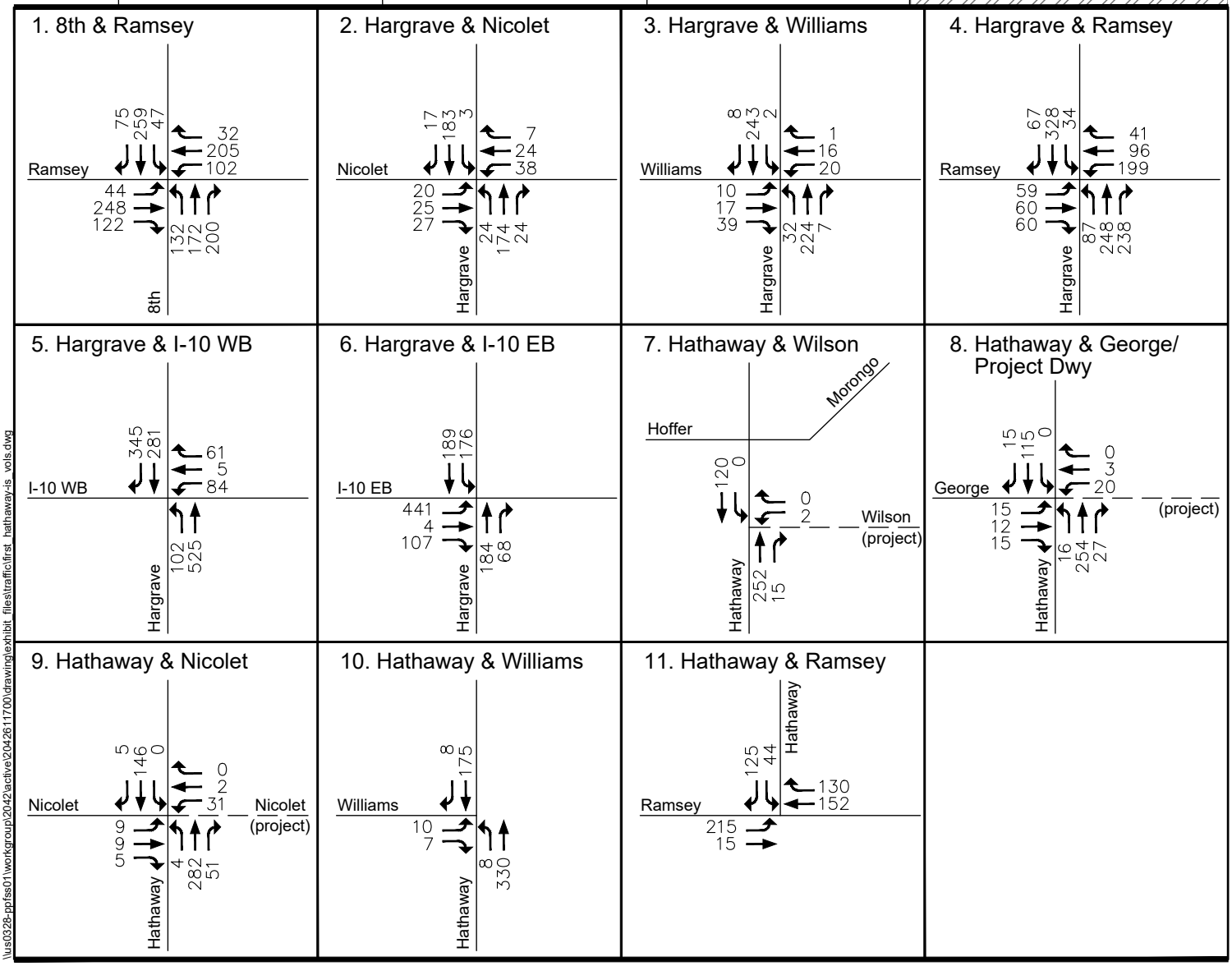


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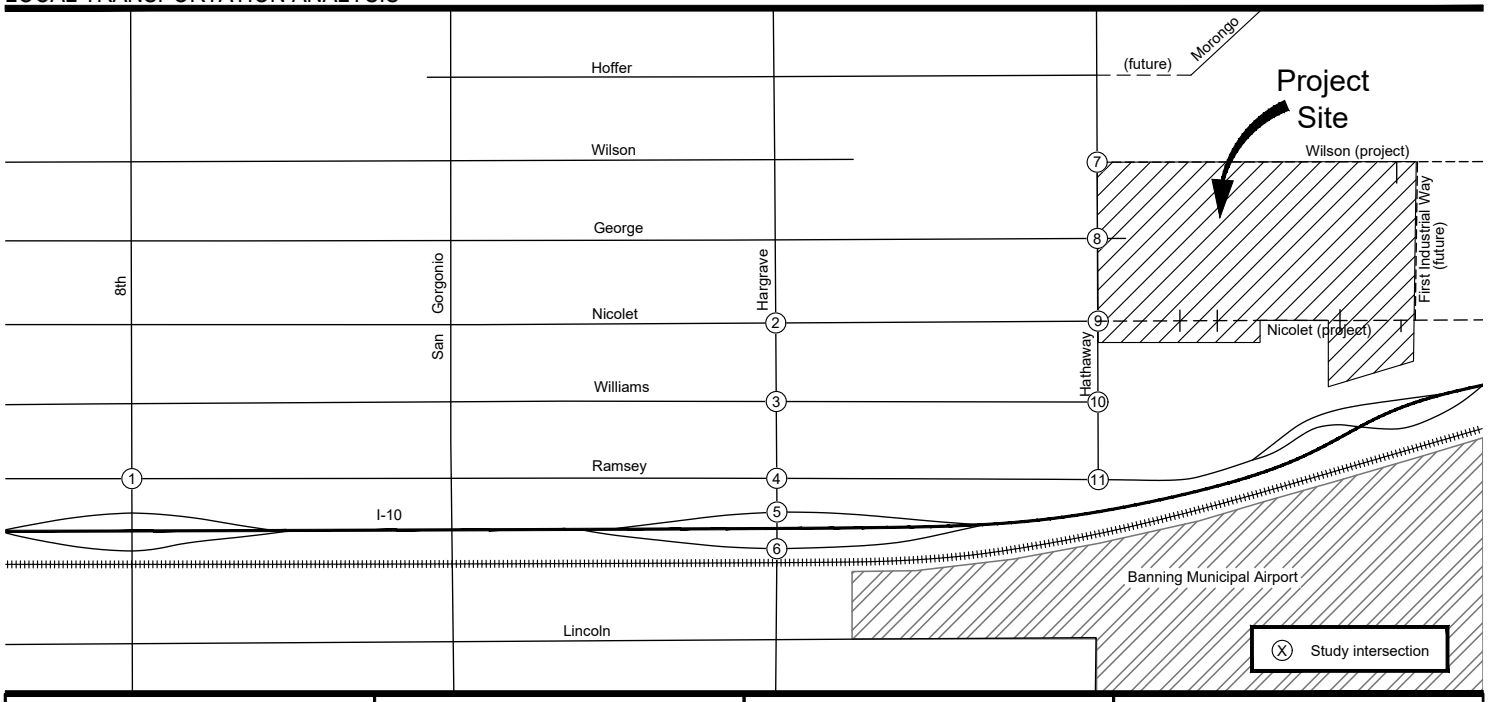
Figure 6-6

Cumulative Conditions Plus Project AM Peak Hour Turning Movement Volumes



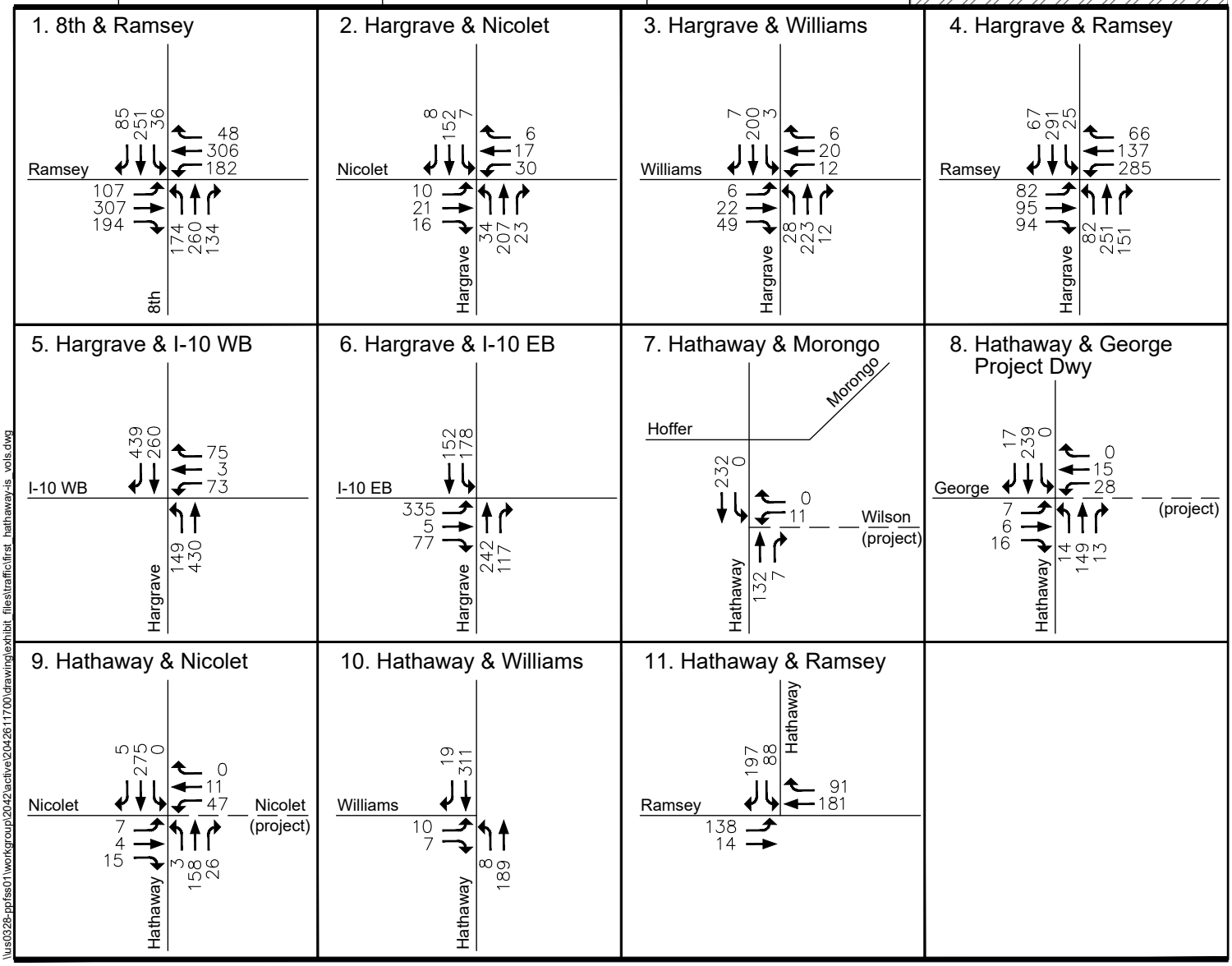


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Figure 6-7

Cumulative Conditions Plus Project PM Peak Hour Turning Movement Volumes

Table 6-4 Cumulative Conditions Plus Project Intersection Level of Service Summary

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour		
		Delay	LOS	Project Increase	Delay	LOS	Project Increase
1. 8th & Ramsey	Signal	32.5 sec	C	0.2 sec	45.3 sec	D	0.1 sec
2. Hargrave & Nicolet	AWSC	9.4 sec	A	0.1 sec	9.6 sec	A	0.1 sec
3. Hargrave & Williams	TWSC	16.0 sec	C	0.4 sec	14.6 sec	B	0.5 sec
4. Hargrave & Ramsey	Signal	22.0 sec	C	0.7 sec	26.0 sec	C	2.0 sec
5. Hargrave & I-10 WB	TWSC	**81.1 sec**	**F**	**22.3 sec**	**61.4 sec**	**F**	**12.7 sec**
6. Hargrave & I-10 EB	TWSC	**568.0 sec**	**F**	**116.8 sec**	**235.3 sec**	**F**	**46.7 sec**
7. Hathaway & Wilson	AWSC	10.8 sec	B	10.8 sec	10.3 sec	B	10.3 sec
8. Hathaway & George	TWSC	13.3 sec	B	2.9 sec	13.1 sec	B	2.9 sec
9. Hathaway & Nicolet	TWSC	13.5 sec	B	3.0 sec	13.9 sec	B	3.6 sec
10. Hathaway & Williams	TWSC	11.5 sec	B	1.1 sec	12.0 sec	B	1.2 sec
11. Hathaway & Ramsey	Signal	20.1 sec	C	1.4 sec	16.4 sec	B	-0.2 sec

Adverse Project effects shown in **bold** (see Table 2-2 for impact criteria)
AWSC = All-way stop control
TWSC = Two-way stop control
LOS = Level of service
sec = seconds of delay per vehicle

6.2.1 Identification of Intersection Deficiencies

The stop-controlled study intersection of Hargrave Street and I-10 Westbound would operate at unacceptable LOS F during the AM and PM peak hours with Project traffic. The proposed Project would increase the AM and PM peak hour LOS F delay by more than 1.0 second. Based on the City's criteria, the Project would contribute to deficient conditions at Hargrave Street and I-10 Westbound under Cumulative Conditions.

The stop-controlled intersection of Hargrave Street and I-10 Eastbound would operate at unacceptable LOS F during the AM and PM peak hours with the addition of Project traffic. The proposed Project would increase the AM and PM peak hour LOS F delay by more than 1.0 second; therefore, the Project would contribute to deficient conditions under Cumulative Conditions at the intersection of Hargrave Street and I-10 Eastbound based on the City's criteria.

The remaining study intersections would operate at acceptable LOS D or better, and the Project has no adverse effect on these intersections based on the City's criteria outlined in Table 2-2.

6.2.1 Freeway Ramp Queuing Analysis

The queue lengths based on the existing lane geometrics and traffic control during the AM and PM peak hours under Cumulative Conditions were estimated by the SimTraffic software. The average 95th percentile queue was determined based on five simulation runs.

Table 6-5 summarizes the 95th percentile queue lengths at the Hargrave Street/I-10 interchange off-ramps under Without Project and Plus Project conditions (queue length calculation results are included in **Appendix D**).

Table 6-5 Cumulative Conditions Freeway Ramp Queuing Analysis Summary

	95th Percentile Queue (feet)			
	No Project		With Project	
Off-Ramp	**AM**	**PM**	**AM**	**PM**
Hargrave/I-10 WB off-ramp	93	148	125	161
Hargrave/I-10 EB off-ramp	674	309	1,213	453

Approximately 1,000 feet of storage is available on the eastbound and westbound off-ramps. As this table shows, under existing side street stop-control conditions, the eastbound ramp queue would exceed the available storage under Cumulative Conditions Plus Project during the AM peak hour. Potential improvements at both ramp intersections have been identified which would result in LOS C and alleviate the off-ramp queuing on the eastbound off-ramp.

The Ramsey Street off-ramp from westbound I-10 is a free-flowing movement and queues would not affect mainline traffic flow; therefore, the Ramsey Street off-ramp is not included in the freeway ramp queuing analysis.

7.0 TRAFFIC SIGNAL WARRANT ANALYSIS

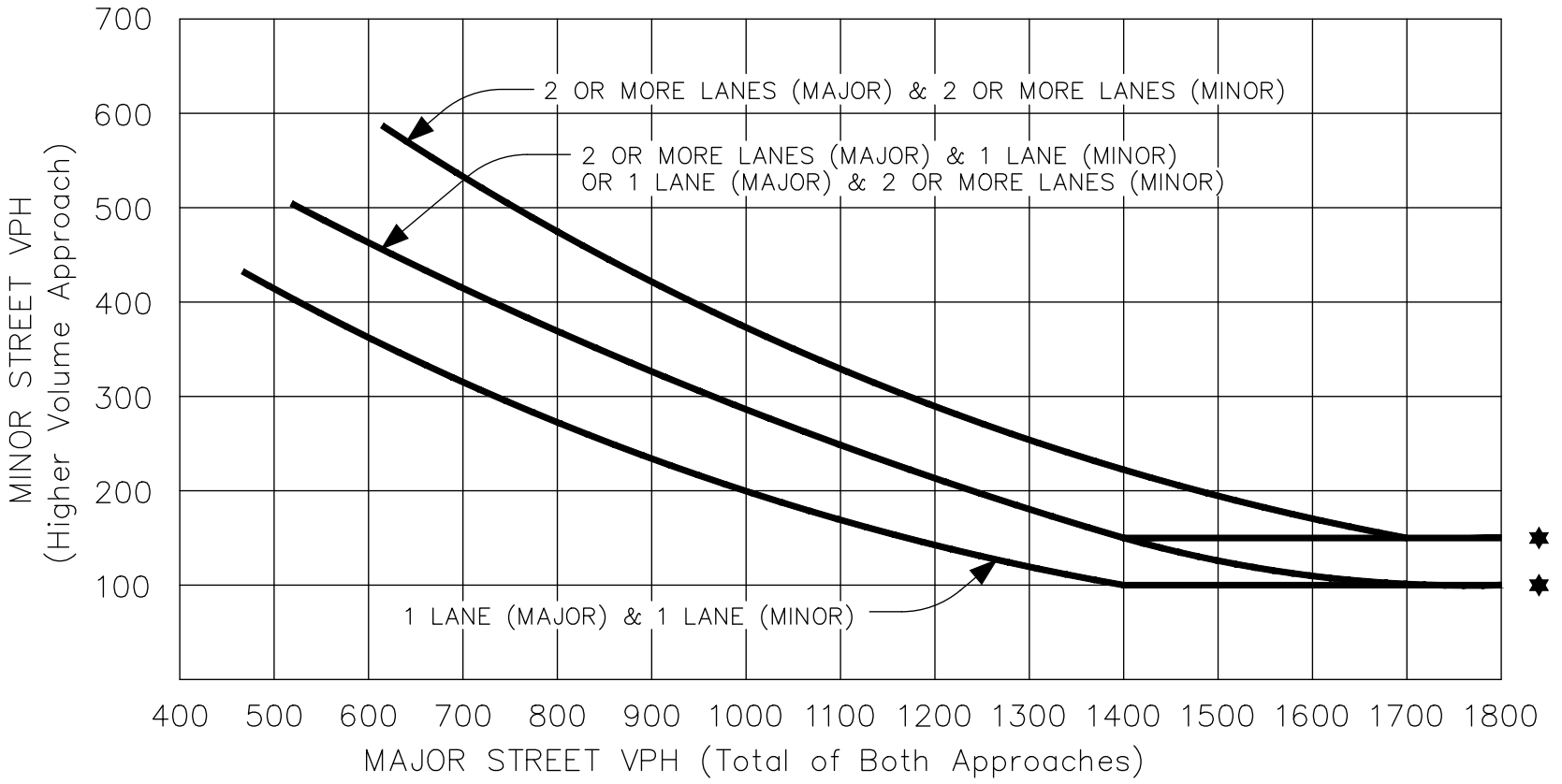
Nine of the study intersections are currently controlled by stop signs. Roadway improvements and a traffic signal are under construction at the intersection of Hathaway Street and Ramsey Street. The remaining eight stop-controlled study intersections were evaluated for satisfaction of Caltrans Peak Hour Signal Warrant.

The side street volume and major street volume at an intersection where the major street has a speed of 40 mph or less are compared with the curves shown in **Figure 7-1**. The higher the major street volume, the lower the side street volume is needed to satisfy the warrant. The minimum side street volume required to warrant the installation of a traffic signal is 100 peak hour vehicles.

Table 7-1 summarizes the Peak Hour Signal Warrant analysis at the stop-controlled intersections under Existing, Opening Year, and Cumulative Conditions. The volumes at the stop-controlled study intersections on Hargrave Street north of Ramsey Street do not meet the minimum requirements for installation of a traffic signal under Existing, Opening Year, or Cumulative Conditions. Although the volumes at the study intersections along Hathaway Street north of Ramsey Street do not meet the minimum requirements for installation of a traffic signal under Existing, Opening Year, or Cumulative Conditions, these intersections will be signalized in the future based on the City's General Plan Exhibit III-7. The Project shall be responsible for its fair share contribution toward the future build out signal improvements (see Section 11-4 for fair-share calculations).

The volumes at the I-10 eastbound and westbound ramp intersections at Hargrave Street do not meet the minimum Peak Hour Signal Warrant requirements for installation of a signal under the Existing and Opening Year scenarios, even though the intersection of Hargrave Street and I-10 Eastbound operates at LOS F during the AM peak hour based on delay under Existing and Opening Year conditions and at LOS E during the PM peak hour under Opening Year conditions. Both ramp intersections satisfy the signal warrant under Cumulative Conditions without and with Project traffic.

Satisfaction of the Peak Hour Signal Warrant does not indicate that a signal is required, but rather shows that installation of a signal meets minimum standards.



★ Note: 150 vph applies as the lower threshold volume for a minor–street approach with two or more lanes, and 100vph applies as the lower threshold volume for a minor–street approach with one lane.

Source: MUTCD – Figure 4C–3

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Figure 7-1

Peak Hour Volume Warrant - Under 45 mph

Table 7-1 Signal Warrant Analysis Summary

Intersection	Major Street Speed	AM Peak Hour		PM Peak Hour		Warrant Satisfied
		Minor Street Volume (Highest Approach)	Major Street Volume (2-way)	Minor Street Volume (Highest Approach)	Major Street Volume (2-way)	
2. Hargrave & Nicolet	30 mph					
Existing		64	385	40	390	No
Opening Year		66	401	42	405	No
Opening Year w/Project		68	417	50	423	No
Cumulative Conditions		71	409	46	414	No
Cumulative w/Project		72	425	53	429	No
3. Hargrave & Williams	30 mph					
Existing		58	467	69	415	No
Opening Year		59	485	72	431	No
Opening Year w/Project		60	502	73	456	No
Cumulative Conditions		65	499	76	448	No
Cumulative w/Project		66	516	77	473	No
5. Hargrave & I-10 WB	30 mph					
Existing		78	922	102	901	No
Opening Year		81	960	106	938	No
Opening Year w/Project		81	1,048	106	1,024	No
Cumulative Conditions		150	1,163	151	1,192	Yes
Cumulative w/Project		150	1,253	151	1,278	Yes
6. Hargrave & I-10 EB	30 mph					
Existing		331	452	296	456	No
Opening Year		344	470	308	474	No
Opening Year w/Project		401	471	337	477	No
Cumulative Conditions		495	616	388	686	Yes
Cumulative w/Project		552	617	417	689	Yes
7. Hathaway & Morongo	35 mph					
Existing		54	148	101	117	No
Opening Year		56	154	105	121	No
Opening Year w/Project		56	169	105	128	No
Cumulative Conditions		0	372	0	364	No
Cumulative w/Project		2	387	11	371	No
8. Hathaway & George	35 mph					
Existing		26	203	21	235	No
Opening Year		27	212	22	246	No
Opening Year w/Project		39	256	43	277	No
Cumulative Conditions		30	383	23	401	No
Cumulative w/Project		42	427	43	432	No

(continued)

9. Hathaway & Nicolet	35 mph					
Existing		11	200	20	221	No
Opening Year		11	207	21	230	No
Opening Year w/Project		33	321	58	315	No
Cumulative Conditions		14	374	22	382	No
Cumulative w/Project		33	488	58	467	No
10. Hathaway & Williams	35 mph					
Existing		13	208	15	236	No
Opening Year		13	215	15	246	No
Opening Year w/Project		14	358	16	378	No
Cumulative Conditions		16	378	16	395	No
Cumulative w/Project		17	521	17	527	No

8.0 SITE ACCESS, SAFETY, AND OTHER ANALYSIS

The Project would provide a driveway on Hathaway Street opposite George Street. Driveways would also be provided on the extension of Wilson Street and the extension of Nicolet Street. **Figure 8-1** illustrates the location of project driveways and the off-site striping on the streets surrounding the site. **Figure 8-2** shows the peak hour PCE trips at the project driveways during the AM and PM peak hours.

Figure 8-3 illustrates the details at the intersections surrounding the Project site, and **Figure 8-4** illustrates driveway details. These figures show truck turning movements at the Project driveways and also show line of sight.

8.1 INTERSECTION SIGHT DISTANCE

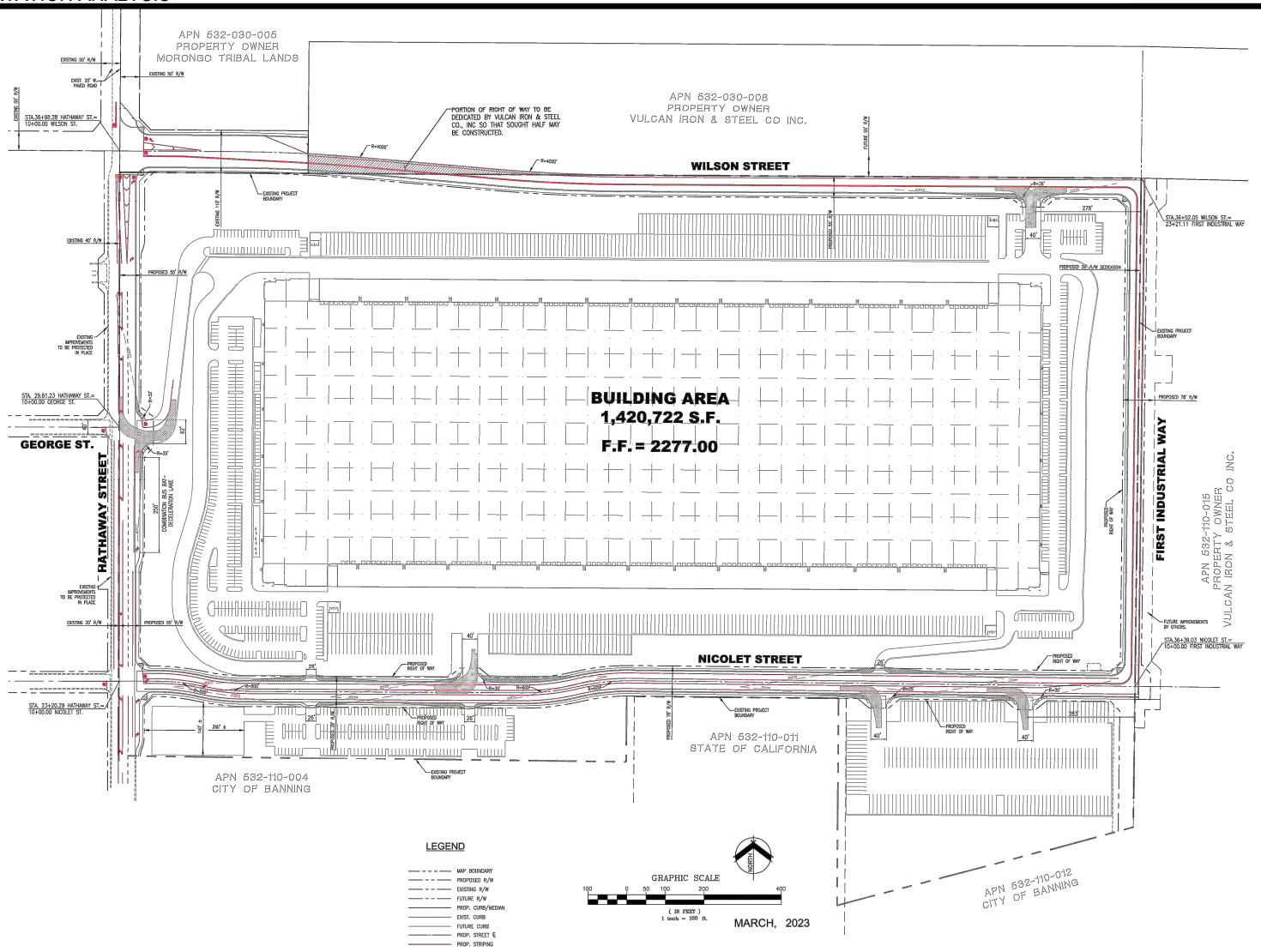
The project access driveways and parking aisles are appropriately sized, spaced, and configured for the project volumes and vehicle types and would be designed in accordance with applicable agency standards.

Sight-distance requirements at project access driveways would be provided per Riverside County Standard Plan 821 requirements. The required line of sight distance for the driveway opposite George Street on Hathaway Street, which has a speed limit of 35 mph, is 250 feet. The Hathaway Street roadway is straight and flat, and landscaping would be limited to 30 inches in height, and no trees, walls, or other obstructions would be placed within the limited use areas to provide the required sight distance. Similarly, the sight distance at the Project driveways along Wilson Street and Nicolet Street would be provided by limiting landscaping to 30 inches in height and no trees, walls, or other obstructions would be placed in the limited use areas. Line of sight at the Project driveways are illustrated in previously referenced Figures 8-3 and 8-4.

8.2 DRIVEWAY LENGTH

The driveway on Hathaway Street opposite George Street has a long throat (i.e., more than 500 feet) that leads to the parking lots and gated warehouse area. This driveway is not gated; therefore, the driveway length would be sufficient to allow vehicles to enter the site without causing subsequent vehicles to back up onto Hathaway Street.

The driveway on Wilson Street has a throat approximately 70 feet long. This driveway leads to parking lots along the eastern edge of the site and is not gated. A small amount of inbound truck traffic is estimated to use this driveway, and passenger vehicles will use it for ingress and egress.



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Source: Stantec

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Figure 8-1a

Proposed Site Access and Interim Off-Site Striping

8.2a

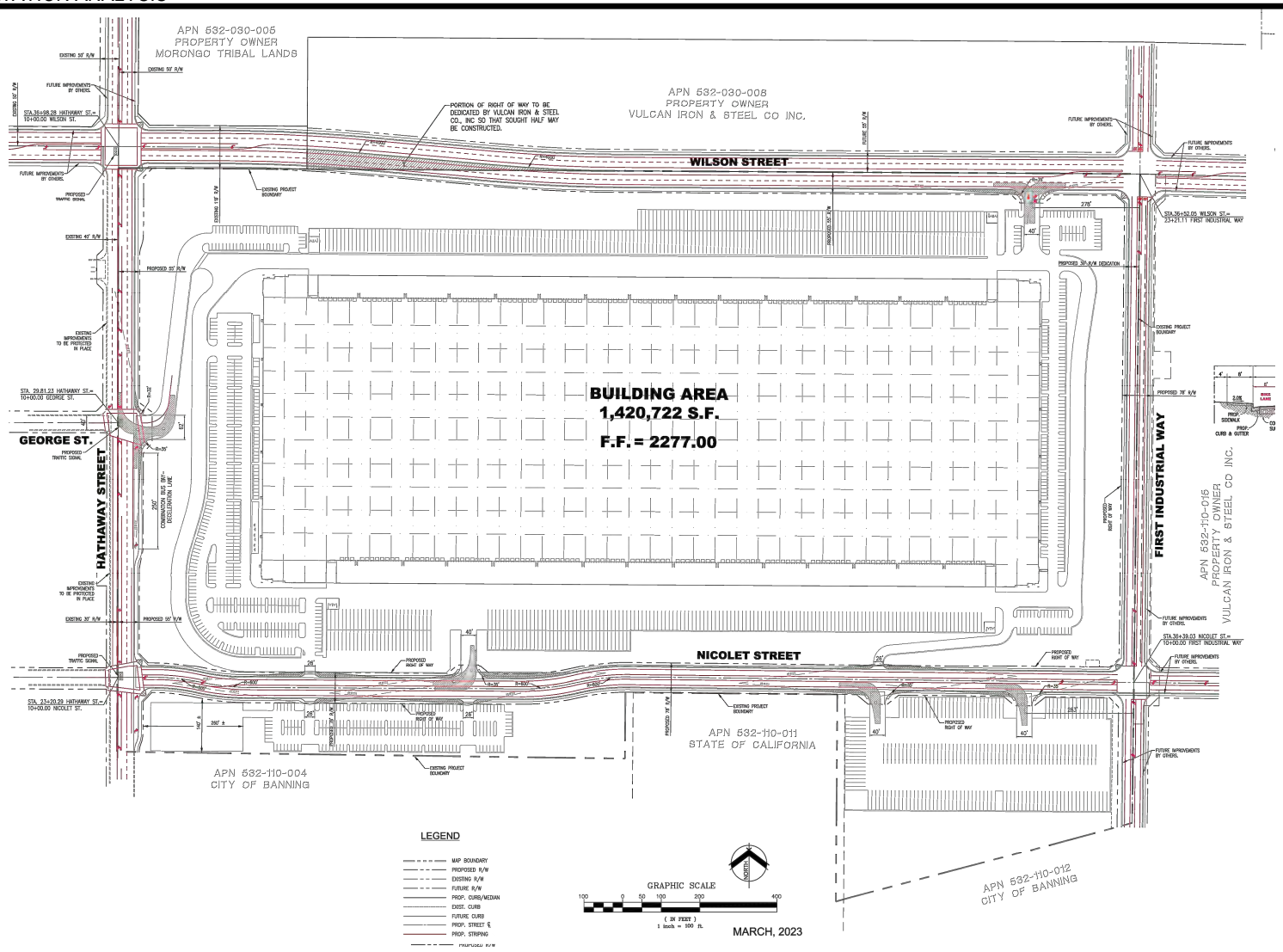

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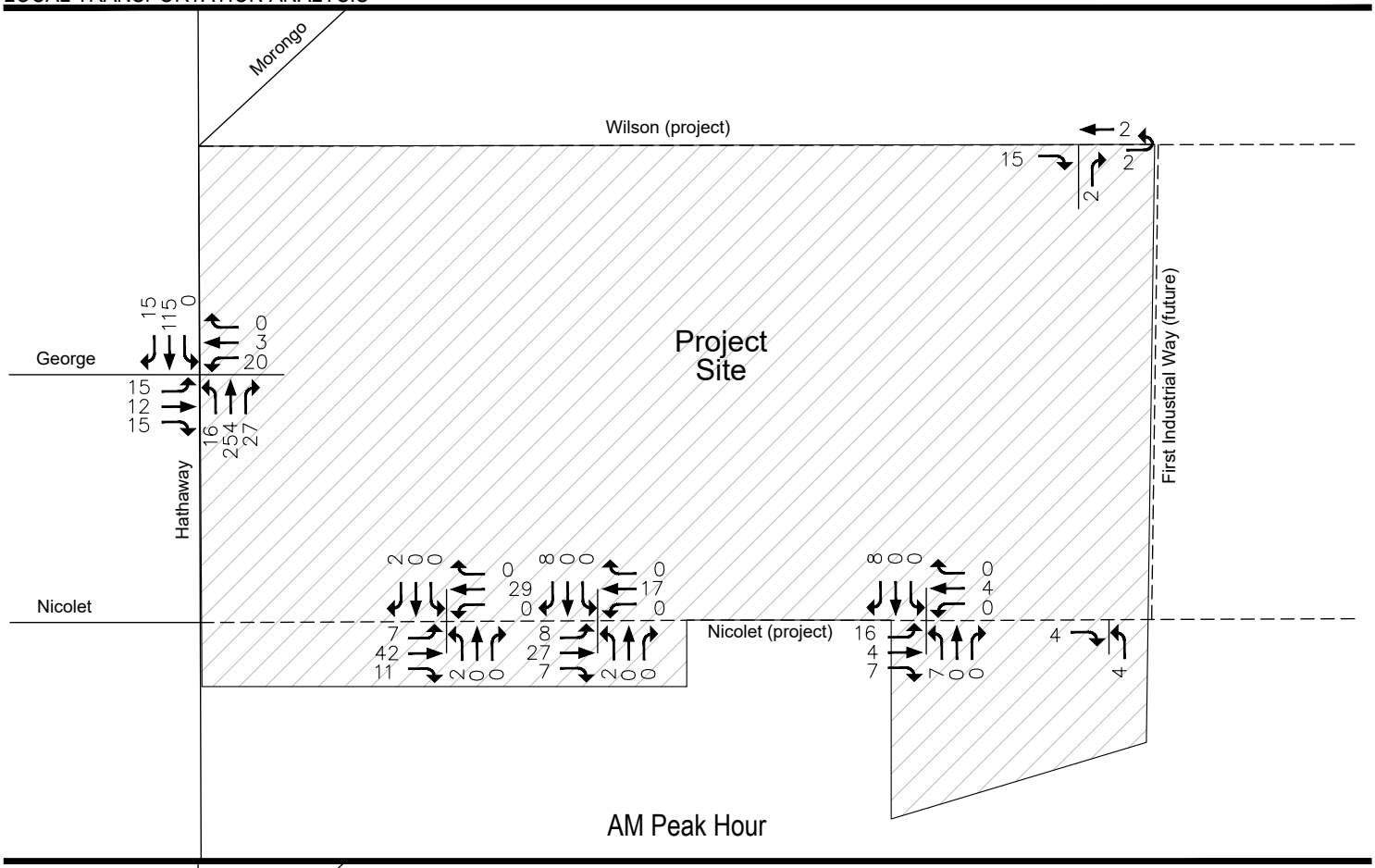
Figure 8-1b

Proposed Site Access and Ultimate Off-Site Striping

8.2b



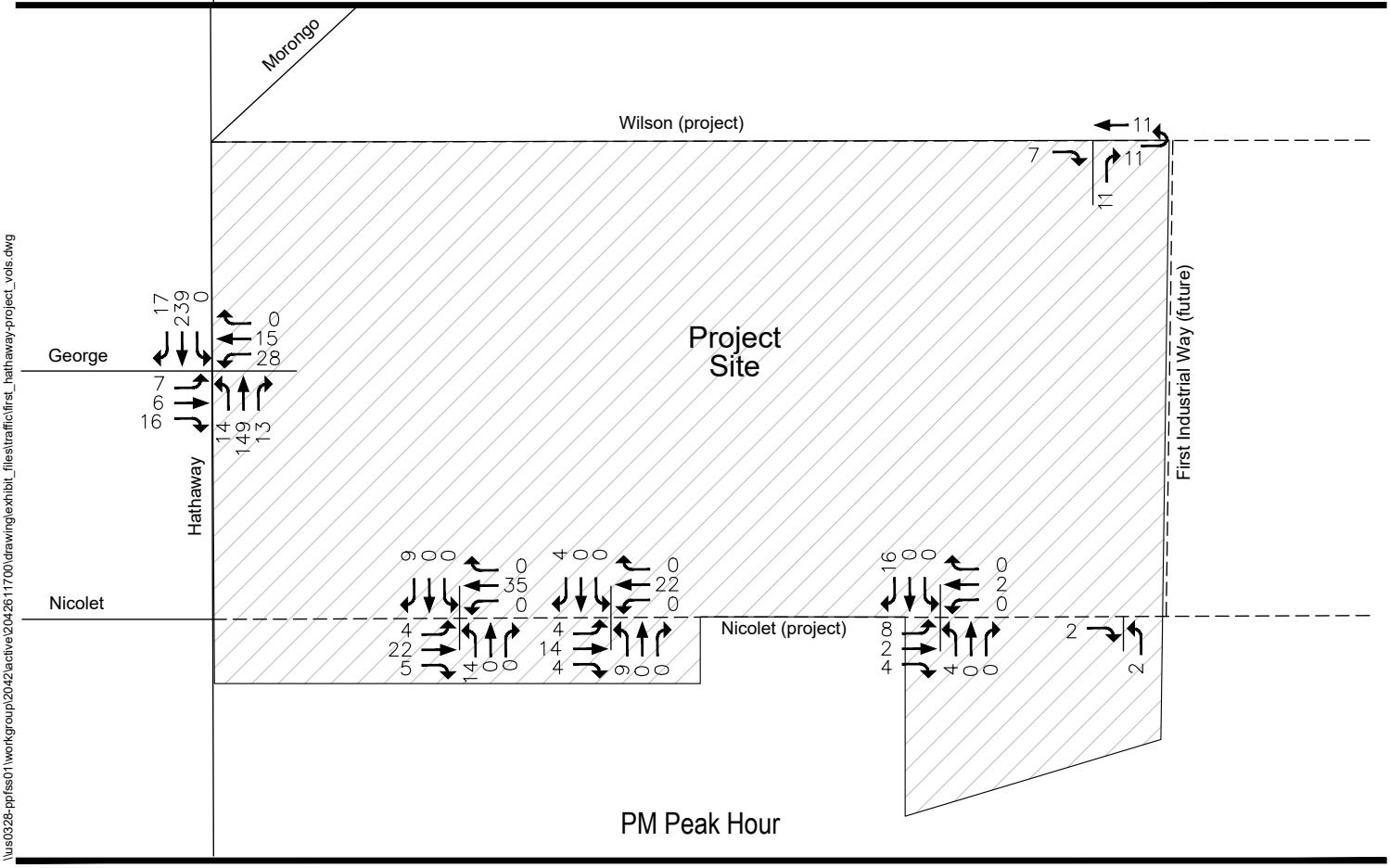


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Figure 8-2
Project Peak Hour Driveway Trips - Total PCE

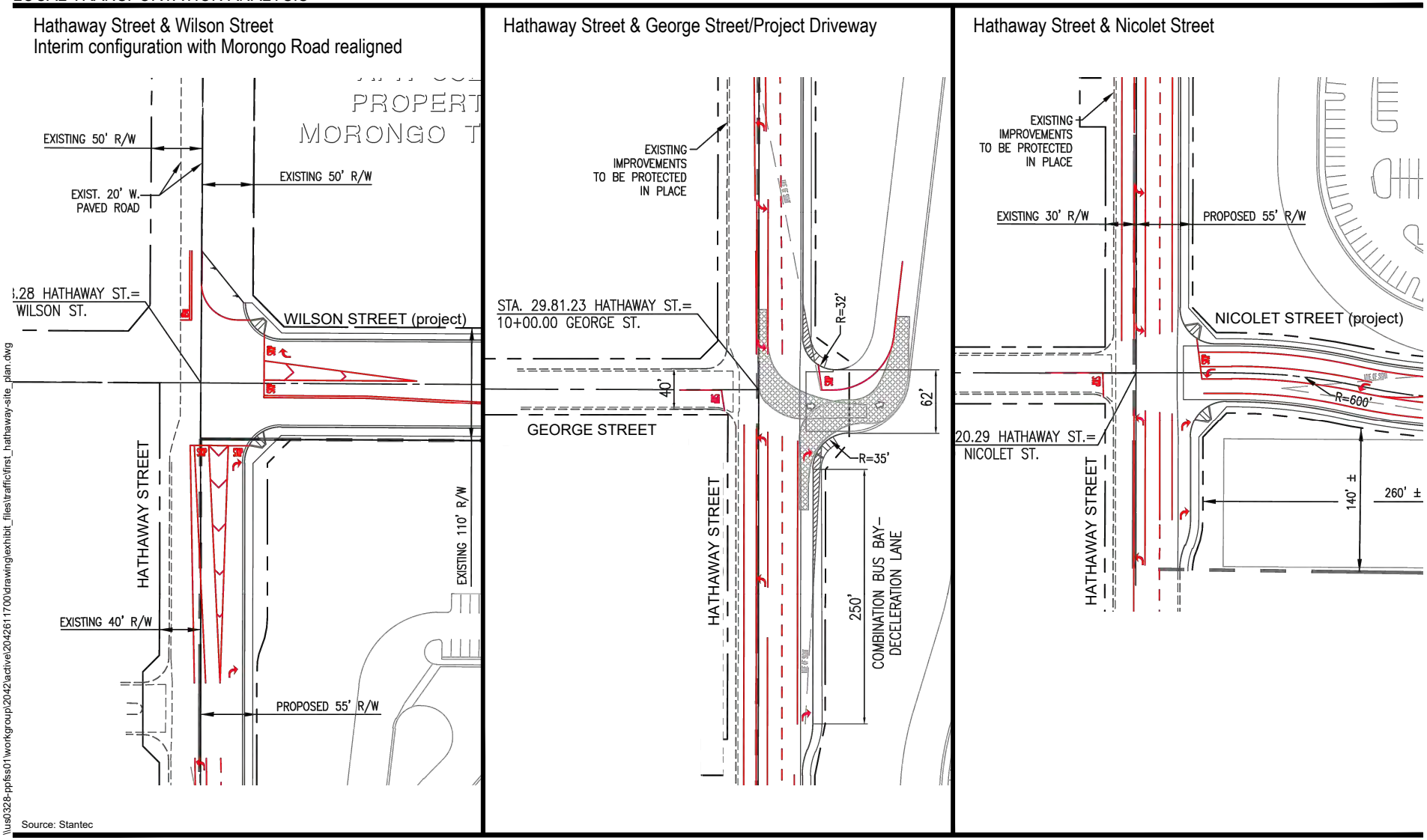

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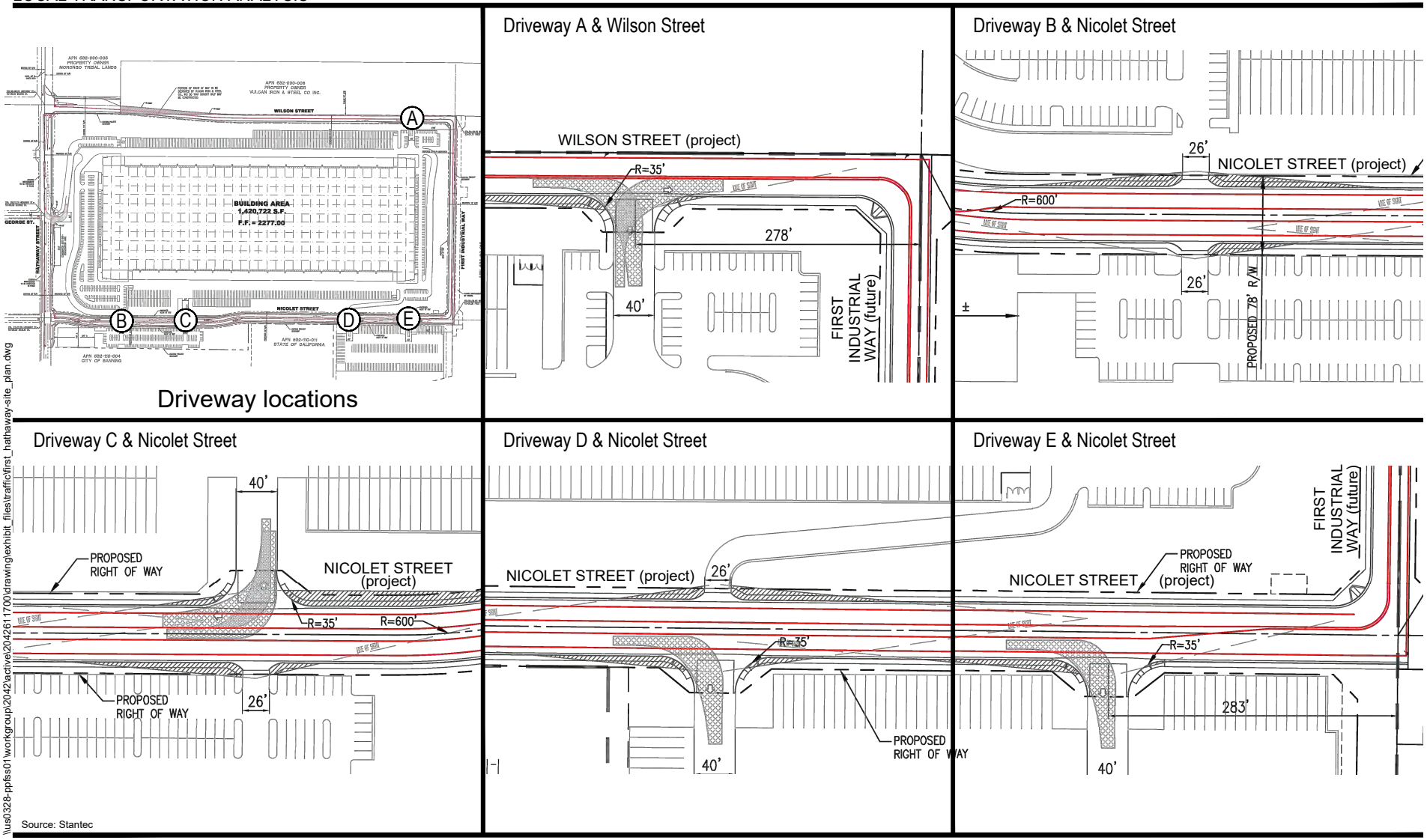
Figure 8-3
Adjacent Intersection Striping Details



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Source: Stantec

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Figure 8-4

Proposed Project Driveway Striping Details

The westerly Project driveway on the north side of Nicolet Street connects to a circulation aisle which leads to the main parking lot and the gated warehouse area. The middle Project driveway on the north side of Nicolet Street has a throat length of approximately 130 feet. This driveway into the warehouse area is gated. The estimated number of trucks arriving at this driveway during the peak hour is approximately three trucks. The average arrival rate is one truck every 20 minutes. During the peak 5 minutes of the peak hour the expected rate is one truck per 10 minutes, and the expected queue is one truck which can be accommodated within the 130-foot throat. The easterly Project driveway on the north side of Nicolet Street has a throat length of approximately 350 feet which leads to parking lots and the gated warehouse area. This driveway length is sufficient to accommodate inbound truck and passenger vehicles.

The two driveways into the parking lot on the south side of Nicolet Street have a throat length of approximately 30 feet. The two driveways into the truck trailer parking on the south side of Nicolet Street have a throat length of approximately 70 feet. These driveways are gated and the average arrival at either driveway during the peak hour is two trucks, or one truck every 30 minutes. During the peak 5 minutes of the peak hour, the arrival rate at either driveway is estimated to be one truck every 15 minutes, and the expected queue is one vehicle which can be accommodated within the available throat length.

8.3 DRIVEWAY DISTANCE TO INTERSECTIONS

The Project would add a driveway on Hathaway Street opposite George Street to minimize the number of driveways on Hathaway Street.

The Project would extend Nicolet Street east of Hathaway Street, thereby adding a fourth leg to the intersection. The western Project driveway on Nicolet Street would be located approximately 490 feet from the Hathaway Street intersection. The eastern Project driveway on Nicolet Street would be located approximately 283 feet from the future First Industrial Way intersection.

The Project would also construct a segment of Wilson Street east of Hathaway Street in the location where Morongo Road currently intersects with Hathaway Street at a 45-degree angle. The segment of Morongo Road northeast of Hathaway Street would be realigned to intersect Hathaway Street at a right angle opposite Hoffer Street north of Wilson Street. The Project driveway on the extension of Wilson Street would be located approximately 278 feet from the future First Industrial Way intersection.

8.4 TRUCK TURNING MOVEMENTS

Truck turning movements at the Project driveways are illustrated in the previously referenced Figures 8-3 and 8-4. These figures show that the driveway widths and curb radii are sufficient to accommodate the large trucks that are anticipated to enter and exit the site.

8.5 RIGHT-TURN LANES AT DRIVEWAYS

The peak hour northbound right turn PCE volume at the Project driveway at George Street is estimated to be 27 vehicles during the AM peak hour and 13 vehicles during the PM peak hour. A combination bus turnout/right-turn lane would be constructed on the northbound approach to the Project driveway opposite George Street.

At the Project driveway on Wilson Street, passenger vehicles as well as trucks are expected to enter the site from eastbound Wilson Street. The eastbound right-turn PCE volume is estimated to be 15 vehicles during the AM peak hour and 7 vehicles during the PM peak hour. Of these Project trips, 6 are truck PCE trips (2 trucks) during the AM peak hour and 3 are truck PCE trips (1 truck) during the PM peak hour. These volumes are less than the City's threshold (i.e., 50 peak hour vehicles) for installation of a right-turn pocket and do not warrant a separate right-turn lane.

The remaining Project driveways are located along Nicolet Street which is a Collector Street, and the Project's right-turn volumes are much lower than 50 peak hour vehicles; therefore, right turn pockets at the Project driveways along Nicolet Street are not warranted.

8.6 ADEQUACY OF PEDESTRIAN FACILITIES

The Project would improve the east side of Hathaway Street along the Project frontage to its ultimate width, and would construct curb, gutter, and sidewalk facilities consistent with the street's General Plan designation.

8.7 BICYCLE ACCESSIBILITY

There currently are no bike facilities along Hathaway Street in the Project vicinity. The Project would improve the east side of Hathaway Street along the Project frontage to its ultimate width, which would provide adequate space for Class II bike lanes on Hathaway Street. From Hathaway Street, bicyclists would have access to future bike facilities on Ramsey Street and other local streets in the area.

8.8 TRANSIT ACCESSIBILITY

Banning Connect Transit System bus Routes 5 and 5/6 travel along Hathaway Street along the Project frontage between George Street and Nicolet Street. These bus routes provide service to areas west and south of the Project site as well as connections to Routes 1 and 6 south of the site. The Project site provides convenient and direct access for transit users. A combination bus turnout/right-turn lane would be constructed on the northbound approach to the Project driveway opposite George Street.

9.0 SAFETY AND OPERATION IMPROVEMENT ANALYSIS

Adverse effects on peak hour study intersection delay were identified under Opening Year and Cumulative Conditions. This chapter identifies potential improvements to provide acceptable level of service at the affected intersections.

9.1 OPENING YEAR CONDITIONS

The proposed Project would have an adverse effect on the following intersection under Opening Year conditions:

6. Hargrave Street and I-10 Eastbound

The intersection is controlled by a stop sign on the eastbound leg and would operate at an unacceptable LOS F during the AM peak hour and an unacceptable LOS E during the PM peak hour without the Project. The Project adds to the deficient condition during the AM and PM peak hours.

A potential improvement that would result in the intersection of Hargrave Street and I-10 Eastbound operating at an acceptable LOS during the peak hours was identified by the cumulative Banning Industrial Center project and consists of installation of all-way stop control. Another potential improvement consists of installation of a roundabout. Since this location is part of the State highway system, Caltrans will make the final determination regarding the type of improvement(s) to implement.

Installation of an all-way stop at the intersection would result in LOS C during the AM peak hour and LOS B during the PM peak hour. Installation of a roundabout would result in LOS A during the AM and PM peak hours. **Table 9-1** summarizes the delay and LOS for the intersection under Opening Year conditions with the potential improvement alternatives.

Table 9-1 Opening Year Conditions with Potential Improvements

Intersection	Opening Year Plus Project			
	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
6. Hargrave & I-10 Eastbound				
Existing Two-Way Stop Control[1]	179.6 sec	F	48.9 sec	E
Improvement Option 1 – All-Way Stop Control	18.0 sec	C	12.9 sec	B
Improvement Option 2 – Roundabout	9.4 sec	A	7.6 sec	A

Notes:
[1] Delay incurred by the side street traffic controlled by a stop sign

LOS = Level of service
sec = seconds of delay per vehicle

9.2 CUMULATIVE CONDITIONS

The proposed Project would have an adverse effect on the following stop-controlled intersections under Cumulative Conditions:

5. Hargrave Street and I-10 Westbound
6. Hargrave Street and I-10 Eastbound

The intersection of Hargrave Street and I-10 Westbound would operate at an unacceptable LOS F during the AM peak hour and LOS E during the PM peak hour without the Project, and the Project adds to the deficient condition. A potential improvement that would result in an acceptable LOS during the peak hours consists of installation of a traffic signal. The intersection satisfies the Peak Hour Signal Warrant under Without Project and Plus Project conditions. An alternative potential improvement that would result in acceptable LOS consists of installation of a roundabout.

The intersection of Hargrave Street and I-10 Eastbound would operate at an unacceptable LOS F during the AM peak hour and PM peak hour without the Project. The Project would add to the deficient condition during the peak hours. A potential improvement that would result in an acceptable LOS during the peak hours consists of installation of a traffic signal. The intersection satisfies the Peak Hour Signal Warrant under Without Project and Plus Project conditions. Another potential improvement that would result in acceptable LOS consists of installation of a roundabout. Since these locations are part of the State highway system, Caltrans will make the final determination regarding the type of improvement(s) to implement.

Table 9-2 summarizes the delay and LOS for the intersections under Cumulative Conditions with the potential improvement alternatives.

Table 9-2 Cumulative Conditions with Potential Improvements

Intersection	Cumulative Conditions Plus Project			
	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
5. Hargrave & I-10 Westbound				
Existing Two-Way Stop Control[1]	81.1 sec	F	61.4 sec	F
Improvement Option 3 – Traffic Signal	6.8 sec	A	6.7 sec	A
Improvement Option 2 – Roundabout	15.5 sec	C	18.4 sec	C
6. Hargrave & I-10 Eastbound				
Existing Two-Way Stop Control[1]	568.0 sec	F	235.3 sec	F
Improvement Option 3 – Traffic Signal	28.2 sec	C	23.3 sec	C
Improvement Option 2 – Roundabout	16.5 sec	C	10.3 sec	B

Notes:
[1] Delay incurred by the side street traffic controlled by a stop sign

LOS = Level of service
sec = seconds of delay per vehicle

10.0 CEQA ASSESSMENT – ACTIVE TRANSPORTATION AND PUBLIC TRANSIT ANALYSIS

This chapter discusses the Project's potential California Environmental Quality Act (CEQA) impacts on active transportation and public transit facilities. A detailed CEQA-level vehicle miles traveled (VMT) assessment is provided as a separate report consistent with the City's TIA guidelines.

The Project is located on the east side of Hathaway Street between Nicolet Street and the future extension of Wilson Street. Currently, Hathaway Street lacks pedestrian and bicycle facilities, and bus Routes 5 and 5/6 provide service to Hathaway Street along the Project frontage.

From the City's TIA guidelines:

- A significant impact will occur if the project conflicts with any adopted policies, plans, or programs related to pedestrian, bicycle, or transit facilities, or otherwise decreases the performance or safety of such facilities.[1]

The roadway on the east side of Hathaway Street would be improved to its ultimate width along the Project frontage consistent with the General Plan designation for the street in compliance with the policies of the Circulation Element. The Project would improve Hathaway Street along the Project frontage to provide sidewalks consistent with Policy 10 and Class II bike lanes consistent with Policy 25 of the Circulation Element of the General Plan.

The Project does not conflict with any of the adopted pedestrian, bicycle, or transit policies, plans, or programs.

[1] *Traffic Impact Analysis Guidelines for Local Transportation Analysis and Vehicle Miles Traveled Analysis.* Section 3.9. September 2021

11.0 IMPROVEMENTS AND RECOMMENDATIONS

Adverse Project effects were identified at one study intersection under Opening Year conditions and at two intersections under Cumulative Conditions.

Recommended improvements to address the intersection deficiencies are discussed in the following sections. It is also recommended that Project trucks be prohibited from using George Street or Nicolet Street.

11.1 PROPOSED IMPROVEMENTS AT INTERSECTIONS

The Project contributes to deficient conditions under Opening Year conditions on the intersection of Hargrave Street and I-10 Eastbound, which would operate at LOS F during the AM peak hour and LOS E during the PM peak hour. The recommended improvement that would result in the intersection of Hargrave Street and I-10 Eastbound operating at an acceptable LOS during the peak hours consists of installation of all-way stop control. Another potential improvement consists of installation of a roundabout.

Under Cumulative Conditions, the Project contributes to deficient conditions at the intersections of Hargrave Street at I-10 Westbound and Hargrave Street at I-10 Eastbound. The proposed improvements consist of installation of a traffic signal at each location. Both intersections satisfy the Peak Hour Traffic Signal Warrant under Cumulative Conditions. The Project would participate in the cost of the traffic signal improvements at Hargrave Street at I-10 Westbound and Hargrave Street at I-10 Eastbound on a fair-share basis.

Since these locations are part of the State highway system, Caltrans will make the final determination regarding the type of improvement(s) to implement.

Proposed Improvements at Surrounding Intersections

The Project will widen the east side of Hathaway Street along the Project frontage and will extend Wilson Street and Nicolet Street between Hathaway Street and the future First Industrial Way.

At the intersection of Hathaway Street and Morongo Road/Wilson Street, which is currently a T-intersection, the Project would construct the south half of Wilson Street adjacent to the Project site as a fourth leg of the intersection. With the development of the future Morongo Health Clinic cumulative project, the Morongo Way leg, which currently intersects Hathaway Street at a 45-degree angle, would be realigned to intersection Hathaway Street opposite Hoffer Street north of its current location. At that time, the intersection of Hathaway Street and Wilson Street would become a T-intersection. Under near-term conditions, the intersection of Hathaway Street and Wilson Street would be striped with one northbound through lane and one northbound right-turn lane, and the westbound approach would be striped with one left-/right-turn lane. The intersection would be controlled by a stop sign in each direction under near-term conditions.

The Project would add a fourth leg to the Hathaway Street and George Street intersection. The northbound approach would be striped with one left-turn lane, two through lanes, and a bus turnout/right-turn lane. The westbound approach would be striped with one shared left-turn/through/right-turn lane. The intersection would be controlled by stop signs on the George Street/Project driveway approaches under near-term conditions.

The Project would add a fourth leg to the Hathaway Street and Nicolet Street intersection. The northbound approach would be striped with one left-turn lane and two through lanes. The westbound approach would be striped with one left-turn lane and one through/right-turn lane. The intersection would be controlled by stop signs on the Nicolet Street approaches under near-term conditions.

11.2 PROPOSED IMPROVEMENTS AT ROADWAY SEGMENTS

The east side of Hathaway Street will be widened to its ultimate width of 55 feet along the Project frontage. Two northbound through lanes and an eight-foot shoulder/bike lane will be striped between Nicolet Street and Wilson Street, and northbound left-turn pockets will be striped at Wilson Street, George Street, and Nicolet Street. A painted median will be striped under near-term conditions until the west side of the roadway is widened to its ultimate width, at which time a raised median will be installed consistent with the Banning General Plan.

Nicolet Street will be extended east of Hathaway Street and constructed to full-width improvements with a 78-foot right-of-way dedication to the future First Industrial Way. The roadway will be striped with one through lane and a 10-foot shoulder/bike lane in each direction with a 12-foot painted median.

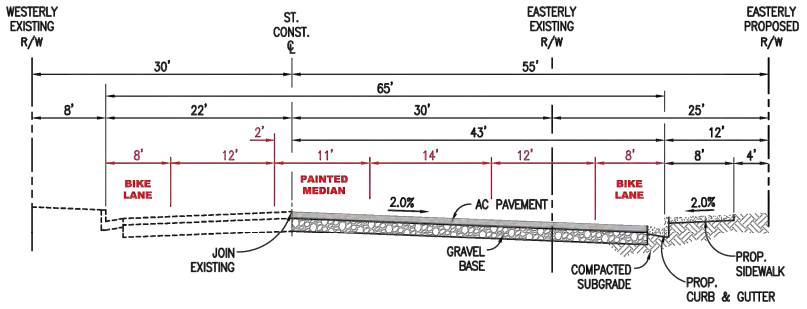
The south side of the Wilson Street extension east of Hathaway Street will be constructed and dedicated with a 55-foot right-of-way along the northern Project frontage between Hathaway Street and the future First Industrial Way. Under near-term conditions, the roadway will be striped with one lane in each direction.

The Project will construct road improvements and dedicate 39 feet of right-of-way for the west side of First Industrial Way along the east frontage of the Project site.

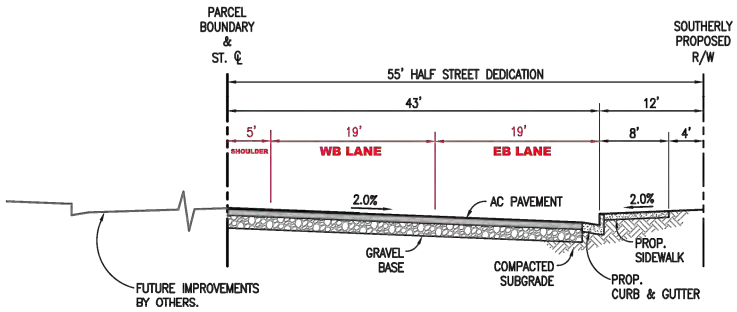
Figure 11- 1 shows the proposed roadway cross-sections for Hathaway Street, Wilson Street, Nicolet Street, and First Industrial Way.

11.3 RECOMMENDED IMPROVEMENTS IN FEE PROGRAMS

The Project would be responsible for paying its WRCOG Transportation Uniform Mitigation Fee (TUMF) and the City's Development Impact Fee (DIF).

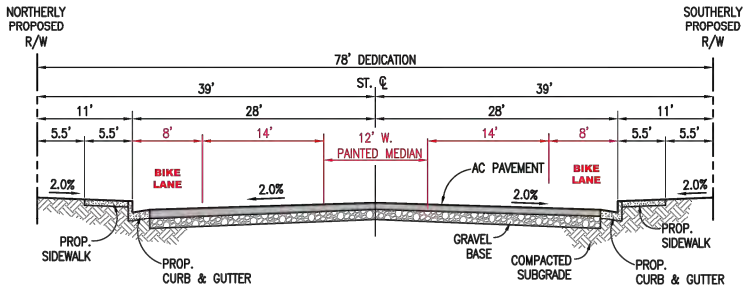


HATHAWAY STREET
SOUTH OF GEORGE ST.
ARTERIAL HIGHWAY
CITY STD. NO. ST-101.1

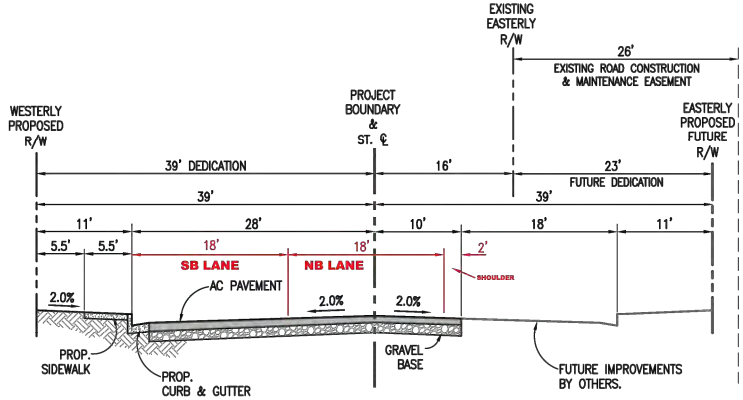


WILSON STREET
ARTERIAL HIGHWAY
CITY STD. NO. ST-101.1

NOTE: WILSON DEDICATION VARIES NEAR HATHAWAY DUE TO HORIZONTAL REALIGNMENT, STA. 14+91 TO STA. 23+02.



NICOLET STREET
DIVIDED COLLECTOR
CITY STD. NO. ST-100



FIRST INDUSTRIAL WAY
DIVIDED COLLECTOR
CITY STD. NO. ST-100

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Figure 11-1
Proposed Roadway Cross-Sections

Effective January 1, 2022, the WRCOG TUMF is $1.86 per square foot (SF) for industrial projects[2]. The calculation for the square footage used in the TUMF calculation for High-Cube Warehouse/Distribution Center[3] is summarized below:

((Project Square Footage – 200,000) x 0.36) + 200,000

Therefore, the TUMF obligation for the Project is calculated as:

((1,420,722 SF – 200,000) x 0.36) + 200,000 = 639,460 SF x $1.86/SF = $1,189,396

The Traffic Component of the City of Banning DIF is based on a rate per 1,000 square feet (TSF) for land use categories listed in Table F of the 2019 Traffic Component Update[4] or on a rate of $653.33 per daily trip for land use categories that are not listed in the table. The proposed Project is a warehouse use that is not listed in Table F; therefore, the Traffic Component DIF is calculated as follows:

2,615 daily PCE trips x $653.33 = $1,708,458

11.4 FAIR SHARE CALCULATIONS

The Project is contributing to otherwise deficient conditions at the Hargrave Street and I-10 ramp intersections. Since widening and signal improvements at the Hargrave Street and I-10 ramp intersections are included in the Traffic Component of the City's DIF, the Project is not responsible for additional fair share costs beyond its DIF payment.

11.4.1 Buildout Traffic Signal Improvements Fair Share Calculation

The study intersections along Hathaway Street are identified as future signalized intersections based on the Banning General Plan Exhibit III-7. The Project shall be responsible for its fair share contribution toward the future buildout traffic signal improvements at the intersections at Wilson Street, George Street, Nicolet Street, and Williams Street along Hathaway Street. Based on Hathaway Street's classification as a Major Highway on the City's General Plan Street System, the LOS C roadway capacity of Hathaway Street will be 30,400 ADT. The Project would generate 2,615 PCE daily trips, which represents an 8.6 percent share of the future volume along Hathaway Street.

2,615 ADT / 30,400 ADT = 8.6%

[2] WRCOG TUMF "Administration & Fees". Accessed April 2022. https://wrcog.us/199/Administration-Fees
[3] WRCOG. 2019. *Transportation Uniform Mitigation Fee – Fee Calculation Handbook.* Worksheet A.2.8.
[4] City of Banning. 2019. *Update of Traffic Fee Component of the Development Fee Program*.

Appendix A COUNT DATA

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, July 22, 2021
JOB #: SC

CITY: Banning
LOCATION: CLASS3 Hathaway south of Morongo

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:15	0	2	2	0	0	0	0	0	0	0	0	0	0	4
0:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
0:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:30	0	1	0	0	1	0	0	0	0	0	0	0	0	2
4:45	0	1	6	0	0	0	0	0	0	0	0	0	0	7
5:00	0	1	3	0	0	0	0	0	0	0	1	0	0	5
5:15	0	5	3	0	1	0	0	0	0	0	3	0	0	12
5:30	1	8	9	0	0	0	0	0	0	0	2	0	0	20
5:45	0	12	13	0	0	0	0	0	0	0	1	0	0	26
6:00	0	3	0	0	0	0	0	0	0	0	2	0	1	6
6:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
6:30	0	2	1	0	0	0	0	0	0	0	3	0	0	6
6:45	0	2	3	0	0	0	0	0	0	0	1	0	0	6
7:00	0	8	3	0	0	0	0	0	0	0	2	0	0	13
7:15	0	6	4	0	0	0	0	0	0	0	2	0	0	12
7:30	1	10	3	0	0	0	0	0	0	0	5	0	0	19
7:45	0	25	4	0	1	0	0	0	0	0	3	0	0	33
8:00	0	9	2	0	0	0	0	0	0	0	4	0	0	15
8:15	0	3	3	0	0	1	0	0	0	0	2	0	0	9
8:30	0	7	3	0	0	0	0	0	0	0	1	0	0	11
8:45	0	9	5	0	0	0	0	0	0	0	2	0	0	16
9:00	0	5	4	0	1	1	0	0	0	0	3	0	0	14
9:15	0	8	4	0	0	0	0	0	0	0	2	0	0	14
9:30	0	2	4	0	0	0	0	0	0	0	3	0	0	9
9:45	0	8	4	0	0	2	0	0	0	0	3	0	0	17
10:00	0	5	4	0	0	0	0	0	0	0	1	0	0	10
10:15	0	8	3	0	0	0	0	0	0	0	4	0	0	15
10:30	0	12	5	0	0	2	0	0	0	0	6	0	0	25
10:45	0	13	4	0	0	1	0	0	0	0	1	0	0	19
11:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
11:15	0	6	7	0	1	4	0	0	0	0	5	0	0	23
11:30	0	6	6	0	1	3	0	0	0	0	6	0	0	22
11:45	0	9	3	0	0	2	0	0	0	0	2	0	0	16
TOTAL	2	235	117	0	6	16	0	0	0	0	70	0	1	447

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	79

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	9	1	0	1	1	0	0	0	0	3	0	0	15
12:15	0	11	3	0	1	1	0	0	0	0	2	0	0	18
12:30	0	16	2	0	0	1	0	0	0	0	2	0	0	21
12:45	0	17	1	1	0	5	0	0	2	0	6	0	0	32
13:00	0	12	5	0	0	1	0	0	0	0	3	0	0	21
13:15	0	13	3	0	0	2	0	0	0	0	1	0	0	19
13:30	0	12	6	0	1	1	0	0	0	0	6	0	0	26
13:45	0	5	5	0	0	1	0	0	0	0	5	0	0	16
14:00	0	13	3	0	0	3	0	0	0	0	2	0	0	21
14:15	0	12	2	0	0	1	0	0	0	0	2	0	0	17
14:30	1	8	6	0	0	1	0	0	0	0	1	0	0	17
14:45	0	9	3	0	0	1	0	0	0	0	1	0	0	14
15:00	0	13	2	0	0	2	0	0	0	0	0	0	0	17
15:15	0	11	2	0	0	1	0	0	1	0	2	0	0	17
15:30	0	11	6	0	1	0	0	0	0	0	2	0	0	20
15:45	0	12	6	0	1	0	0	0	1	0	0	0	0	20
16:00	0	7	2	0	1	0	0	0	0	0	5	0	0	15
16:15	0	17	4	0	0	0	0	0	0	0	1	0	0	22
16:30	0	8	1	0	0	0	0	0	0	0	1	0	0	10
16:45	0	9	1	0	0	0	0	0	0	0	1	0	0	11
17:00	0	14	3	0	0	0	0	0	0	0	3	0	0	20
17:15	1	14	4	0	0	0	0	0	0	0	4	0	0	23
17:30	0	8	3	0	1	0	0	0	0	0	1	0	0	13
17:45	0	18	2	0	0	0	0	0	0	0	5	0	0	25
18:00	0	18	0	0	0	0	0	0	0	0	0	0	0	18
18:15	0	12	2	0	0	0	0	0	0	0	0	0	0	14
18:30	1	5	1	0	0	0	0	0	0	0	2	0	0	9
18:45	0	8	4	0	1	0	0	0	0	0	3	0	0	16
19:00	0	9	3	0	0	0	0	0	0	0	3	0	0	15
19:15	0	7	2	0	0	0	0	0	0	0	0	0	0	9
19:30	0	8	2	0	0	0	0	0	0	0	2	0	0	12
19:45	0	5	1	0	0	0	0	0	0	0	2	0	0	8
20:00	0	10	3	0	0	0	0	0	0	0	1	0	0	14
20:15	0	14	2	0	0	0	0	0	0	0	4	0	0	20
20:30	0	10	1	0	0	0	0	0	1	0	3	0	0	15
20:45	1	6	2	0	0	0	0	0	0	0	2	0	0	11
21:00	0	3	2	0	0	0	0	0	0	0	2	0	0	7
21:15	0	8	2	0	0	0	0	0	0	0	2	0	0	12
21:30	0	9	1	0	0	0	0	0	0	0	1	0	0	11
21:45	0	5	1	0	0	0	0	0	0	0	1	0	0	7
22:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8
22:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
22:30	0	9	3	0	0	0	0	0	0	0	0	0	0	12
22:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
23:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
23:15	0	0	2	0	0	0	0	0	0	0	0	0	0	2
23:30	0	1	1	0	0	0	0	0	0	0	0	0	0	2
23:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
TOTAL	4	452	114	1	8	22	0	0	5	0	87	0	0	693

PM PEAK HOUR	12:45 PM
PM PEAK VOLUME	98

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	6	687	231	1	14	38	0	0	5	0	157	0	1	1,140
% OF TOTAL	0.5%	60.3%	20.3%	0.1%	1.2%	3.3%	0.0%	0.0%	0.4%	0.0%	13.8%	0.0%	0.1%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	9	1,405	457	3	33	75	0	0	9	0	313	0	1	2,305
% OF TOTAL	0.8%	123.2%	40.1%	0.3%	2.9%	6.6%	0.0%	0.0%	0.8%	0.0%	27.5%	0.0%	0.1%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, July 22, 2021
JOB #: SC

CITY: Banning
LOCATION: CLASS3 Hathaway south of Morongo

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
0:15	0	10	0	0	0	0	0	0	0	0	0	0	0	10
0:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
0:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:15	0	4	0	0	0	0	0	0	1	0	0	0	0	5
4:30	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15	0	1	0	0	0	0	0	0	0	0	2	0	0	3
5:30	0	5	1	0	0	0	0	0	0	0	2	0	0	8
5:45	0	3	0	0	0	0	0	0	0	0	2	0	0	5
6:00	0	5	2	0	0	0	0	0	0	0	1	0	0	8
6:15	0	2	4	0	0	0	0	0	0	0	1	0	0	7
6:30	0	2	1	0	1	0	0	0	0	0	1	0	0	5
6:45	1	2	2	0	0	0	0	0	0	0	2	0	0	7
7:00	0	3	3	0	0	1	0	0	0	0	2	0	0	9
7:15	0	7	4	0	0	0	0	0	0	0	3	0	0	14
7:30	0	3	4	0	0	0	0	0	0	0	0	0	0	7
7:45	0	4	3	0	1	0	0	0	0	0	5	0	0	13
8:00	0	5	3	0	0	1	0	0	0	0	3	0	0	12
8:15	0	5	1	0	1	0	0	0	1	0	4	0	0	12
8:30	0	3	4	0	0	0	0	0	0	0	1	0	0	8
8:45	0	10	1	0	0	0	0	0	0	0	2	0	0	13
9:00	0	5	7	0	1	0	0	0	0	0	4	0	0	17
9:15	0	3	1	0	0	0	0	0	0	0	3	0	0	7
9:30	0	7	2	0	1	0	0	0	0	0	0	0	0	10
9:45	1	12	5	0	0	1	0	0	0	0	5	0	0	24
10:00	0	9	1	0	0	0	0	0	0	0	1	0	0	11
10:15	0	10	4	0	1	2	0	0	0	0	2	0	0	19
10:30	0	6	1	0	0	0	0	0	0	0	5	0	0	12
10:45	0	4	1	0	0	0	0	0	0	0	4	0	0	9
11:00	0	4	6	0	0	1	0	0	0	0	2	0	0	13
11:15	0	10	5	0	1	0	0	0	0	0	1	0	0	17
11:30	0	7	6	0	0	2	0	0	0	0	7	0	0	22
11:45	0	10	1	0	0	2	0	0	0	0	3	0	0	16
TOTAL	2	191	77	0	7	10	0	0	2	0	68	0	0	357

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	68

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	11	2	1	0	2	0	0	0	0	2	0	0	18
12:15	0	13	2	1	0	2	0	0	0	0	3	0	0	21
12:30	0	13	4	0	2	2	0	0	0	0	3	0	0	24
12:45	0	14	2	0	0	1	0	0	0	0	2	0	0	19
13:00	0	6	2	0	1	2	0	0	0	0	5	0	0	16
13:15	0	11	5	0	1	2	0	0	2	0	4	0	0	25
13:30	0	5	4	0	0	2	0	0	0	0	1	0	0	12
13:45	0	11	0	0	2	3	0	0	0	0	6	0	0	22
14:00	0	9	3	0	0	2	0	0	0	0	4	0	0	18
14:15	0	10	2	0	1	1	0	0	0	0	2	0	0	16
14:30	1	15	4	0	0	0	0	0	0	0	2	0	0	22
14:45	0	12	5	0	1	3	0	0	0	0	1	0	0	22
15:00	0	10	6	0	0	1	0	0	0	0	0	0	0	17
15:15	0	11	11	0	1	1	0	0	0	0	3	0	0	27
15:30	0	10	2	0	0	1	0	0	0	0	0	0	0	13
15:45	0	8	3	0	1	0	0	0	0	0	2	0	0	14
16:00	0	7	8	0	0	1	0	0	0	0	2	0	0	18
16:15	0	10	7	0	0	0	0	0	0	0	1	0	0	18
16:30	0	16	6	0	1	1	0	0	0	0	3	0	0	27
16:45	0	7	3	0	0	0	0	0	0	0	2	0	0	12
17:00	0	16	6	0	0	0	0	0	0	0	1	0	0	23
17:15	0	20	3	0	0	0	0	0	0	0	3	0	0	26
17:30	0	6	2	0	0	0	0	0	0	0	3	0	0	11
17:45	0	9	4	0	0	0	0	0	0	0	1	0	0	14
18:00	0	10	1	0	0	0	0	0	0	0	3	0	0	14
18:15	0	9	2	0	0	0	0	0	0	0	1	0	0	12
18:30	0	9	5	0	0	0	0	0	0	0	1	0	0	15
18:45	0	10	1	0	0	0	0	0	0	0	1	0	0	12
19:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
19:15	0	5	4	0	0	0	0	0	0	0	5	0	0	14
19:30	0	1	4	0	0	0	0	0	0	0	1	0	0	6
19:45	0	7	3	0	1	0	0	0	0	0	2	0	0	13
20:00	0	6	1	0	0	0	0	0	0	0	2	0	0	9
20:15	0	7	1	0	0	0	0	0	0	0	0	0	0	8
20:30	0	7	4	0	0	0	0	0	0	0	3	0	0	14
20:45	0	11	1	0	0	0	0	0	0	0	2	0	0	14
21:00	0	4	0	0	0	0	0	0	0	0	3	0	0	7
21:15	0	7	2	0	0	0	0	0	0	0	3	0	0	12
21:30	0	21	1	0	0	0	0	0	0	0	2	0	0	24
21:45	0	17	4	0	0	0	0	0	0	0	1	0	0	22
22:00	0	17	3	0	0	0	0	0	0	0	2	0	0	22
22:15	0	27	4	0	0	0	0	0	0	0	0	0	0	31
22:30	0	16	2	0	0	0	0	0	0	0	0	0	0	18
22:45	0	9	2	0	0	0	0	0	0	0	0	0	0	11
23:00	0	16	4	0	0	0	0	0	0	0	0	0	0	20
23:15	0	23	0	0	0	0	0	0	0	0	0	0	0	23
23:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10
23:45	0	10	1	0	0	0	0	0	0	0	0	0	0	11
TOTAL	1	527	149	2	12	27	0	0	2	0	88	0	0	808

PM PEAK HOUR	9:30 PM
PM PEAK VOLUME	99

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	3	718	226	2	19	37	0	0	4	0	156	0	0	1,165
% OF TOTAL	0.3%	61.6%	19.4%	0.2%	1.6%	3.2%	0.0%	0.0%	0.3%	0.0%	13.4%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, July 22, 2021
JOB #: SC

CITY: Banning
LOCATION: CLASS5 Hargrave south of Ramsey

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	17	0	0	0	0	0	0	0	0	0	0	0	17
0:15	0	12	2	0	0	0	0	0	0	0	0	0	0	14
0:30	0	16	0	0	0	0	0	0	0	0	0	0	0	16
0:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
1:15	0	9	1	0	0	0	0	0	0	0	0	0	0	10
1:30	0	11	1	0	0	0	0	0	0	0	0	0	0	12
1:45	0	8	3	0	0	0	0	0	0	0	0	0	0	11
2:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
2:15	0	8	1	0	0	0	0	1	0	0	0	0	0	10
2:30	0	11	2	0	0	0	0	0	0	0	0	0	0	13
2:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
3:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:30	0	10	0	0	0	0	0	0	0	0	0	0	0	10
3:45	0	5	1	0	0	1	0	0	0	0	0	0	0	7
4:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3
4:15	0	3	4	0	0	0	0	0	0	0	0	0	0	7
4:30	0	4	4	0	0	0	0	0	0	0	0	0	0	8
4:45	0	11	5	1	0	0	0	0	0	0	0	0	0	17
5:00	0	10	6	0	0	0	0	0	0	0	1	0	0	17
5:15	0	8	1	0	2	0	0	0	0	0	3	0	0	14
5:30	1	17	11	0	2	1	0	0	2	0	2	0	0	36
5:45	0	12	11	0	2	1	0	0	1	0	1	0	0	28
6:00	0	11	2	1	1	2	0	0	0	0	1	0	0	18
6:15	0	16	4	0	0	3	0	0	0	0	0	0	0	23
6:30	0	12	2	0	0	1	0	1	0	0	3	0	0	19
6:45	0	15	11	0	1	0	0	0	0	0	1	0	0	28
7:00	0	23	8	0	0	0	0	0	0	0	3	0	0	34
7:15	0	36	15	1	0	1	0	0	0	0	2	0	0	55
7:30	0	55	15	0	1	0	0	0	0	0	6	0	0	77
7:45	0	62	13	0	4	2	0	0	0	0	2	0	0	83
8:00	0	52	3	1	1	0	0	0	1	0	3	0	0	61
8:15	0	31	14	0	0	1	0	0	0	0	3	0	0	49
8:30	0	27	19	1	1	0	0	0	1	0	1	0	0	50
8:45	0	37	6	0	1	0	0	0	1	0	1	0	0	46
9:00	0	21	4	0	2	1	0	0	0	0	4	0	0	32
9:15	0	30	10	0	2	0	0	0	0	0	1	0	0	43
9:30	0	29	11	0	2	1	0	0	0	0	4	0	0	47
9:45	0	34	13	1	1	2	0	0	0	0	2	0	0	53
10:00	0	30	12	0	1	0	0	0	0	0	1	0	0	44
10:15	0	33	11	0	1	2	0	0	0	0	5	0	0	52
10:30	0	37	5	0	2	1	0	0	0	0	5	0	0	50
10:45	0	34	5	0	2	0	0	0	0	0	1	0	0	42
11:00	0	41	8	1	3	1	0	0	0	0	1	0	0	55
11:15	0	38	8	0	1	2	0	0	0	0	5	0	0	54
11:30	0	40	13	0	1	1	0	0	0	0	5	0	0	60
11:45	0	39	14	0	2	2	0	0	1	0	2	0	0	60
TOTAL	1	1,001	283	7	37	26	0	2	7	0	69	0	0	1,433

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	276

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	46	12	1	3	2	0	0	0	0	2	0	0	66
12:15	0	37	11	2	1	0	0	0	0	0	2	0	0	53
12:30	0	45	15	1	1	1	0	0	0	0	5	0	0	68
12:45	0	52	9	1	1	3	0	0	0	0	4	0	0	70
13:00	0	40	9	0	2	1	0	0	0	0	3	0	0	55
13:15	0	45	8	0	0	3	0	1	0	0	1	0	0	58
13:30	0	48	12	1	0	1	0	0	0	0	5	0	0	67
13:45	0	35	8	0	1	3	0	0	0	0	6	0	0	53
14:00	0	40	13	0	1	3	0	0	0	0	2	0	0	59
14:15	0	30	13	0	1	2	0	0	0	0	0	0	0	46
14:30	0	41	10	0	0	5	0	0	1	0	2	0	0	59
14:45	0	47	9	0	3	1	0	0	0	0	0	0	0	60
15:00	0	44	9	1	0	4	0	0	0	0	1	0	0	59
15:15	0	37	16	0	0	3	0	0	0	1	0	0	0	57
15:30	0	48	17	0	1	2	0	0	1	0	0	0	0	69
15:45	0	46	17	0	0	2	0	0	0	0	0	0	0	65
16:00	1	44	14	0	0	1	1	0	0	1	2	0	0	64
16:15	0	54	9	1	2	0	1	0	0	0	0	0	0	67
16:30	0	49	5	0	2	0	1	0	0	0	2	0	0	59
16:45	0	67	5	0	0	0	2	0	0	0	0	0	0	74
17:00	0	50	7	0	0	0	0	0	0	0	2	0	0	59
17:15	1	52	13	1	2	0	0	0	0	0	1	0	0	70
17:30	0	62	13	0	1	0	0	0	0	0	2	0	0	78
17:45	0	53	12	0	2	0	0	0	0	0	4	0	0	71
18:00	0	58	5	0	0	0	0	0	0	0	0	0	0	63
18:15	2	44	10	0	1	0	0	0	0	0	0	0	0	57
18:30	1	53	10	0	4	0	0	0	0	0	2	0	0	70
18:45	0	39	3	0	0	0	0	0	1	0	3	0	0	46
19:00	0	38	7	0	0	0	0	0	0	0	0	0	0	45
19:15	0	47	7	0	2	0	0	0	0	0	2	0	0	58
19:30	0	38	6	0	0	0	0	0	0	0	1	0	0	45
19:45	0	50	7	0	1	0	0	0	2	0	0	0	0	60
20:00	0	47	5	0	0	0	0	0	2	0	2	0	0	56
20:15	1	38	5	0	1	0	0	1	1	0	1	0	0	48
20:30	0	33	2	0	0	0	0	0	0	0	4	0	0	39
20:45	0	33	9	0	0	0	0	0	0	0	2	0	0	44
21:00	0	37	2	0	0	0	0	0	0	0	2	0	0	41
21:15	0	37	2	0	0	0	0	0	0	0	3	0	0	42
21:30	3	30	6	0	0	1	0	0	0	0	0	0	0	40
21:45	1	37	2	0	0	0	0	0	0	0	1	0	0	41
22:00	0	39	6	0	0	0	0	0	0	0	0	0	0	45
22:15	0	29	1	0	0	0	0	0	0	0	0	0	0	30
22:30	0	26	3	0	0	0	0	1	0	0	0	0	0	30
22:45	0	17	1	0	0	0	0	0	0	0	0	0	0	18
23:00	0	22	2	0	0	0	0	0	1	0	0	0	0	25
23:15	0	14	3	0	2	0	0	0	0	0	0	0	0	19
23:30	0	14	2	0	0	0	0	0	1	0	0	0	0	17
23:45	0	17	1	0	0	0	0	0	0	0	0	0	0	18
TOTAL	10	1,949	373	9	35	38	5	3	10	2	69	0	0	2,503

PM PEAK HOUR	5:15 PM
PM PEAK VOLUME	282

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	11	2,950	656	16	72	64	5	5	17	2	138	0	0	3,936
% OF TOTAL	0.3%	74.9%	16.7%	0.4%	1.8%	1.6%	0.1%	0.1%	0.4%	0.1%	3.5%	0.0%	0.0%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	21	7,250	1,621	49	228	147	14	9	80	2	289	1	0	9,711
% OF TOTAL	0.5%	184.2%	41.2%	1.2%	5.8%	3.7%	0.4%	0.2%	2.0%	0.1%	7.3%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, July 22, 2021
JOB #: SC

CITY: Banning
LOCATION: CLASS5 Hargrave south of Ramsey

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	9	3	0	1	0	0	0	1	0	0	0	0	14
0:15	0	22	2	0	0	0	0	0	0	0	0	0	0	24
0:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10
0:45	0	17	0	0	1	0	0	0	0	0	0	0	0	18
1:00	0	12	1	1	0	0	0	0	1	0	0	0	0	15
1:15	0	10	0	0	0	0	0	0	0	0	0	0	0	10
1:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
1:45	0	8	3	0	0	0	0	0	0	0	0	0	0	11
2:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
2:15	0	13	2	0	0	0	0	0	1	0	0	0	0	16
2:30	0	9	0	0	0	0	0	0	0	0	0	0	0	9
2:45	0	10	0	0	1	0	0	0	0	0	0	0	0	11
3:00	0	8	1	0	1	0	0	1	0	0	0	0	0	11
3:15	0	13	2	0	1	0	0	0	1	0	0	0	0	17
3:30	0	15	1	0	1	0	0	0	3	0	0	0	0	20
3:45	0	12	0	0	1	0	0	0	0	0	0	0	0	13
4:00	0	10	1	0	0	1	0	0	0	0	1	0	0	13
4:15	0	21	4	0	0	0	0	0	3	0	0	0	0	28
4:30	0	18	4	0	0	0	0	0	0	0	0	1	0	23
4:45	1	15	2	0	1	0	0	0	2	0	0	0	0	21
5:00	0	35	7	0	0	0	0	0	0	0	0	0	0	42
5:15	0	39	8	0	1	0	0	0	1	0	1	0	0	50
5:30	0	51	7	0	0	0	0	0	1	0	2	0	0	61
5:45	0	44	12	0	3	0	0	0	2	0	3	0	0	64
6:00	0	37	14	0	2	1	0	1	1	0	0	0	0	56
6:15	0	29	9	1	1	0	0	1	1	0	2	0	0	44
6:30	0	61	14	0	5	9	0	0	1	0	1	0	0	91
6:45	0	49	16	0	1	0	0	0	1	0	2	0	0	69
7:00	0	53	10	1	0	3	0	0	1	0	2	0	0	70
7:15	0	55	18	1	5	1	0	0	1	0	2	0	0	83
7:30	0	70	22	2	3	0	0	0	1	0	1	0	0	99
7:45	0	71	14	1	3	1	0	0	2	0	3	0	0	95
8:00	0	46	15	0	3	2	0	0	2	0	3	0	0	71
8:15	0	41	14	0	2	0	0	0	1	0	6	0	0	64
8:30	0	40	17	0	2	0	0	0	0	0	1	0	0	60
8:45	0	65	13	1	5	1	0	0	1	0	2	0	0	88
9:00	0	46	22	0	2	0	0	0	2	0	3	0	0	75
9:15	0	54	13	0	2	1	0	0	1	0	3	0	0	74
9:30	0	60	4	1	6	1	0	0	2	0	0	0	0	74
9:45	0	54	21	0	3	1	0	0	0	0	4	0	0	83
10:00	0	55	13	1	1	0	0	0	2	0	2	0	0	74
10:15	0	61	16	0	0	1	0	0	1	0	1	0	0	80
10:30	0	57	15	0	1	4	0	0	1	0	5	0	0	83
10:45	0	53	12	1	0	0	0	0	1	0	3	0	0	70
11:00	0	50	15	1	4	1	0	0	3	0	4	0	0	78
11:15	0	53	20	0	5	1	0	0	4	0	1	0	0	84
11:30	0	58	13	0	7	1	0	0	0	0	3	0	0	82
11:45	0	67	13	2	4	2	0	0	0	0	6	0	0	94
TOTAL	1	1,704	415	14	79	32	0	3	46	0	67	1	0	2,362

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	348

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	76	16	0	4	3	0	0	1	0	2	0	0	102
12:15	0	77	18	2	2	2	0	0	0	0	3	0	0	104
12:30	0	90	15	1	2	2	0	0	0	0	3	0	0	113
12:45	0	75	9	0	3	0	0	0	0	0	2	0	0	89
13:00	0	61	21	1	0	1	0	0	1	0	4	0	0	89
13:15	0	50	10	1	5	6	0	0	1	0	5	0	0	78
13:30	0	75	24	1	1	4	0	0	1	0	0	0	0	106
13:45	0	81	14	0	1	2	0	0	0	0	5	0	0	103
14:00	0	56	15	1	3	3	0	0	1	0	5	0	0	84
14:15	0	58	20	0	2	3	0	0	1	0	2	0	0	86
14:30	0	61	16	0	3	5	0	0	0	0	2	0	0	87
14:45	0	57	14	0	4	4	0	0	0	0	1	0	0	80
15:00	0	54	19	1	2	3	0	0	0	0	0	0	0	79
15:15	0	60	19	0	1	3	0	0	0	0	3	0	0	86
15:30	0	70	16	0	2	3	0	0	0	0	0	0	0	91
15:45	0	59	14	0	2	3	0	0	0	0	2	0	0	80
16:00	2	78	22	1	0	0	2	0	1	0	1	0	0	107
16:15	0	57	19	1	1	0	2	0	1	0	2	0	0	83
16:30	0	64	14	0	1	1	2	0	0	0	3	0	0	85
16:45	0	70	11	1	2	0	3	0	0	0	2	0	0	89
17:00	2	100	18	1	2	0	0	0	0	0	0	0	0	123
17:15	0	67	12	0	2	3	0	0	1	0	4	0	0	89
17:30	0	56	18	0	6	0	0	0	0	0	3	0	0	83
17:45	0	54	20	0	2	0	0	0	0	0	1	0	0	77
18:00	0	59	9	0	5	0	0	0	0	0	4	0	0	77
18:15	0	63	11	1	1	0	0	0	0	0	1	0	0	77
18:30	0	70	13	1	3	0	0	0	0	0	1	0	0	88
18:45	0	42	12	1	0	0	0	0	1	0	1	0	0	57
19:00	1	52	11	0	1	0	0	0	0	0	3	0	0	68
19:15	0	52	6	0	0	0	0	0	0	0	0	0	0	58
19:30	0	38	9	0	3	0	0	0	2	0	1	0	0	53
19:45	0	36	11	1	1	0	0	0	0	0	1	0	0	50
20:00	0	44	12	0	2	0	0	0	0	0	1	0	0	59
20:15	1	54	8	0	2	0	0	0	0	0	1	0	0	66
20:30	1	50	8	0	0	0	0	0	1	0	1	0	0	61
20:45	0	50	9	1	0	0	0	0	0	0	0	0	0	60
21:00	0	37	4	0	1	0	0	0	1	0	6	0	0	49
21:15	0	37	5	0	0	0	0	0	0	0	3	0	0	45
21:30	2	43	0	0	2	0	0	0	1	0	1	0	0	49
21:45	0	38	3	1	0	0	0	0	0	0	2	0	0	44
22:00	0	46	5	0	1	0	0	0	0	0	1	0	0	53
22:15	0	42	6	0	2	0	0	0	0	0	1	0	0	51
22:30	0	28	4	0	0	0	0	0	0	0	0	0	0	32
22:45	0	22	2	1	0	0	0	0	0	0	0	0	0	25
23:00	0	17	3	0	0	0	0	1	0	0	0	0	0	21
23:15	0	23	3	0	0	0	0	0	0	0	0	0	0	26
23:30	0	20	1	0	0	0	0	0	1	0	0	0	0	22
23:45	0	27	1	0	0	0	0	0	1	0	0	0	0	29
TOTAL	9	2,596	550	19	77	51	9	1	17	0	84	0	0	3,413

PM PEAK HOUR	12:00 PM
PM PEAK VOLUME	408

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	10	4,300	965	33	156	83	9	4	63	0	151	1	0	5,775
% OF TOTAL	0.2%	74.5%	16.7%	0.6%	2.7%	1.4%	0.2%	0.1%	1.1%	0.0%	2.6%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, July 22, 2021
JOB #: SC

CITY: Banning
LOCATION: CLASS4 Ramsey east of Hargrave

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3	12:00	0	26	7	0	5	1	0	0	0	0	2	0	0	41
0:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4	12:15	0	28	6	1	1	1	0	0	0	0	2	0	0	39
0:30	0	11	0	0	0	0	0	0	0	0	0	0	0	11	12:30	0	35	4	0	3	1	0	0	0	0	5	0	0	48
0:45	0	6	0	0	2	0	0	0	0	0	0	0	0	8	12:45	0	33	7	0	2	3	0	0	0	0	5	0	0	50
1:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6	13:00	0	26	7	1	3	1	0	0	0	0	3	0	0	41
1:15	0	6	2	0	0	0	0	0	0	0	0	0	0	8	13:15	0	35	4	0	1	4	0	1	0	0	1	0	0	46
1:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	13:30	0	42	12	1	2	0	0	0	0	0	5	0	0	62
1:45	0	9	1	0	1	0	0	0	0	0	0	0	0	11	13:45	1	27	7	1	2	2	0	0	0	0	6	0	0	46
2:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6	14:00	0	24	8	0	0	2	0	0	0	0	3	0	0	37
2:15	0	5	0	0	0	0	0	0	1	0	0	0	0	6	14:15	1	26	7	0	0	2	0	0	0	0	0	0	0	36
2:30	0	3	1	0	1	0	0	0	0	0	0	0	0	5	14:30	1	29	12	0	3	3	0	0	0	0	2	0	0	50
2:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4	14:45	1	21	5	0	3	1	0	0	0	0	0	0	0	31
3:00	0	2	0	0	0	0	0	1	0	0	0	0	0	3	15:00	0	23	11	2	1	5	0	0	0	0	1	0	0	43
3:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3	15:15	0	33	8	0	0	4	0	0	1	0	0	0	0	46
3:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6	15:30	1	30	13	0	1	2	0	0	1	0	0	0	0	48
3:45	0	2	2	0	0	0	0	0	0	0	0	0	0	4	15:45	0	35	14	0	2	2	0	0	1	0	0	0	0	54
4:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6	16:00	0	35	7	0	1	3	0	0	0	0	2	0	0	48
4:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3	16:15	0	24	9	1	2	1	0	0	0	0	0	0	0	37
4:30	0	2	3	0	1	0	0	0	0	0	0	0	0	6	16:30	0	32	6	0	2	1	0	0	0	0	2	0	0	43
4:45	1	7	4	0	1	0	0	0	0	0	0	0	0	13	16:45	0	31	8	1	1	2	0	0	0	0	0	0	0	43
5:00	0	6	5	0	0	0	0	0	0	0	1	0	0	12	17:00	0	22	7	0	0	0	0	0	0	0	2	0	0	31
5:15	0	5	4	0	2	0	0	0	0	0	3	0	0	14	17:15	1	34	8	1	2	0	0	0	0	0	1	0	0	47
5:30	1	15	14	0	2	1	0	0	1	0	2	0	0	36	17:30	0	28	7	0	1	0	0	0	0	0	2	0	0	38
5:45	0	14	11	0	1	1	0	1	1	0	1	0	0	30	17:45	0	35	9	0	1	0	0	0	0	0	4	0	0	49
6:00	0	7	4	2	2	2	0	0	0	0	2	0	0	19	18:00	1	25	5	0	1	1	0	0	0	0	2	0	0	35
6:15	0	13	4	0	0	3	0	1	0	0	0	0	0	21	18:15	0	25	8	0	1	0	0	0	0	0	0	0	0	34
6:30	0	3	5	0	2	1	0	1	0	0	3	0	0	15	18:30	0	25	5	0	0	0	0	0	0	0	1	0	0	31
6:45	0	8	7	0	1	0	0	0	0	0	1	0	0	17	18:45	0	22	9	0	1	0	0	0	0	0	3	0	0	35
7:00	0	18	5	1	0	0	0	0	0	0	3	0	0	27	19:00	2	35	7	0	1	0	0	0	0	0	3	0	0	48
7:15	0	9	8	1	1	0	0	0	0	0	2	0	0	21	19:15	0	22	2	0	0	0	0	0	0	0	1	0	0	25
7:30	0	24	10	0	1	0	0	0	0	0	6	0	0	41	19:30	0	19	3	0	1	0	0	0	0	0	1	0	0	24
7:45	0	31	6	1	4	2	0	0	0	0	2	0	0	46	19:45	0	13	3	0	0	0	0	0	0	0	3	0	0	19
8:00	0	23	6	0	1	0	0	0	1	0	3	0	0	34	20:00	0	32	6	1	1	0	0	0	0	0	0	0	0	40
8:15	0	22	5	0	2	1	0	1	0	0	3	0	0	34	20:15	0	21	3	0	0	0	0	0	1	0	5	0	0	30
8:30	0	16	16	1	4	0	0	0	1	0	1	0	0	39	20:30	0	22	6	0	0	0	0	0	0	0	2	0	0	30
8:45	0	17	5	1	1	0	0	0	1	0	1	0	0	26	20:45	1	17	8	1	0	0	0	0	0	0	2	0	0	29
9:00	0	16	6	0	2	1	0	0	0	0	4	0	0	29	21:00	0	20	10	0	0	0	0	0	0	0	2	0	0	32
9:15	0	22	6	0	7	0	0	0	0	0	1	0	0	36	21:15	0	25	1	0	0	0	0	0	0	0	3	0	0	29
9:30	0	20	10	0	3	0	0	0	0	0	5	0	0	38	21:30	1	18	3	0	0	1	0	0	0	0	0	0	0	23
9:45	1	18	8	1	2	2	0	0	0	0	3	0	0	35	21:45	1	13	3	1	1	0	0	0	0	0	1	0	0	20
10:00	0	25	6	1	3	0	0	0	0	0	1	0	0	36	22:00	0	33	2	0	0	0	0	0	0	0	0	0	0	35
10:15	0	31	10	0	3	1	0	0	1	0	6	0	0	52	22:15	0	14	2	0	0	0	0	0	0	0	0	0	0	16
10:30	0	32	1	0	4	1	0	0	0	0	6	0	0	44	22:30	0	11	6	0	0	0	0	0	1	0	0	0	0	18
10:45	1	31	5	1	3	1	0	0	0	0	1	0	0	43	22:45	0	7	0	1	0	0	0	0	1	0	0	0	0	9
11:00	0	26	8	1	1	1	0	0	0	0	1	0	0	38	23:00	1	11	0	0	0	0	0	0	1	0	0	0	0	13
11:15	0	30	6	0	4	2	0	0	0	0	5	0	0	47	23:15	0	11	3	0	0	0	0	0	0	0	0	0	0	14
11:30	1	15	14	0	3	1	0	0	0	0	4	0	0	38	23:30	0	6	1	0	0	0	0	0	1	0	0	0	0	8
11:45	0	30	10	1	1	2	0	0	0	0	2	0	0	46	23:45	0	11	0	0	0	0	0	0	0	0	0	0	0	11
TOTAL	5	616	224	12	66	23	0	5	7	0	73	0	0	1,031	TOTAL	13	1,172	289	13	46	43	0	1	8	0	77	0	0	1,662

AM PEAK HOUR	10:15 AM
AM PEAK VOLUME	177

PM PEAK HOUR	12:45 PM
PM PEAK VOLUME	199

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	18	1,788	513	25	112	66	0	6	15	0	150	0	0	2,693
% OF TOTAL	0.7%	66.4%	19.0%	0.9%	4.2%	2.5%	0.0%	0.2%	0.6%	0.0%	5.6%	0.0%	0.0%	100.0%
Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	32	4,475	1,282	54	325	160	0	19	76	0	323	0	0	6,746
% OF TOTAL	1.2%	166.2%	47.6%	2.0%	12.1%	5.9%	0.0%	0.7%	2.8%	0.0%	12.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thursday, July 22, 2021
JOB #: SC

CITY: Banning
LOCATION: CLASS4 Ramsey east of Hargrave

AM	WESTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	11	3	0	1	0	0	0	1	0	0	0	0	16
0:15	0	16	1	0	2	0	0	0	0	0	0	0	0	19
0:30	0	8	1	0	0	0	0	0	0	0	0	0	0	9
0:45	0	13	0	0	1	0	0	0	0	0	0	0	0	14
1:00	0	6	1	1	0	0	0	0	1	0	0	0	0	9
1:15	0	6	1	0	3	0	0	0	0	0	0	0	0	10
1:30	0	6	2	0	0	0	0	0	0	0	0	0	0	8
1:45	0	7	2	0	0	0	0	0	0	0	0	0	0	9
2:00	0	4	2	0	0	0	0	0	0	0	0	0	0	6
2:15	0	5	3	0	0	0	0	0	1	0	0	0	0	9
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00	0	4	1	0	0	0	0	1	0	0	0	0	0	6
3:15	0	2	0	0	1	0	0	0	1	0	0	0	0	4
3:30	0	4	0	0	1	0	0	1	2	0	0	0	0	8
3:45	0	8	0	0	0	0	0	1	0	0	0	0	0	9
4:00	0	3	1	0	0	0	0	0	0	0	1	0	0	5
4:15	0	9	2	0	0	0	0	0	1	0	0	0	0	12
4:30	0	3	2	0	0	0	0	0	0	0	1	0	0	6
4:45	1	5	0	0	0	0	0	0	2	0	0	0	0	8
5:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
5:15	0	5	2	0	0	0	0	0	1	0	1	0	0	9
5:30	0	14	3	1	0	0	0	0	1	0	2	0	0	21
5:45	0	12	4	0	3	0	0	0	2	0	3	0	0	24
6:00	0	16	7	0	3	1	0	1	1	0	0	0	0	29
6:15	0	10	4	0	5	0	0	1	1	0	2	0	0	23
6:30	0	14	6	1	6	9	0	0	0	0	1	0	0	37
6:45	0	11	4	1	5	0	0	0	1	0	2	0	0	24
7:00	0	20	10	1	1	1	0	0	1	0	2	0	0	36
7:15	2	36	14	0	2	1	0	1	1	0	2	0	0	59
7:30	0	26	12	1	4	0	0	2	1	0	1	0	0	47
7:45	0	34	9	1	4	0	0	0	1	0	4	0	0	53
8:00	0	13	11	1	2	2	0	1	1	0	3	0	0	34
8:15	0	30	11	0	3	2	0	0	1	0	5	0	0	52
8:30	0	30	12	0	4	0	0	0	0	0	1	0	0	47
8:45	0	32	10	0	5	1	0	0	1	0	2	0	0	51
9:00	0	24	13	0	3	0	0	0	2	0	4	0	0	46
9:15	0	36	6	1	0	1	0	1	0	0	3	0	0	48
9:30	0	28	10	0	8	0	0	0	1	0	1	0	0	48
9:45	0	30	15	0	3	1	0	0	0	0	3	0	0	52
10:00	0	36	8	2	3	0	0	0	2	0	2	0	0	53
10:15	0	37	12	0	3	2	0	0	1	0	2	0	0	57
10:30	0	43	6	0	8	4	0	0	1	0	5	0	0	67
10:45	0	40	8	0	6	0	0	1	2	0	3	0	0	60
11:00	1	38	14	2	7	1	0	0	3	0	4	0	0	70
11:15	0	33	19	0	4	0	0	0	4	0	1	0	0	61
11:30	1	40	5	0	8	2	0	0	0	0	5	0	0	61
11:45	0	43	7	2	3	2	0	0	0	0	6	0	0	63
TOTAL	5	867	266	15	113	30	0	11	39	0	72	0	0	1,418

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	258

PM	WESTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	51	20	1	3	3	0	0	1	0	3	0	0	82
12:15	0	51	12	0	5	3	0	0	0	0	4	0	0	75
12:30	0	55	13	0	4	2	0	0	0	0	3	0	0	77
12:45	0	48	6	0	2	1	0	0	0	0	3	0	0	60
13:00	0	42	17	1	3	1	0	0	0	0	4	0	0	68
13:15	0	36	18	0	2	2	0	1	0	0	8	0	0	67
13:30	0	43	18	1	5	4	0	0	1	0	0	0	0	72
13:45	1	52	12	0	5	2	0	0	0	0	6	0	0	78
14:00	0	40	13	2	3	4	0	0	1	0	5	0	0	68
14:15	1	37	13	0	3	3	0	0	1	0	2	0	0	60
14:30	2	58	14	0	2	4	0	0	1	0	3	0	0	84
14:45	1	43	21	0	5	6	0	0	0	0	1	0	0	77
15:00	0	43	15	0	3	3	0	0	0	0	0	0	0	64
15:15	1	40	18	2	3	3	0	0	0	0	3	0	0	70
15:30	0	53	16	0	3	4	0	0	0	0	0	0	0	76
15:45	0	39	14	0	3	3	0	0	0	0	2	0	0	61
16:00	1	46	22	1	2	4	0	0	2	0	1	0	0	79
16:15	0	42	15	0	4	2	0	0	1	0	2	0	0	66
16:30	0	44	15	0	1	3	0	0	0	0	3	0	0	66
16:45	0	58	8	0	1	3	0	0	0	0	2	0	0	72
17:00	0	57	12	1	1	0	0	0	1	0	0	0	0	72
17:15	0	56	13	0	2	3	0	0	0	0	4	0	0	78
17:30	0	41	15	1	1	0	0	0	0	0	3	0	0	61
17:45	0	47	17	0	3	0	0	0	0	0	1	0	0	68
18:00	0	51	10	0	0	0	0	0	2	0	5	0	0	68
18:15	0	45	10	1	2	0	0	0	2	0	3	0	0	63
18:30	0	43	8	0	3	0	0	0	0	0	2	0	0	56
18:45	0	41	5	0	1	0	0	0	1	0	1	0	0	49
19:00	0	38	15	0	1	0	0	0	1	0	0	0	0	55
19:15	0	38	11	1	2	0	0	0	1	0	5	0	0	58
19:30	0	36	6	0	1	0	0	0	1	0	0	0	0	44
19:45	0	22	8	0	1	0	0	0	0	0	3	0	0	34
20:00	0	29	4	0	3	0	0	0	1	0	1	0	0	38
20:15	0	25	6	1	2	0	0	0	0	0	2	0	0	36
20:30	0	21	8	0	2	0	0	0	0	0	2	0	0	33
20:45	1	27	5	0	2	0	0	0	1	0	0	0	0	36
21:00	0	20	14	0	2	0	0	0	1	0	6	0	0	43
21:15	0	16	2	0	1	0	0	0	0	0	3	0	0	22
21:30	1	27	2	0	2	1	0	0	0	0	1	0	0	34
21:45	0	19	4	0	0	0	0	0	0	0	2	0	0	25
22:00	0	31	5	0	2	0	0	0	0	0	1	0	0	39
22:15	0	36	8	0	1	0	0	0	0	0	1	0	0	46
22:30	0	28	4	0	1	0	0	0	0	0	0	0	0	33
22:45	0	19	3	1	0	0	0	0	0	0	0	0	0	23
23:00	0	21	3	0	2	0	0	1	0	0	0	0	0	27
23:15	0	24	2	0	0	0	0	0	0	0	0	0	0	26
23:30	0	17	2	0	0	0	0	0	1	0	0	0	0	20
23:45	0	24	1	0	0	0	0	0	1	0	0	0	0	26
TOTAL	9	1,820	503	14	100	64	0	2	22	0	101	0	0	2,635

PM PEAK HOUR	2:30 PM
PM PEAK VOLUME	295

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	14	2,687	769	29	213	94	0	13	61	0	173	0	0	4,053
% OF TOTAL	0.3%	66.3%	19.0%	0.7%	5.3%	2.3%	0.0%	0.3%	1.5%	0.0%	4.3%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Banning
N/S: 8th Street
E/W: Ramsey Street
Weather: Clear

File Name : 01_BAN_8th_Ramsey AM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	8th Street Southbound				Ramsey Street Westbound				8th Street Northbound				Ramsey Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	59	4	74	15	13	3	31	15	23	39	77	8	26	17	51	233
07:15 AM	7	90	8	105	16	25	2	43	15	36	49	100	4	55	30	89	337
07:30 AM	9	83	7	99	41	36	5	82	30	50	52	132	6	32	23	61	374
07:45 AM	8	61	13	82	26	21	6	53	20	36	43	99	10	38	18	66	300
Total	35	293	32	360	98	95	16	209	80	145	183	408	28	151	88	267	1244
08:00 AM	7	42	13	62	12	29	3	44	29	31	43	103	5	46	18	69	278
08:15 AM	9	51	17	77	22	42	5	69	32	32	34	98	6	45	23	74	318
08:30 AM	13	52	15	80	29	48	8	85	32	40	50	122	11	55	33	99	386
08:45 AM	8	55	14	77	28	53	9	90	27	30	53	110	13	55	36	104	381
Total	37	200	59	296	91	172	25	288	120	133	180	433	35	201	110	346	1363
Grand Total	72	493	91	656	189	267	41	497	200	278	363	841	63	352	198	613	2607
Apprch %	11	75.2	13.9		38	53.7	8.2		23.8	33.1	43.2		10.3	57.4	32.3		
Total %	2.8	18.9	3.5	25.2	7.2	10.2	1.6	19.1	7.7	10.7	13.9	32.3	2.4	13.5	7.6	23.5	

	8th Street Southbound				Ramsey Street Westbound				8th Street Northbound				Ramsey Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	7	42	13	62	12	29	3	44	29	31	43	103	5	46	18	69	278
08:15 AM	9	51	**17**	77	22	42	5	69	**32**	32	34	98	6	45	23	74	318
08:30 AM	**13**	52	15	**80**	**29**	48	8	85	32	**40**	50	**122**	11	**55**	33	99	**386**
08:45 AM	8	**55**	14	77	28	**53**	**9**	**90**	27	30	**53**	110	**13**	55	**36**	**104**	381
Total Volume	37	200	59	296	91	172	25	288	120	133	180	433	35	201	110	346	1363
% App. Total	12.5	67.6	19.9		31.6	59.7	8.7		27.7	30.7	41.6		10.1	58.1	31.8		
PHF	.712	.909	.868	.925	.784	.811	.694	.800	.938	.831	.849	.887	.673	.914	.764	.832	.883

Counts Unlimited
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City of Banning
N/S: 8th Street
E/W: Ramsey Street
Weather: Clear

File Name : 01_BAN_8th_Ramsey PM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	8th Street Southbound				Ramsey Street Westbound				8th Street Northbound				Ramsey Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	48	17	75	54	67	7	128	39	45	29	113	25	61	45	131	447
04:15 PM	7	45	20	72	27	74	7	108	39	45	32	116	26	79	50	155	451
04:30 PM	4	53	19	76	47	61	16	124	38	54	30	122	20	53	48	121	443
04:45 PM	7	53	14	74	36	54	7	97	42	55	29	126	17	69	33	119	416
Total	28	199	70	297	164	256	37	457	158	199	120	477	88	262	176	526	1757
05:00 PM	7	32	21	60	48	53	5	106	39	55	31	125	16	51	49	116	407
05:15 PM	6	42	10	58	42	42	12	96	28	64	44	136	28	61	32	121	411
05:30 PM	8	34	13	55	47	69	6	122	29	63	43	135	26	69	57	152	464
05:45 PM	3	59	16	78	37	53	3	93	24	62	52	138	31	49	34	114	423
Total	24	167	60	251	174	217	26	417	120	244	170	534	101	230	172	503	1705
Grand Total	52	366	130	548	338	473	63	874	278	443	290	1011	189	492	348	1029	3462
Apprch %	9.5	66.8	23.7		38.7	54.1	7.2		27.5	43.8	28.7		18.4	47.8	33.8		
Total %	1.5	10.6	3.8	15.8	9.8	13.7	1.8	25.2	8	12.8	8.4	29.2	5.5	14.2	10.1	29.7	

	8th Street Southbound				Ramsey Street Westbound				8th Street Northbound				Ramsey Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**10**	48	17	75	**54**	67	7	**128**	39	45	29	113	25	61	45	131	447
04:15 PM	7	45	**20**	72	27	**74**	7	108	39	45	**32**	116	**26**	**79**	**50**	**155**	**451**
04:30 PM	4	**53**	19	**76**	47	61	**16**	124	38	54	30	122	20	53	48	121	443
04:45 PM	7	53	14	74	36	54	7	97	**42**	**55**	29	**126**	17	69	33	119	416
Total Volume	28	199	70	297	164	256	37	457	158	199	120	477	88	262	176	526	1757
% App. Total	9.4	67	23.6		35.9	56	8.1		33.1	41.7	25.2		16.7	49.8	33.5		
PHF	.700	.939	.875	.977	.759	.865	.578	.893	.940	.905	.938	.946	.846	.829	.880	.848	.974

Location: Banning
N/S: 8th Street
E/W: Ramsey Street

Date: 3/7/2018
Date: Wednesday

PEDESTRIANS

	North Leg 8th Street	East Leg Ramsey Street	South Leg 8th Street	West Leg Ramsey Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	3	0	1	4
7:15 AM	0	5	0	2	7
7:30 AM	1	0	1	0	2
7:45 AM	0	0	1	2	3
8:00 AM	1	1	1	0	3
8:15 AM	1	0	0	1	2
8:30 AM	1	1	5	0	7
8:45 AM	1	1	1	1	4
TOTAL VOLUMES:	5	11	9	7	32

	North Leg 8th Street	East Leg Ramsey Street	South Leg 8th Street	West Leg Ramsey Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	2	0	1	0	3
4:15 PM	1	3	6	0	10
4:30 PM	1	2	2	4	9
4:45 PM	0	1	0	3	4
5:00 PM	1	5	1	0	7
5:15 PM	1	1	4	2	8
5:30 PM	2	4	2	1	9
5:45 PM	4	1	3	7	15
TOTAL VOLUMES:	12	17	19	17	65

Location: Banning
N/S: 8th Street
E/W: Ramsey Street

Date: 3/7/2018
Date: Wednesday

BICYCLES

	Southbound 8th Street			Westbound Ramsey Street			Northbound 8th Street			Eastbound Ramsey Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

	Southbound 8th Street			Westbound Ramsey Street			Northbound 8th Street			Eastbound Ramsey Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	1	0	1	0	1	1	1	0	0	0	6

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City of Banning
N/S: Hargrave Street
E/W: Nicolet Street
Weather: Clear

File Name : 02_BAN_Hargrave_Nicolet AM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hargrave Street Southbound				Nicolet Street Westbound				Hargrave Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	27	0	27	12	3	1	16	5	15	3	23	0	1	4	5	71
07:15 AM	3	37	1	41	7	6	1	14	14	27	1	42	2	2	7	11	108
07:30 AM	0	41	3	44	15	9	1	25	10	32	5	47	7	6	7	20	136
07:45 AM	0	38	4	42	10	3	1	14	5	33	5	43	7	5	8	20	119
Total	3	143	8	154	44	21	4	69	34	107	14	155	16	14	26	56	434
08:00 AM	1	38	1	40	3	5	2	10	2	32	2	36	0	5	1	6	92
08:15 AM	2	42	7	51	5	4	3	12	4	53	3	60	4	2	7	13	136
08:30 AM	0	50	8	58	5	1	0	6	4	36	2	42	7	6	5	18	124
08:45 AM	1	56	6	63	8	7	1	16	2	28	3	33	3	4	3	10	122
Total	4	186	22	212	21	17	6	44	12	149	10	171	14	17	16	47	474
Grand Total	7	329	30	366	65	38	10	113	46	256	24	326	30	31	42	103	908
Apprch %	1.9	89.9	8.2		57.5	33.6	8.8		14.1	78.5	7.4		29.1	30.1	40.8		
Total %	0.8	36.2	3.3	40.3	7.2	4.2	1.1	12.4	5.1	28.2	2.6	35.9	3.3	3.4	4.6	11.3	

	Hargrave Street Southbound				Nicolet Street Westbound				Hargrave Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	41	3	44	**15**	**9**	1	**25**	**10**	32	**5**	47	**7**	**6**	7	**20**	**136**
07:45 AM	0	38	4	42	10	3	1	14	5	33	5	43	7	5	**8**	20	119
08:00 AM	1	38	1	40	3	5	2	10	2	32	2	36	0	5	1	6	92
08:15 AM	**2**	**42**	**7**	**51**	5	4	**3**	12	4	**53**	3	**60**	4	2	7	13	136
Total Volume	3	159	15	177	33	21	7	61	21	150	15	186	18	18	23	59	483
% App. Total	1.7	89.8	8.5		54.1	34.4	11.5		11.3	80.6	8.1		30.5	30.5	39		
PHF	.375	.946	.536	.868	.550	.583	.583	.610	.525	.708	.750	.775	.643	.750	.719	.738	.888

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City of Banning
N/S: Hargrave Street
E/W: Nicolet Street
Weather: Clear

File Name : 02_BAN_Hargrave_Nicolet PM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hargrave Street Southbound				Nicolet Street Westbound				Hargrave Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	41	1	45	7	5	0	12	5	30	6	41	1	7	3	11	109
04:15 PM	3	28	3	34	4	3	4	11	2	39	2	43	3	4	5	12	100
04:30 PM	1	39	2	42	7	1	1	9	3	53	1	57	1	6	4	11	119
04:45 PM	2	32	2	36	8	0	1	9	7	19	5	31	2	3	1	6	82
Total	9	140	8	157	26	9	6	41	17	141	14	172	7	20	13	40	410
05:00 PM	3	32	1	36	5	0	1	6	6	39	4	49	3	2	2	7	98
05:15 PM	0	28	0	28	7	1	0	8	5	51	5	61	3	4	3	10	107
05:30 PM	2	25	4	31	4	5	3	12	6	41	5	52	0	5	3	8	103
05:45 PM	2	43	3	48	3	5	2	10	12	48	3	63	3	5	4	12	133
Total	7	128	8	143	19	11	6	36	29	179	17	225	9	16	12	37	441
Grand Total	16	268	16	300	45	20	12	77	46	320	31	397	16	36	25	77	851
Apprch %	5.3	89.3	5.3		58.4	26	15.6		11.6	80.6	7.8		20.8	46.8	32.5		
Total %	1.9	31.5	1.9	35.3	5.3	2.4	1.4	9	5.4	37.6	3.6	46.7	1.9	4.2	2.9	9	

	Hargrave Street Southbound				Nicolet Street Westbound				Hargrave Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**3**	32	1	36	5	0	1	6	6	39	4	49	**3**	2	2	7	98
05:15 PM	0	28	0	28	**7**	1	0	8	5	**51**	**5**	61	3	4	3	10	107
05:30 PM	2	25	**4**	31	4	**5**	**3**	**12**	6	41	5	52	0	**5**	3	8	103
05:45 PM	2	**43**	3	**48**	3	5	2	10	**12**	48	3	**63**	3	5	**4**	**12**	**133**
Total Volume	7	128	8	143	19	11	6	36	29	179	17	225	9	16	12	37	441
% App. Total	4.9	89.5	5.6		52.8	30.6	16.7		12.9	79.6	7.6		24.3	43.2	32.4		
PHF	.583	.744	.500	.745	.679	.550	.500	.750	.604	.877	.850	.893	.750	.800	.750	.771	.829

Location: Banning
N/S: Hargrave Street
E/W: Nicolet Street

Date: 3/7/2018
Date: Wednesday

PEDESTRIANS

	North Leg Hargrave Street Pedestrians	East Leg Nicolet Street Pedestrians	South Leg Hargrave Street Pedestrians	West Leg Nicolet Street Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	0	0	0	1	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	4	4

	North Leg Hargrave Street Pedestrians	East Leg Nicolet Street Pedestrians	South Leg Hargrave Street Pedestrians	West Leg Nicolet Street Pedestrians	
4:00 PM	0	1	1	1	3
4:15 PM	0	0	0	2	2
4:30 PM	0	0	2	1	3
4:45 PM	0	0	3	1	4
5:00 PM	0	2	2	0	4
5:15 PM	0	1	0	3	4
5:30 PM	2	0	0	1	3
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	2	5	8	9	24

Location: Banning
N/S: Hargrave Street
E/W: Nicolet Street

Date: 3/7/2018
Date: Wednesday

BICYCLES

	Southbound Hargrave Street			Westbound Nicolet Street			Northbound Hargrave Street			Eastbound Nicolet Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	1	0	0	0	0	0	2

	Southbound Hargrave Street			Westbound Nicolet Street			Northbound Hargrave Street			Eastbound Nicolet Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	2	0	0	0	0	0	1	0	0	0	1	4

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City of Banning
N/S: Hargrave Street
E/W: Williams Street
Weather: Clear

File Name : 03_BAN_Hargrave_Williams AM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hargrave Street Southbound				Williams Street Westbound				Hargrave Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	40	1	41	2	1	0	3	3	24	2	29	0	2	6	8	81
07:15 AM	0	48	2	50	9	1	0	10	10	40	1	51	0	7	3	10	121
07:30 AM	0	63	2	65	3	3	0	6	8	46	2	56	3	7	13	23	150
07:45 AM	1	56	1	58	4	2	0	6	13	46	1	60	2	2	7	11	135
Total	1	207	6	214	18	7	0	25	34	156	6	196	5	18	29	52	487
08:00 AM	0	39	1	40	8	3	0	11	5	33	1	39	1	0	9	10	100
08:15 AM	1	52	4	57	1	5	1	7	2	62	2	66	3	2	5	10	140
08:30 AM	2	58	5	65	2	5	2	9	5	32	1	38	1	4	8	13	125
08:45 AM	2	60	4	66	8	7	2	17	9	31	0	40	3	5	7	15	138
Total	5	209	14	228	19	20	5	44	21	158	4	183	8	11	29	48	503
Grand Total	6	416	20	442	37	27	5	69	55	314	10	379	13	29	58	100	990
Apprch %	1.4	94.1	4.5		53.6	39.1	7.2		14.5	82.8	2.6		13	29	58		
Total %	0.6	42	2	44.6	3.7	2.7	0.5	7	5.6	31.7	1	38.3	1.3	2.9	5.9	10.1	

	Hargrave Street Southbound				Williams Street Westbound				Hargrave Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**63**	2	**65**	3	3	0	6	8	46	**2**	56	**3**	**7**	**13**	**23**	**150**
07:45 AM	**1**	56	1	58	4	2	0	6	**13**	46	1	60	2	2	7	11	135
08:00 AM	0	39	1	40	**8**	3	0	**11**	5	33	1	39	1	0	9	10	100
08:15 AM	1	52	**4**	57	1	**5**	**1**	7	2	**62**	2	**66**	3	2	5	10	140
Total Volume	2	210	8	220	16	13	1	30	28	187	6	221	9	11	34	54	525
% App. Total	0.9	95.5	3.6		53.3	43.3	3.3		12.7	84.6	2.7		16.7	20.4	63		
PHF	.500	.833	.500	.846	.500	.650	.250	.682	.538	.754	.750	.837	.750	.393	.654	.587	.875

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City of Banning
N/S: Hargrave Street
E/W: Williams Street
Weather: Clear

File Name : 03_BAN_Hargrave_Williams PM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hargrave Street Southbound				Williams Street Westbound				Hargrave Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	52	0	52	2	4	0	6	7	39	3	49	2	3	8	13	120
04:15 PM	0	32	2	34	3	3	1	7	4	41	2	47	2	2	11	15	103
04:30 PM	1	45	3	49	3	3	2	8	8	56	2	66	1	4	14	19	142
04:45 PM	1	42	1	44	1	3	1	5	9	29	3	41	1	4	4	9	99
Total	2	171	6	179	9	13	4	26	28	165	10	203	6	13	37	56	464
05:00 PM	0	39	3	42	3	4	2	9	6	48	4	58	1	4	16	21	130
05:15 PM	1	34	0	35	2	3	1	6	1	56	0	57	3	5	8	16	114
05:30 PM	1	32	0	33	3	2	1	6	4	52	1	57	3	1	3	7	103
05:45 PM	0	49	1	50	3	1	1	5	5	60	2	67	4	2	4	10	132
Total	2	154	4	160	11	10	5	26	16	216	7	239	11	12	31	54	479
Grand Total	4	325	10	339	20	23	9	52	44	381	17	442	17	25	68	110	943
Apprch %	1.2	95.9	2.9		38.5	44.2	17.3		10	86.2	3.8		15.5	22.7	61.8		
Total %	0.4	34.5	1.1	35.9	2.1	2.4	1	5.5	4.7	40.4	1.8	46.9	1.8	2.7	7.2	11.7	

	Hargrave Street Southbound				Williams Street Westbound				Hargrave Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**1**	**45**	**3**	**49**	**3**	3	**2**	8	8	**56**	2	**66**	1	4	14	19	**142**
04:45 PM	1	42	1	44	1	3	1	5	**9**	29	3	41	1	4	4	9	99
05:00 PM	0	39	3	42	3	**4**	2	**9**	6	48	**4**	58	1	4	**16**	**21**	130
05:15 PM	1	34	0	35	2	3	1	6	1	56	0	57	**3**	**5**	8	16	114
Total Volume	3	160	7	170	9	13	6	28	24	189	9	222	6	17	42	65	485
% App. Total	1.8	94.1	4.1		32.1	46.4	21.4		10.8	85.1	4.1		9.2	26.2	64.6		
PHF	.750	.889	.583	.867	.750	.813	.750	.778	.667	.844	.563	.841	.500	.850	.656	.774	.854

Location: Banning
N/S: Hargrave Street
E/W: Williams Street

Date: 3/7/2018
Date: Wednesday

PEDESTRIANS

	North Leg Hargrave Street	East Leg Williams Street	South Leg Hargrave Street	West Leg Williams Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	0	0	1
7:15 AM	0	0	0	1	1
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	1	0	1	0	2
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	3	1	1	2	7

	North Leg Hargrave Street	East Leg Williams Street	South Leg Hargrave Street	West Leg Williams Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	2	0	0	2
4:15 PM	0	1	0	1	2
4:30 PM	0	0	1	1	2
4:45 PM	0	0	0	0	0
5:00 PM	1	1	0	1	3
5:15 PM	0	1	0	3	4
5:30 PM	0	0	0	0	0
5:45 PM	0	2	0	1	3
TOTAL VOLUMES:	1	7	1	7	16

Location: Banning
N/S: Hargrave Street
E/W: Williams Street

Date: 3/7/2018
Date: Wednesday

BICYCLES

	Southbound Hargrave Street			Westbound Williams Street			Northbound Hargrave Street			Eastbound Williams Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	2	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	2	1	0	0	0	0	0	0	0	3

	Southbound Hargrave Street			Westbound Williams Street			Northbound Hargrave Street			Eastbound Williams Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	1	2
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	2
TOTAL VOLUMES:	0	2	0	0	1	0	1	1	0	0	1	1	7

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 22, 21

LOCATION: Banning
NORTH & SOUTH: Hargrave
EAST & WEST: Ramsey

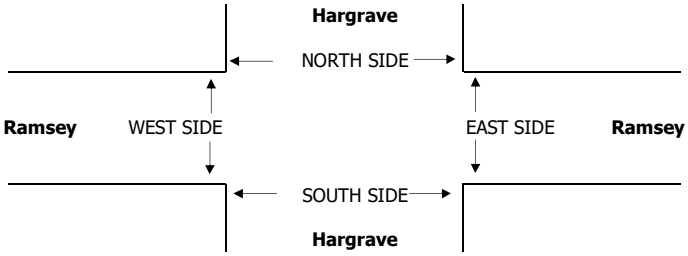
PROJECT #: SC
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Hargrave			SOUTHBOUND Hargrave			EASTBOUND Ramsey			WESTBOUND Ramsey				U-TURNS				
	LANES:	NL 1	NT 1.5	NR 0.5	SL 1	ST 1	SR 1	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	8	13	13	6	41	3	5	8	9	20	10	7	143	0	0	0	0	0
	7:15 AM	14	28	13	2	42	5	8	6	7	34	18	7	184	0	0	0	0	0
	7:30 AM	8	41	28	5	59	13	8	8	13	27	15	4	229	0	0	0	0	0
	7:45 AM	21	33	29	6	60	11	8	11	11	24	19	9	242	0	0	0	0	0
	8:00 AM	18	23	20	7	40	8	3	7	10	21	10	3	170	0	0	0	0	0
	8:15 AM	12	18	19	3	28	2	5	12	8	28	18	7	160	0	0	0	0	0
	8:30 AM	12	20	18	5	28	5	4	16	9	23	19	5	164	0	0	0	0	0
	8:45 AM	11	19	16	4	46	8	4	6	13	29	17	5	178	0	0	0	0	0
	VOLUMES	104	195	156	38	344	55	45	74	80	206	126	47	1,470	0	0	0	0	0
	APPROACH %	23%	43%	34%	9%	79%	13%	23%	37%	40%	54%	33%	12%						
	APP/DEPART	455	/	287	437	/	630	199	/	268	379	/	285	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	61	125	90	20	201	37	27	32	41	106	62	23	825					
	APPROACH %	22%	45%	33%	8%	78%	14%	27%	32%	41%	55%	32%	12%						
	PEAK HR FACTOR		0.831			0.838			0.833			0.809		0.852					
	APP/DEPART	276	/	175	258	/	348	100	/	142	191	/	160	0					
PM	4:00 PM	11	34	19	3	52	6	12	26	15	40	30	9	257	0	0	1	0	1
	4:15 PM	7	41	19	2	28	8	13	16	13	42	13	6	208	0	0	0	0	0
	4:30 PM	13	27	19	9	30	6	5	16	17	38	26	3	209	0	0	0	0	0
	4:45 PM	15	38	21	2	33	10	13	19	20	36	28	9	244	0	0	0	0	0
	5:00 PM	8	34	17	0	63	7	10	14	20	40	25	9	247	0	0	0	0	0
	5:15 PM	13	34	23	6	34	8	7	18	15	40	27	11	236	0	0	0	0	0
	5:30 PM	25	35	18	5	37	10	16	16	15	31	15	15	238	0	1	0	0	1
	5:45 PM	12	33	26	9	31	8	9	14	20	26	31	12	231	0	0	0	0	0
	VOLUMES	104	276	162	36	308	63	85	139	135	293	195	74	1,870	0	1	1	0	2
	APPROACH %	19%	51%	30%	9%	76%	15%	24%	39%	38%	52%	35%	13%						
	APP/DEPART	542	/	435	407	/	736	359	/	336	562	/	363	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	61	141	79	13	167	35	46	67	70	147	95	44	965					
	APPROACH %	22%	50%	28%	6%	78%	16%	25%	37%	38%	51%	33%	15%						
	PEAK HR FACTOR		0.901			0.768			0.880			0.917		0.977					
	APP/DEPART	281	/	232	215	/	384	183	/	158	286	/	191	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:15 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	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
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			4:45 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 22, 21

LOCATION: Banning
NORTH & SOUTH: Hargrave
EAST & WEST: I-10 WB Ramps

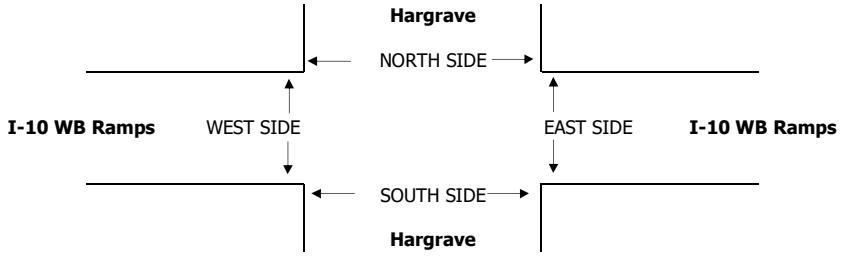
PROJECT #: SC
LOCATION #: 5
CONTROL: STOP W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Hargrave			SOUTHBOUND Hargrave			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL X	ET X	ER X	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	12	34	0	0	31	38	0	0	0	7	0	3	125	0	0	0	0	0
	7:15 AM	9	52	0	0	41	53	0	0	0	7	0	6	168	0	0	0	0	0
	7:30 AM	9	70	0	0	50	51	0	0	0	5	2	7	194	0	0	0	0	0
	7:45 AM	20	77	0	0	46	51	0	0	0	7	2	10	213	0	0	0	0	0
	8:00 AM	16	56	0	0	42	40	0	0	0	4	0	8	166	0	0	0	0	0
	8:15 AM	4	46	0	0	36	38	0	0	0	3	2	5	134	0	0	0	0	0
	8:30 AM	10	47	0	0	35	31	0	0	0	3	0	6	132	0	0	0	0	0
	8:45 AM	9	42	0	0	36	55	0	0	0	7	1	10	160	0	0	0	0	0
	VOLUMES	89	424	0	0	317	357	0	0	0	43	7	55	1,292	0	0	0	0	0
	APPROACH %	17%	83%	0%	0%	47%	53%	0%	0%	0%	41%	7%	52%						
	APP/DEPART	513	/	479	674	/	360	0	/	0	105	/	453	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	54	255	0	0	179	195	0	0	0	23	4	31	741					
	APPROACH %	17%	83%	0%	0%	48%	52%	0%	0%	0%	40%	7%	53%						
	PEAK HR FACTOR		0.796			0.926			0.000			0.763		0.870					
	APP/DEPART	309	/	286	374	/	202	0	/	0	58	/	253	0					
PM	4:00 PM	20	61	0	0	58	50	0	0	0	4	0	7	200	0	0	0	0	0
	4:15 PM	20	66	0	0	44	51	0	0	0	4	0	6	191	0	0	0	0	0
	4:30 PM	14	54	0	0	37	49	0	0	0	1	0	8	163	0	0	0	0	0
	4:45 PM	8	71	0	0	44	51	0	0	0	11	1	9	195	0	0	0	0	0
	5:00 PM	26	52	0	0	50	82	0	0	0	6	1	6	223	0	0	0	0	0
	5:15 PM	11	66	0	0	38	52	0	0	0	9	0	13	189	0	0	0	0	0
	5:30 PM	17	63	0	0	40	49	0	0	0	8	0	17	194	0	0	0	0	0
	5:45 PM	8	58	0	0	54	39	0	0	0	10	2	13	184	0	0	0	0	0
	VOLUMES	124	491	0	0	365	423	0	0	0	53	4	79	1,539	0	0	0	0	0
	APPROACH %	20%	80%	0%	0%	46%	54%	0%	0%	0%	39%	3%	58%						
	APP/DEPART	615	/	570	788	/	418	0	/	0	136	/	551	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	62	252	0	0	172	234	0	0	0	34	2	45	801					
	APPROACH %	20%	80%	0%	0%	42%	58%	0%	0%	0%	42%	2%	56%						
	PEAK HR FACTOR		0.981			0.769			0.000			0.810		0.898					
	APP/DEPART	314	/	297	406	/	206	0	/	0	81	/	298	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:15 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	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
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			4:45 PM			0	0	0	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 22, 21

LOCATION: Banning
NORTH & SOUTH: Hargrave
EAST & WEST: I-10 EB Ramps

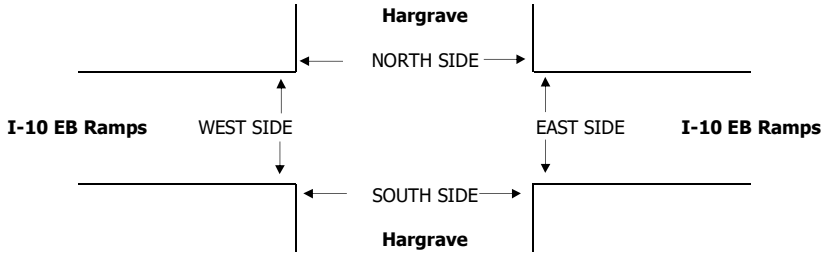
PROJECT #: SC
LOCATION #: 6
CONTROL: STOP E

NOTES:
Every hour passed a train which creates a queue on SB

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Hargrave			SOUTHBOUND Hargrave			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL 0	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	14	2	22	16	0	33	1	7	0	0	0	95	0	0	0	0	0
	7:15 AM	0	21	10	32	17	0	42	1	7	0	0	0	130	0	0	0	0	0
	7:30 AM	0	20	8	31	25	0	61	1	6	0	0	0	152	0	0	0	0	0
	7:45 AM	0	32	7	28	24	0	64	1	12	0	0	0	168	0	0	0	0	0
	8:00 AM	0	28	7	26	19	0	41	0	9	0	0	0	130	0	0	0	0	0
	8:15 AM	0	19	8	26	14	0	34	0	12	0	0	0	113	0	0	0	0	0
	8:30 AM	0	22	8	31	8	0	35	0	12	0	0	0	116	0	0	0	0	0
	8:45 AM	0	19	10	29	14	0	31	2	13	0	0	0	118	0	0	0	0	0
	VOLUMES	0	175	60	225	137	0	341	6	78	0	0	0	1,022	0	0	0	0	0
	APPROACH %	0%	74%	26%	62%	38%	0%	80%	1%	18%	0%	0%	0%						
	APP/DEPART	235	/	516	362	/	215	425	/	291	0	/	0	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	101	32	117	85	0	208	3	34	0	0	0	580					
	APPROACH %	0%	76%	24%	58%	42%	0%	85%	1%	14%	0%	0%	0%						
	PEAK HR FACTOR		0.853			0.902			0.795			0.000		0.863					
	APP/DEPART	133	/	309	202	/	119	245	/	152	0	/	0	0					
PM	4:00 PM	0	33	18	41	21	0	45	1	7	0	0	0	166	0	0	0	0	0
	4:15 PM	0	31	12	29	19	0	53	0	7	0	0	0	151	0	0	0	0	0
	4:30 PM	0	24	9	22	14	0	41	1	8	0	0	0	119	0	0	0	0	0
	4:45 PM	0	27	13	42	15	0	53	2	7	0	0	0	159	0	0	0	0	0
	5:00 PM	0	38	12	36	22	0	39	0	10	0	0	0	157	0	0	0	0	0
	5:15 PM	0	26	7	24	23	0	52	2	6	0	0	0	140	0	0	0	0	0
	5:30 PM	0	26	11	22	21	0	53	0	13	0	0	0	146	0	0	0	0	0
	5:45 PM	0	22	9	40	24	0	51	1	11	0	0	0	158	0	2	0	0	2
	VOLUMES	0	227	91	256	159	0	387	7	69	0	0	0	1,196	0	2	0	0	2
	APPROACH %	0%	71%	29%	62%	38%	0%	84%	2%	15%	0%	0%	0%						
	APP/DEPART	318	/	616	415	/	228	463	/	352	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	117	43	124	81	0	197	4	36	0	0	0	602					
	APPROACH %	0%	73%	27%	60%	40%	0%	83%	2%	15%	0%	0%	0%						
	PEAK HR FACTOR		0.800			0.884			0.898			0.000		0.947					
	APP/DEPART	160	/	314	205	/	117	237	/	171	0	/	0	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	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
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:45 PM					0	0	0	0	0					

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City of Banning
N/S: Hathaway Street
E/W: Morongo Road
Weather: Clear

File Name : 07_BAN_Hawthaway_Morongo AM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound			Morongo Road Westbound			Hathaway Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	3	8	0	8	2	9	11	22
07:15 AM	3	3	6	7	0	7	1	9	10	23
07:30 AM	3	4	7	9	1	10	3	12	15	32
07:45 AM	3	7	10	11	0	11	5	30	35	56
Total	9	17	26	35	1	36	11	60	71	133
08:00 AM	1	4	5	11	0	11	5	23	28	44
08:15 AM	2	6	8	13	0	13	4	19	23	44
08:30 AM	3	6	9	15	1	16	3	19	22	47
08:45 AM	4	9	13	11	4	15	3	9	12	40
Total	10	25	35	50	5	55	15	70	85	175
Grand Total	19	42	61	85	6	91	26	130	156	308
Apprch %	31.1	68.9		93.4	6.6		16.7	83.3		
Total %	6.2	13.6	19.8	27.6	1.9	29.5	8.4	42.2	50.6	

	Hathaway Street Southbound			Morongo Road Westbound			Hathaway Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**3**	**7**	**10**	11	0	11	**5**	**30**	**35**	**56**
08:00 AM	1	4	5	11	0	11	5	23	28	44
08:15 AM	2	6	8	13	0	13	4	19	23	44
08:30 AM	3	6	9	**15**	**1**	**16**	3	19	22	47
Total Volume	9	23	32	50	1	51	17	91	108	191
% App. Total	28.1	71.9		98	2		15.7	84.3		
PHF	.750	.821	.800	.833	.250	.797	.850	.758	.771	.853

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City of Banning
N/S: Hathaway Street
E/W: Morongo Road
Weather: Clear

File Name : 07_BAN_Hawthaway_Morongo PM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound			Morongo Road Westbound			Hathaway Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	8	9	22	0	22	1	11	12	43
04:15 PM	3	9	12	26	1	27	6	11	17	56
04:30 PM	2	6	8	21	5	26	8	13	21	55
04:45 PM	3	5	8	20	0	20	3	13	16	44
Total	9	28	37	89	6	95	18	48	66	198
05:00 PM	2	3	5	21	2	23	7	17	24	52
05:15 PM	1	3	4	17	3	20	4	8	12	36
05:30 PM	2	2	4	14	1	15	8	13	21	40
05:45 PM	2	2	4	9	0	9	7	15	22	35
Total	7	10	17	61	6	67	26	53	79	163
Grand Total	16	38	54	150	12	162	44	101	145	361
Apprch %	29.6	70.4		92.6	7.4		30.3	69.7		
Total %	4.4	10.5	15	41.6	3.3	44.9	12.2	28	40.2	

	Hathaway Street Southbound			Morongo Road Westbound			Hathaway Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	**3**	**9**	**12**	**26**	1	**27**	6	11	17	**56**
04:30 PM	2	6	8	21	**5**	26	**8**	13	21	55
04:45 PM	3	5	8	20	0	20	3	13	16	44
05:00 PM	2	3	5	21	2	23	7	**17**	**24**	52
Total Volume	10	23	33	88	8	96	24	54	78	207
% App. Total	30.3	69.7		91.7	8.3		30.8	69.2		
PHF	.833	.639	.688	.846	.400	.889	.750	.794	.813	.924

Location: Banning
N/S: Hathaway Street
E/W: Morongo Road

Date: 3/7/2018
Date: Wednesday

PEDESTRIANS

	North Leg Hathaway Street	East Leg Morongo Road	South Leg Hathaway Street	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	3	3
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	3	3

	North Leg Hathaway Street	East Leg Morongo Road	South Leg Hathaway Street	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	2	0	2
TOTAL VOLUMES:	0	0	2	0	2

Location: Banning
N/S: Hathaway Street
E/W: Morongo Road

Date: 3/7/2018
Date: Wednesday

BICYCLES

	Southbound Hathaway Street			Westbound Morongo Road			Northbound Hathaway Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Hathaway Street			Westbound Morongo Road			Northbound Hathaway Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	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
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Banning
N/S: Hathaway Street
E/W: George Street
Weather: Clear

File Name : 08_BAN_Hawthaway_George AM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound			Hathaway Street Northbound			George Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	10	1	11	3	10	13	0	3	3	27
07:15 AM	12	2	14	1	12	13	0	3	3	30
07:30 AM	14	4	18	6	22	28	4	1	5	51
07:45 AM	14	3	17	2	32	34	2	4	6	57
Total	50	10	60	12	76	88	6	11	17	165
08:00 AM	18	0	18	2	20	22	4	2	6	46
08:15 AM	20	5	25	4	25	29	1	6	7	61
08:30 AM	16	2	18	4	15	19	4	3	7	44
08:45 AM	16	0	16	5	10	15	0	6	6	37
Total	70	7	77	15	70	85	9	17	26	188
Grand Total	120	17	137	27	146	173	15	28	43	353
Apprch %	87.6	12.4		15.6	84.4		34.9	65.1		
Total %	34	4.8	38.8	7.6	41.4	49	4.2	7.9	12.2	

	Hathaway Street Southbound			Hathaway Street Northbound			George Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	14	4	18	**6**	22	28	**4**	1	5	51
07:45 AM	14	3	17	2	**32**	**34**	2	4	6	57
08:00 AM	18	0	18	2	20	22	4	2	6	46
08:15 AM	**20**	**5**	**25**	4	25	29	1	**6**	**7**	**61**
Total Volume	66	12	78	14	99	113	11	13	24	215
% App. Total	84.6	15.4		12.4	87.6		45.8	54.2		
PHF	.825	.600	.780	.583	.773	.831	.688	.542	.857	.881

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City of Banning
N/S: Hathaway Street
E/W: George Street
Weather: Clear

File Name : 08_BAN_Hawthaway_George PM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound			Hathaway Street Northbound			George Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	30	5	35	0	17	17	1	5	6	58
04:15 PM	24	5	29	5	24	29	0	4	4	62
04:30 PM	28	2	30	4	22	26	2	3	5	61
04:45 PM	27	1	28	3	24	27	3	2	5	60
Total	109	13	122	12	87	99	6	14	20	241
05:00 PM	20	6	26	1	14	15	0	4	4	45
05:15 PM	16	0	16	6	14	20	1	3	4	40
05:30 PM	9	5	14	6	23	29	0	0	0	43
05:45 PM	17	0	17	8	20	28	5	5	10	55
Total	62	11	73	21	71	92	6	12	18	183
Grand Total	171	24	195	33	158	191	12	26	38	424
Apprch %	87.7	12.3		17.3	82.7		31.6	68.4		
Total %	40.3	5.7	46	7.8	37.3	45	2.8	6.1	9	

	Hathaway Street Southbound			Hathaway Street Northbound			George Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**30**	**5**	**35**	0	17	17	1	**5**	**6**	58
04:15 PM	24	5	29	**5**	**24**	**29**	0	4	4	**62**
04:30 PM	28	2	30	4	22	26	2	3	5	61
04:45 PM	27	1	28	3	24	27	**3**	2	5	60
Total Volume	109	13	122	12	87	99	6	14	20	241
% App. Total	89.3	10.7		12.1	87.9		30	70		
PHF	.908	.650	.871	.600	.906	.853	.500	.700	.833	.972

Location: Banning
N/S: Hathaway Street
E/W: George Street

Date: 3/7/2018
Date: Wednesday

PEDESTRIANS

	North Leg Hathaway Street	East Leg Dead End	South Leg Hathaway Street	West Leg George Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Hathaway Street	East Leg Dead End	South Leg Hathaway Street	West Leg George Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Banning
N/S: Hathaway Street
E/W: George Street

Date: 3/7/2018
Date: Wednesday

BICYCLES

	Southbound Hathaway Street			Westbound Dead End			Northbound Hathaway Street			Eastbound George Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Hathaway Street			Westbound Dead End			Northbound Hathaway Street			Eastbound George Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	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
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Banning
N/S: Hathaway Street
E/W: Nicolet Street
Weather: Clear

File Name : 09_BAN_Hawthaway_Nicolet AM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	13	0	13	0	0	0	0	1	11	0	12	0	0	1	1	26
07:15 AM	0	13	0	13	0	0	0	0	0	12	0	12	2	0	2	4	29
07:30 AM	0	15	0	15	0	0	0	0	1	21	0	22	0	0	2	2	39
07:45 AM	0	18	2	20	0	0	0	0	2	30	0	32	2	0	3	5	57
Total	0	59	2	61	0	0	0	0	4	74	0	78	4	0	8	12	151
08:00 AM	0	15	2	17	0	0	0	0	1	27	0	28	1	0	1	2	47
08:15 AM	0	19	0	19	0	0	0	0	1	26	0	27	0	0	0	0	46
08:30 AM	0	25	0	25	0	0	0	0	0	21	0	21	3	0	1	4	50
08:45 AM	0	26	2	28	0	0	0	0	1	13	0	14	1	0	2	3	45
Total	0	85	4	89	0	0	0	0	3	87	0	90	5	0	4	9	188
Grand Total	0	144	6	150	0	0	0	0	7	161	0	168	9	0	12	21	339
Apprch %	0	96	4		0	0	0		4.2	95.8	0		42.9	0	57.1		
Total %	0	42.5	1.8	44.2	0	0	0	0	2.1	47.5	0	49.6	2.7	0	3.5	6.2	

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	18	**2**	20	0	0	0	0	**2**	**30**	0	**32**	2	0	**3**	**5**	**57**
08:00 AM	0	15	2	17	0	0	0	0	1	27	0	28	1	0	1	2	47
08:15 AM	0	19	0	19	0	0	0	0	1	26	0	27	0	0	0	0	46
08:30 AM	0	**25**	0	**25**	0	0	0	0	0	21	0	21	**3**	0	1	4	50
Total Volume	0	77	4	81	0	0	0	0	4	104	0	108	6	0	5	11	200
% App. Total	0	95.1	4.9		0	0	0		3.7	96.3	0		54.5	0	45.5		
PHF	.000	.770	.500	.810	.000	.000	.000	.000	.500	.867	.000	.844	.500	.000	.417	.550	.877

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City of Banning
N/S: Hathaway Street
E/W: Nicolet Street
Weather: Clear

File Name : 09_BAN_Hawthaway_Nicolet PM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	29	2	31	0	0	0	0	1	12	0	13	2	0	3	5	49
04:15 PM	0	31	0	31	0	0	0	0	1	25	0	26	2	0	2	4	61
04:30 PM	0	31	0	31	0	0	0	0	1	26	0	27	1	0	5	6	64
04:45 PM	0	28	1	29	0	0	0	0	0	21	0	21	1	0	3	4	54
Total	0	119	3	122	0	0	0	0	3	84	0	87	6	0	13	19	228
05:00 PM	0	23	0	23	0	0	0	0	0	22	0	22	0	0	2	2	47
05:15 PM	0	20	2	22	0	0	0	0	1	18	0	19	0	0	5	5	46
05:30 PM	0	16	3	19	0	0	0	0	1	27	0	28	3	0	1	4	51
05:45 PM	0	11	2	13	0	0	0	0	0	26	0	26	0	0	1	1	40
Total	0	70	7	77	0	0	0	0	2	93	0	95	3	0	9	12	184
Grand Total	0	189	10	199	0	0	0	0	5	177	0	182	9	0	22	31	412
Apprch %	0	95	5		0	0	0		2.7	97.3	0		29	0	71		
Total %	0	45.9	2.4	48.3	0	0	0	0	1.2	43	0	44.2	2.2	0	5.3	7.5	

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Nicolet Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	29	**2**	**31**	0	0	0	0	**1**	12	0	13	**2**	0	3	5	49
04:15 PM	0	**31**	0	31	0	0	0	0	1	25	0	26	2	0	2	4	61
04:30 PM	0	31	0	31	0	0	0	0	1	**26**	0	**27**	1	0	**5**	**6**	**64**
04:45 PM	0	28	1	29	0	0	0	0	0	21	0	21	1	0	3	4	54
Total Volume	0	119	3	122	0	0	0	0	3	84	0	87	6	0	13	19	228
% App. Total	0	97.5	2.5		0	0	0		3.4	96.6	0		31.6	0	68.4		
PHF	.000	.960	.375	.984	.000	.000	.000	.000	.750	.808	.000	.806	.750	.000	.650	.792	.891

Location: Banning
N/S: Hathaway Street
E/W: Nicolet Street

Date: 3/7/2018
Date: Wednesday

PEDESTRIANS

	North Leg Hathaway Street	East Leg Dirt Road	South Leg Hathaway Street	West Leg Nicolet Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Hathaway Street	East Leg Dirt Road	South Leg Hathaway Street	West Leg Nicolet Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Banning
N/S: Hathaway Street
E/W: Nicolet Street

Date: 3/7/2018
Date: Wednesday

BICYCLES

	Southbound Hathaway Street			Westbound Dirt Road			Northbound Hathaway Street			Eastbound Nicolet Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Hathaway Street			Westbound Dirt Road			Northbound Hathaway Street			Eastbound Nicolet Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	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
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Banning
N/S: Hathaway Street
E/W: Williams Street
Weather: Clear

File Name : 10_BAN_Hawthaway_Williams AM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	14	0	14	0	0	0	0	1	12	0	13	0	0	1	1	28
07:15 AM	0	17	0	17	0	0	0	0	0	10	0	10	1	0	0	1	28
07:30 AM	0	16	0	16	0	0	0	0	0	20	0	20	1	0	3	4	40
07:45 AM	0	22	0	22	0	0	0	0	3	31	0	34	2	0	1	3	59
Total	0	69	0	69	0	0	0	0	4	73	0	77	4	0	5	9	155
08:00 AM	0	13	3	16	0	0	0	0	2	29	0	31	0	0	0	0	47
08:15 AM	0	19	1	20	0	0	0	0	1	23	0	24	3	0	1	4	48
08:30 AM	0	23	3	26	0	0	0	0	2	22	0	24	1	0	5	6	56
08:45 AM	0	25	1	26	0	0	0	0	1	12	0	13	0	0	2	2	41
Total	0	80	8	88	0	0	0	0	6	86	0	92	4	0	8	12	192
Grand Total	0	149	8	157	0	0	0	0	10	159	0	169	8	0	13	21	347
Apprch %	0	94.9	5.1		0	0	0		5.9	94.1	0		38.1	0	61.9		
Total %	0	42.9	2.3	45.2	0	0	0	0	2.9	45.8	0	48.7	2.3	0	3.7	6.1	

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	22	0	22	0	0	0	0	**3**	**31**	0	**34**	2	0	1	3	**59**
08:00 AM	0	13	**3**	16	0	0	0	0	2	29	0	31	0	0	0	0	47
08:15 AM	0	19	1	20	0	0	0	0	1	23	0	24	**3**	0	1	4	48
08:30 AM	0	**23**	3	**26**	0	0	0	0	2	22	0	24	1	0	**5**	**6**	56
Total Volume	0	77	7	84	0	0	0	0	8	105	0	113	6	0	7	13	210
% App. Total	0	91.7	8.3		0	0	0		7.1	92.9	0		46.2	0	53.8		
PHF	.000	.837	.583	.808	.000	.000	.000	.000	.667	.847	.000	.831	.500	.000	.350	.542	.890

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City of Banning
N/S: Hathaway Street
E/W: Williams Street
Weather: Clear

File Name : 10_BAN_Hawthaway_Williams PM
Site Code : 20618164
Start Date : 3/7/2018
Page No : 1

Groups Printed- Total Volume

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	29	2	31	0	0	0	0	2	14	0	16	0	0	1	1	48
04:15 PM	0	26	5	31	0	0	0	0	4	24	0	28	1	0	1	2	61
04:30 PM	0	35	3	38	0	0	0	0	0	28	0	28	0	0	1	1	67
04:45 PM	0	29	1	30	0	0	0	0	2	22	0	24	1	0	3	4	58
Total	0	119	11	130	0	0	0	0	8	88	0	96	2	0	6	8	234
05:00 PM	0	22	4	26	0	0	0	0	2	16	0	18	6	0	2	8	52
05:15 PM	0	26	0	26	0	0	0	0	2	20	0	22	4	0	3	7	55
05:30 PM	0	18	1	19	0	0	0	0	3	26	0	29	1	0	1	2	50
05:45 PM	0	12	1	13	0	0	0	0	1	25	0	26	1	0	3	4	43
Total	0	78	6	84	0	0	0	0	8	87	0	95	12	0	9	21	200
Grand Total	0	197	17	214	0	0	0	0	16	175	0	191	14	0	15	29	434
Apprch %	0	92.1	7.9		0	0	0		8.4	91.6	0		48.3	0	51.7		
Total %	0	45.4	3.9	49.3	0	0	0	0	3.7	40.3	0	44	3.2	0	3.5	6.7	

	Hathaway Street Southbound				Dirt Road Westbound				Hathaway Street Northbound				Williams Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	26	**5**	31	0	0	0	0	**4**	24	0	**28**	1	0	1	2	61
04:30 PM	0	**35**	3	**38**	0	0	0	0	0	**28**	0	28	0	0	1	1	**67**
04:45 PM	0	29	1	30	0	0	0	0	2	22	0	24	1	0	**3**	4	58
05:00 PM	0	22	4	26	0	0	0	0	2	16	0	18	**6**	0	2	**8**	52
Total Volume	0	112	13	125	0	0	0	0	8	90	0	98	8	0	7	15	238
% App. Total	0	89.6	10.4		0	0	0		8.2	91.8	0		53.3	0	46.7		
PHF	.000	.800	.650	.822	.000	.000	.000	.000	.500	.804	.000	.875	.333	.000	.583	.469	.888

Location: Banning
N/S: Hathaway Street
E/W: Williams Street

Date: 3/7/2018
Date: Wednesday

PEDESTRIANS

	North Leg Hathaway Street	East Leg Dirt Road	South Leg Hathaway Street	West Leg Williams Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Hathaway Street	East Leg Dirt Road	South Leg Hathaway Street	West Leg Williams Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Banning
N/S: Hathaway Street
E/W: Williams Street

Date: 3/7/2018
Date: Wednesday

BICYCLES

	Southbound Hathaway Street			Westbound Dirt Road			Northbound Hathaway Street			Eastbound Williams Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Hathaway Street			Westbound Dirt Road			Northbound Hathaway Street			Eastbound Williams Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	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
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 22, 21

LOCATION: Banning
NORTH & SOUTH: Hathaway
EAST & WEST: Ramsey

PROJECT #: SC
LOCATION #: 3
CONTROL: STOP S

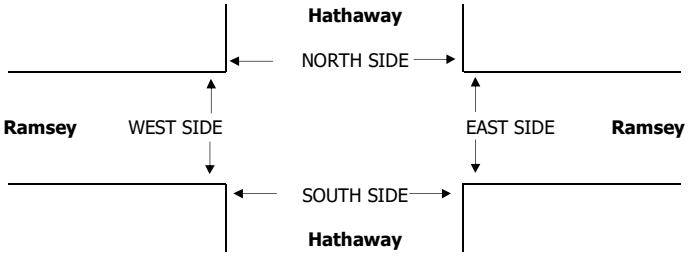
NOTES:
Minor Construction. SB closed

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

☑ Add U-Turns to Left Turns

		NORTHBOUND Hathaway			SOUTHBOUND Hathaway			EASTBOUND Ramsey			WESTBOUND Ramsey				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	1	0	11	11	2	0	0	27	6	58	0	0	0	0	0
	7:15 AM	0	0	0	1	0	17	11	4	0	0	28	6	67	0	0	0	0	0
	7:30 AM	0	0	0	1	0	8	18	1	0	0	22	3	53	0	0	0	0	0
	7:45 AM	0	0	0	2	0	15	26	3	0	0	31	12	89	0	0	0	0	0
	8:00 AM	0	0	0	0	0	18	6	2	0	0	14	1	41	0	0	0	0	0
	8:15 AM	0	0	0	0	0	12	12	3	0	0	24	1	52	0	0	0	0	0
	8:30 AM	0	0	0	1	0	13	11	9	0	0	22	0	56	0	0	0	0	0
	8:45 AM	0	0	0	1	0	14	13	3	0	0	19	6	56	0	0	0	0	0
	VOLUMES	0	0	0	7	0	108	108	27	0	0	187	35	472	0	0	0	0	0
	APPROACH %	0%	0%	0%	6%	0%	94%	80%	20%	0%	0%	84%	16%						
	APP/DEPART	0	/	143	115	/	0	135	/	34	222	/	295	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	5	0	51	66	10	0	0	108	27	267					
	APPROACH %	0%	0%	0%	9%	0%	91%	87%	13%	0%	0%	80%	20%						
	PEAK HR FACTOR		0.000			0.778			0.655			0.785		0.750					
	APP/DEPART	0	/	93	56	/	0	76	/	15	135	/	159	0					
PM	4:00 PM	0	0	0	6	0	17	20	9	0	0	42	11	105	0	0	0	0	0
	4:15 PM	0	0	0	0	0	19	20	3	0	0	22	6	70	0	0	0	0	0
	4:30 PM	0	0	0	2	0	29	13	5	0	0	28	5	82	0	0	0	0	0
	4:45 PM	0	0	0	2	0	11	9	9	0	0	36	4	71	0	0	0	0	0
	5:00 PM	0	0	0	3	0	16	11	1	0	0	31	12	74	0	0	0	0	0
	5:15 PM	0	0	0	1	0	28	28	3	0	0	37	11	108	0	0	0	0	0
	5:30 PM	0	0	0	0	0	12	17	0	0	0	34	8	71	0	0	0	0	0
	5:45 PM	0	0	0	1	0	14	20	5	0	0	37	10	87	0	0	0	0	0
	VOLUMES	0	0	0	15	0	146	138	35	0	0	267	67	668	0	0	0	0	0
	APPROACH %	0%	0%	0%	9%	0%	91%	80%	20%	0%	0%	80%	20%						
	APP/DEPART	0	/	205	161	/	0	173	/	50	334	/	413	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	5	0	70	76	9	0	0	139	41	340					
	APPROACH %	0%	0%	0%	7%	0%	93%	89%	11%	0%	0%	77%	23%						
	PEAK HR FACTOR		0.000			0.647			0.685			0.938		0.787					
	APP/DEPART	0	/	117	75	/	0	85	/	14	180	/	209	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:00 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	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
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	5:00 PM					0	0	0	0	0					

Appendix B INTERSECTION DELAY CALCULATION RESULTS

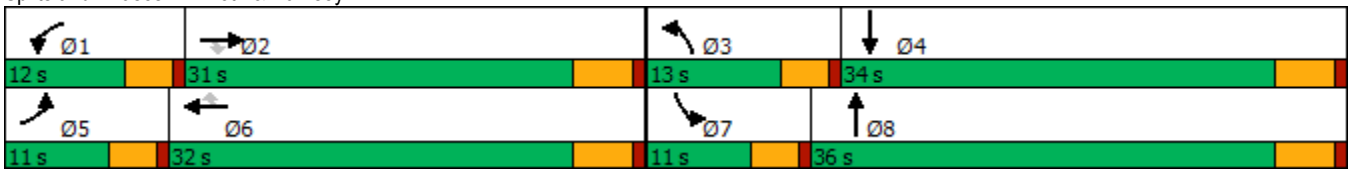
Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	213	117	96	182	27	127	141	191	39	212	63
Future Volume (vph)	37	213	117	96	182	27	127	141	191	39	212	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1703	0	1770	1798	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1703	0	1770	1798	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			121		83			18	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	242	133	109	207	31	144	377	0	44	313	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	11.0	31.0	31.0	12.0	32.0	32.0	13.0	36.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.0	16.4	16.4	7.8	21.9	21.9	8.9	35.8		7.0	29.1	
Actuated g/C Ratio	0.09	0.20	0.20	0.10	0.27	0.27	0.11	0.45		0.09	0.36	
v/c Ratio	0.28	0.66	0.32	0.66	0.42	0.06	0.73	0.47		0.29	0.47	
Control Delay	41.9	38.4	7.1	57.2	28.4	0.2	59.5	16.9		41.8	22.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	41.9	38.4	7.1	57.2	28.4	0.2	59.5	16.9		41.8	22.7	
LOS	D	D	A	E	C	A	E	B		D	C	
Approach Delay		28.7			34.9			28.7			25.0	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 80.4			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	19	24	35	22	7	22	159	16	3	169	16
Future Vol, veh/h	19	19	24	35	22	7	22	159	16	3	169	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	21	27	39	25	8	25	179	18	3	190	18
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	8.4	8.7	9.2	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	31%	55%	2%
Vol Thru, %	81%	31%	34%	90%
Vol Right, %	8%	39%	11%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	62	64	188
LT Vol	22	19	35	3
Through Vol	159	19	22	169
RT Vol	16	24	7	16
Lane Flow Rate	221	70	72	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.276	0.094	0.101	0.263
Departure Headway (Hd)	4.493	4.839	5.048	4.484
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	799	738	708	801
Service Time	2.527	2.883	3.092	2.517
HCM Lane V/C Ratio	0.277	0.095	0.102	0.263
HCM Control Delay	9.2	8.4	8.7	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.3	0.3	1.1

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	12	36	17	14	1	30	198	6	2	223	8
Future Vol, veh/h	10	12	36	17	14	1	30	198	6	2	223	8
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	14	41	19	16	1	34	225	7	2	253	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	567	562	258	582	559	225	262	0	0	232	0	0
Stage 1	262	262	-	293	293	-	-	-	-	-	-	-
Stage 2	305	300	-	289	266	-	-	-	-	-	-	-
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	434	436	781	424	438	814	1302	-	-	1336	-	-
Stage 1	743	691	-	715	670	-	-	-	-	-	-	-
Stage 2	705	666	-	719	689	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	412	424	781	384	426	814	1302	-	-	1336	-	-
Mov Cap-2 Maneuver	412	424	-	384	426	-	-	-	-	-	-	-
Stage 1	724	690	-	696	653	-	-	-	-	-	-	-
Stage 2	669	649	-	667	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	14.7	1	0.1
HCM LOS	B	B		

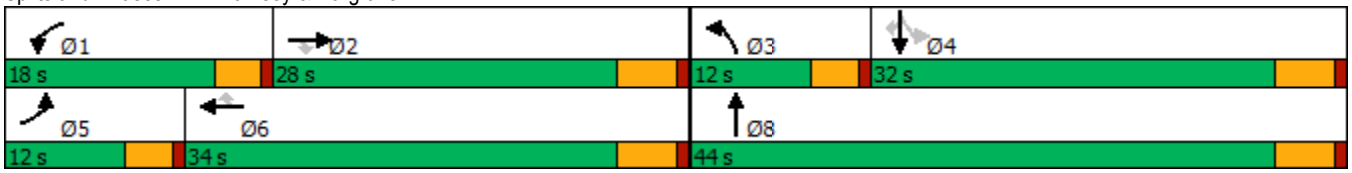
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1302	-	-	588	408	1336	-	-
HCM Lane V/C Ratio	0.026	-	-	0.112	0.089	0.002	-	-
HCM Control Delay (s)	7.8	-	-	11.9	14.7	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	43	55	143	84	31	82	169	122	27	271	50
Future Volume (vph)	36	43	55	143	84	31	82	169	122	27	271	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3252	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.546		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3252	0	997	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		144				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2577			270			624	
Travel Time (s)		51.1			50.2			6.1			14.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	51	65	168	99	36	96	343	0	32	319	59
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	28.0	28.0	18.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.0	12.1	12.1	12.5	18.5	18.5	8.0	42.2		32.7	32.7	32.7
Actuated g/C Ratio	0.10	0.16	0.16	0.16	0.24	0.24	0.10	0.54		0.42	0.42	0.42
v/c Ratio	0.24	0.18	0.17	0.61	0.23	0.08	0.54	0.19		0.08	0.42	0.08
Control Delay	37.9	29.9	1.0	41.9	25.1	0.4	47.1	6.9		20.0	22.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	37.9	29.9	1.0	41.9	25.1	0.4	47.1	6.9		20.0	22.1	0.2
LOS	D	C	A	D	C	A	D	A		B	C	A
Approach Delay		20.1			31.5			15.7			18.8	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.7			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	31	5	42	73	344	0	0	242	263
Future Vol, veh/h	0	0	0	31	5	42	73	344	0	0	242	263
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	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	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	36	6	48	84	395	0	0	278	302

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	992	1143	395	580	0	-	-	-	0
Stage 1	563	563	-	-	-	-	-	-	-
Stage 2	429	580	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	270	198	650	984	-	0	0	-	-
Stage 1	566	506	-	-	-	0	0	-	-
Stage 2	652	497	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	247	0	650	984	-	-	-	-	-
Mov Cap-2 Maneuver	247	0	-	-	-	-	-	-	-
Stage 1	518	0	-	-	-	-	-	-	-
Stage 2	652	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.2	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	984	-	384	-	-
HCM Lane V/C Ratio	0.085	-	0.233	-	-
HCM Control Delay (s)	9	-	17.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.9	-	-

Intersection												
Int Delay, s/veh	34.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	281	4	46	0	0	0	0	136	43	158	115	0
Future Vol, veh/h	281	4	46	0	0	0	0	136	43	158	115	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	-	-	-	-	-	-	-	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	327	5	53	0	0	0	0	158	50	184	134	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	685	710	134				-	0	0	208	0	0
Stage 1	502	502	-				-	-	-	-	-	-
Stage 2	183	208	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	411	356	910				0	-	-	1351	-	0
Stage 1	604	539	-				0	-	-	-	-	0
Stage 2	844	726	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	355	0	910				-	-	-	1351	-	-
Mov Cap-2 Maneuver	355	0	-				-	-	-	-	-	-
Stage 1	522	0	-				-	-	-	-	-	-
Stage 2	844	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	76.9	0	4.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	388	1351	-
HCM Lane V/C Ratio	-	-	0.992	0.136	-
HCM Control Delay (s)	-	-	76.9	8.1	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	11.8	0.5	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	1	18	96	10	24
Future Vol, veh/h	53	1	18	96	10	24
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	35	35	35	35
Mvmt Flow	62	1	21	113	12	28
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.9	8	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	98%	29%
Vol Thru, %	16%	0%	71%
Vol Right, %	84%	2%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	114	54	34
LT Vol	0	53	10
Through Vol	18	0	24
RT Vol	96	1	0
Lane Flow Rate	134	64	40
Geometry Grp	1	1	1
Degree of Util (X)	0.154	0.078	0.053
Departure Headway (Hd)	4.131	4.42	4.768
Convergence, Y/N	Yes	Yes	Yes
Cap	861	797	744
Service Time	2.19	2.519	2.843
HCM Lane V/C Ratio	0.156	0.08	0.054
HCM Control Delay	8	7.9	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.3	0.2

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	14	15	105	70	13
Future Vol, veh/h	12	14	15	105	70	13
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	88	88	88	88	88	88
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	14	16	17	119	80	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	241	88	95	0	-	0
Stage 1	88	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	747	970	1427	-	-	-
Stage 1	935	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	737	970	1427	-	-	-
Mov Cap-2 Maneuver	737	-	-	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1427	-	846	-	-
HCM Lane V/C Ratio	0.012	-	0.035	-	-
HCM Control Delay (s)	7.6	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	5	4	110	82	4
Future Vol, veh/h	6	5	4	110	82	4
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	88	88	88	88	88	88
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	7	6	5	125	93	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	231	96	98	0	-	0
Stage 1	96	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	757	960	1423	-	-	-
Stage 1	928	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	754	960	1423	-	-	-
Mov Cap-2 Maneuver	754	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1423	-	835	-	-
HCM Lane V/C Ratio	0.003	-	0.015	-	-
HCM Control Delay (s)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	7	8	111	82	7
Future Vol, veh/h	6	7	8	111	82	7
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	7	8	9	125	92	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	239	96	100	0	-	0
Stage 1	96	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	749	960	1421	-	-	-
Stage 1	928	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	744	960	1421	-	-	-
Mov Cap-2 Maneuver	744	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1421	-	847	-	-
HCM Lane V/C Ratio	0.006	-	0.017	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	14	146	36	7	69
Future Vol, veh/h	89	14	146	36	7	69
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	75	75	75	75	75	75
Heavy Vehicles, %	6	6	6	6	14	14
Mvmt Flow	119	19	195	48	9	92

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	243	0	-	0	476	219
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	257	-
Critical Hdwy	4.16	-	-	-	6.54	6.34
Critical Hdwy Stg 1	-	-	-	-	5.54	-
Critical Hdwy Stg 2	-	-	-	-	5.54	-
Follow-up Hdwy	2.254	-	-	-	3.626	3.426
Pot Cap-1 Maneuver	1300	-	-	-	526	792
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	759	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1300	-	-	-	478	792
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	759	-

Approach	EB	WB	SB
HCM Control Delay, s	7	0	10.6
HCM LOS			B

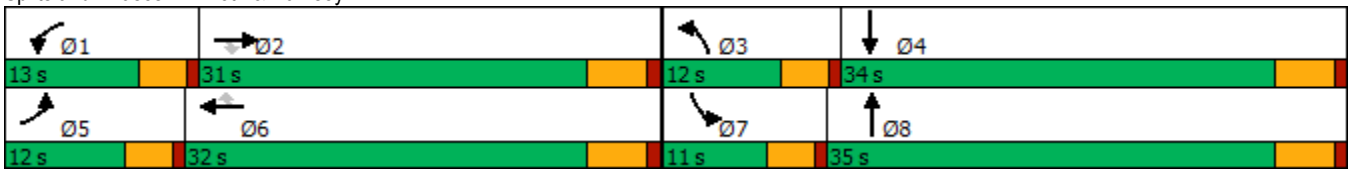
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1300	-	-	-	747
HCM Lane V/C Ratio	0.091	-	-	-	0.136
HCM Control Delay (s)	8	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	278	187	174	271	39	167	211	127	30	211	74
Future Volume (vph)	93	278	187	174	271	39	167	211	127	30	211	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1758	0	1770	1790	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1758	0	1770	1790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			121		36			21	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	287	193	179	279	40	172	349	0	31	294	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.8	18.4	18.4	9.0	22.0	22.0	8.0	37.0		7.0	29.1	
Actuated g/C Ratio	0.09	0.22	0.22	0.11	0.27	0.27	0.10	0.45		0.08	0.35	
v/c Ratio	0.60	0.72	0.40	0.96	0.58	0.08	1.00	0.43		0.21	0.46	
Control Delay	54.3	40.4	6.5	98.3	32.8	0.3	111.3	18.7		40.9	23.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	54.3	40.4	6.5	98.3	32.8	0.3	111.3	18.7		40.9	23.0	
LOS	D	D	A	F	C	A	F	B		D	C	
Approach Delay		31.4			53.7			49.3			24.7	
Approach LOS		C			D			D			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 82.6			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 40.9		Intersection LOS: D	
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	17	13	20	12	6	31	190	18	7	136	8
Future Vol, veh/h	10	17	13	20	12	6	31	190	18	7	136	8
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	20	16	24	14	7	37	229	22	8	164	10
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	8.3	8.4	9.7	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	25%	53%	5%
Vol Thru, %	79%	43%	32%	90%
Vol Right, %	8%	33%	16%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	40	38	151
LT Vol	31	10	20	7
Through Vol	190	17	12	136
RT Vol	18	13	6	8
Lane Flow Rate	288	48	46	182
Geometry Grp	1	1	1	1
Degree of Util (X)	0.348	0.066	0.064	0.225
Departure Headway (Hd)	4.346	4.893	5.051	4.45
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	829	731	708	808
Service Time	2.368	2.931	3.09	2.474
HCM Lane V/C Ratio	0.347	0.066	0.065	0.225
HCM Control Delay	9.7	8.3	8.4	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.6	0.2	0.2	0.9

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	18	45	10	14	6	25	200	10	3	170	7
Future Vol, veh/h	6	18	45	10	14	6	25	200	10	3	170	7
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	21	53	12	16	7	29	235	12	4	200	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	523	517	204	542	509	235	208	0	0	247	0	0
Stage 1	212	212	-	293	293	-	-	-	-	-	-	-
Stage 2	311	305	-	249	216	-	-	-	-	-	-	-
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	465	462	837	451	467	804	1363	-	-	1319	-	-
Stage 1	790	727	-	715	670	-	-	-	-	-	-	-
Stage 2	699	662	-	755	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	440	451	837	400	456	804	1363	-	-	1319	-	-
Mov Cap-2 Maneuver	440	451	-	400	456	-	-	-	-	-	-	-
Stage 1	773	725	-	700	656	-	-	-	-	-	-	-
Stage 2	661	648	-	685	722	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	13.2	0.8	0.1
HCM LOS	B	B		

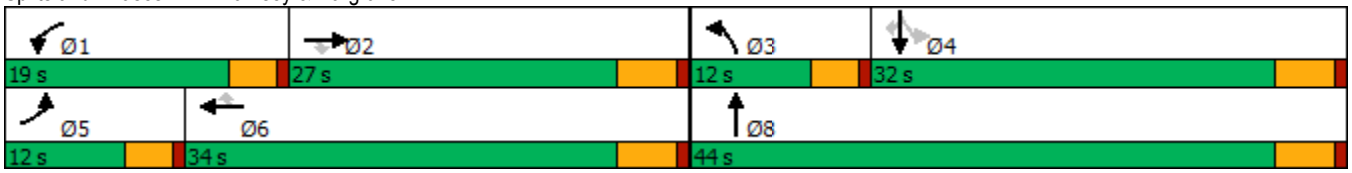
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1363	-	-	643	475	1319	-	-
HCM Lane V/C Ratio	0.022	-	-	0.126	0.074	0.003	-	-
HCM Control Delay (s)	7.7	-	-	11.4	13.2	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	84	88	184	119	55	76	176	99	16	209	44
Future Volume (vph)	58	84	88	184	119	55	76	176	99	16	209	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3284	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.579		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3284	0	1058	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		101				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2577			270			624	
Travel Time (s)		51.1			50.2			6.1			14.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	86	90	188	121	56	78	281	0	16	213	45
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	27.0	27.0	19.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.2	12.2	13.3	19.2	19.2	8.1	40.9		31.6	31.6	31.6
Actuated g/C Ratio	0.11	0.16	0.16	0.17	0.25	0.25	0.11	0.53		0.41	0.41	0.41
v/c Ratio	0.33	0.30	0.23	0.64	0.27	0.12	0.43	0.16		0.04	0.28	0.06
Control Delay	40.4	32.4	1.4	42.3	25.2	0.5	43.1	7.8		20.2	21.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	40.4	32.4	1.4	42.3	25.2	0.5	43.1	7.8		20.2	21.0	0.2
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		22.6			30.2			15.5			17.5	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 21.7		Intersection LOS: C	
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	43	3	56	78	315	0	0	215	293
Future Vol, veh/h	0	0	0	43	3	56	78	315	0	0	215	293
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	48	3	62	87	350	0	0	239	326

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	926	1089	350	565	0	-	-	-	0
Stage 1	524	524	-	-	-	-	-	-	-
Stage 2	402	565	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	296	214	689	997	-	0	0	-	-
Stage 1	590	527	-	-	-	0	0	-	-
Stage 2	671	505	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	270	0	689	997	-	-	-	-	-
Mov Cap-2 Maneuver	270	0	-	-	-	-	-	-	-
Stage 1	539	0	-	-	-	-	-	-	-
Stage 2	671	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17	1.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	997	-	412	-	-
HCM Lane V/C Ratio	0.087	-	0.275	-	-
HCM Control Delay (s)	9	-	17	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.1	-	-

Intersection												
Int Delay, s/veh	14.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	246	5	45	0	0	0	0	146	54	155	101	0
Future Vol, veh/h	246	5	45	0	0	0	0	146	54	155	101	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	259	5	47	0	0	0	0	154	57	163	106	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	615	643	106				-	0	0	211	0	0
Stage 1	432	432	-				-	-	-	-	-	-
Stage 2	183	211	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	451	389	943				0	-	-	1348	-	0
Stage 1	650	579	-				0	-	-	-	-	0
Stage 2	844	724	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	393	0	943				-	-	-	1348	-	-
Mov Cap-2 Maneuver	393	0	-				-	-	-	-	-	-
Stage 1	650	0	-				-	-	-	-	-	-
Stage 2	735	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	32.1	0	4.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	432	1348	-
HCM Lane V/C Ratio	-	-	0.721	0.121	-
HCM Control Delay (s)	-	-	32.1	8	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	5.6	0.4	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	93	8	25	57	11	24
Future Vol, veh/h	93	8	25	57	11	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	35	35	35	35
Mvmt Flow	101	9	27	62	12	26
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8	7.9	8.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	92%	31%
Vol Thru, %	30%	0%	69%
Vol Right, %	70%	8%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	82	101	35
LT Vol	0	93	11
Through Vol	25	0	24
RT Vol	57	8	0
Lane Flow Rate	89	110	38
Geometry Grp	1	1	1
Degree of Util (X)	0.106	0.131	0.051
Departure Headway (Hd)	4.301	4.29	4.822
Convergence, Y/N	Yes	Yes	Yes
Cap	823	824	733
Service Time	2.382	2.374	2.913
HCM Lane V/C Ratio	0.108	0.133	0.052
HCM Control Delay	7.9	8	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.4	0.2

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	15	13	92	116	14
Future Vol, veh/h	6	15	13	92	116	14
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	6	15	13	95	120	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	248	127	134	0	-	0
Stage 1	127	-	-	-	-	-
Stage 2	121	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	740	923	1380	-	-	-
Stage 1	899	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	733	923	1380	-	-	-
Mov Cap-2 Maneuver	733	-	-	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1380	-	859	-	-
HCM Lane V/C Ratio	0.01	-	0.025	-	-
HCM Control Delay (s)	7.6	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	14	3	89	126	3
Future Vol, veh/h	6	14	3	89	126	3
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	7	16	3	100	142	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	250	144	145	0	-	0
Stage 1	144	-	-	-	-	-
Stage 2	106	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	739	903	1367	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	738	903	1367	-	-	-
Mov Cap-2 Maneuver	738	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	918	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1367	-	846	-	-
HCM Lane V/C Ratio	0.002	-	0.027	-	-
HCM Control Delay (s)	7.6	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	7	8	95	119	14
Future Vol, veh/h	8	7	8	95	119	14
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	9	8	9	107	134	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	267	142	150	0	-	0
Stage 1	142	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	722	906	1361	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	717	906	1361	-	-	-
Mov Cap-2 Maneuver	717	-	-	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	901	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1361	-	794	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s)	7.7	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	13	174	51	6	88
Future Vol, veh/h	83	13	174	51	6	88
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	79	79	79	79	79	79
Heavy Vehicles, %	6	6	6	6	14	14
Mvmt Flow	105	16	220	65	8	111

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	285	0	-	0	479	253
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	226	-
Critical Hdwy	4.16	-	-	-	6.54	6.34
Critical Hdwy Stg 1	-	-	-	-	5.54	-
Critical Hdwy Stg 2	-	-	-	-	5.54	-
Follow-up Hdwy	2.254	-	-	-	3.626	3.426
Pot Cap-1 Maneuver	1255	-	-	-	524	757
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	784	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1255	-	-	-	480	757
Mov Cap-2 Maneuver	-	-	-	-	480	-
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	784	-

Approach	EB	WB	SB
HCM Control Delay, s	7	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1255	-	-	-	730
HCM Lane V/C Ratio	0.084	-	-	-	0.163
HCM Control Delay (s)	8.1	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

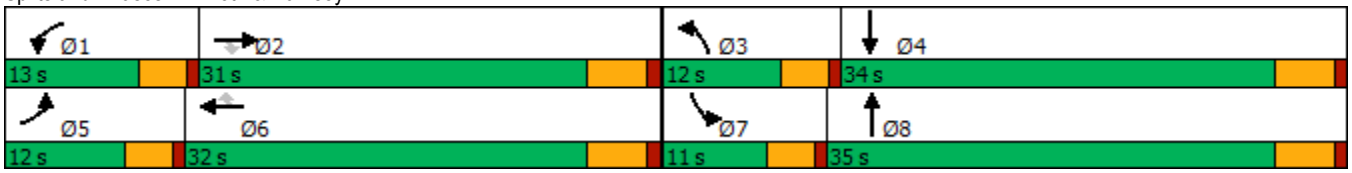
Opening Year Conditions - Without Project

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	222	122	100	189	28	132	147	199	41	220	66
Future Volume (vph)	38	222	122	100	189	28	132	147	199	41	220	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1703	0	1770	1798	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1703	0	1770	1798	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			121		81			18	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	252	139	114	215	32	150	393	0	47	325	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.6	16.7	16.7	8.6	20.0	20.0	8.1	35.6		7.1	29.5	
Actuated g/C Ratio	0.10	0.21	0.21	0.11	0.25	0.25	0.10	0.45		0.09	0.38	
v/c Ratio	0.26	0.66	0.32	0.61	0.47	0.07	0.82	0.48		0.29	0.47	
Control Delay	40.5	37.6	7.0	51.5	29.2	0.3	72.1	18.0		42.0	22.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.5	37.6	7.0	51.5	29.2	0.3	72.1	18.0		42.0	22.6	
LOS	D	D	A	D	C	A	E	B		D	C	
Approach Delay		28.1			33.7			32.9			25.1	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 78.5			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 30.1		Intersection LOS: C	
Intersection Capacity Utilization 58.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	20	25	36	23	7	23	165	17	3	176	17
Future Vol, veh/h	20	20	25	36	23	7	23	165	17	3	176	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	22	28	40	26	8	26	185	19	3	198	19
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	8.5	8.7	9.4	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	31%	55%	2%
Vol Thru, %	80%	31%	35%	90%
Vol Right, %	8%	38%	11%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	205	65	66	196
LT Vol	23	20	36	3
Through Vol	165	20	23	176
RT Vol	17	25	7	17
Lane Flow Rate	230	73	74	220
Geometry Grp	1	1	1	1
Degree of Util (X)	0.289	0.099	0.105	0.276
Departure Headway (Hd)	4.521	4.886	5.096	4.511
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	795	730	701	795
Service Time	2.556	2.937	3.147	2.547
HCM Lane V/C Ratio	0.289	0.1	0.106	0.277
HCM Control Delay	9.4	8.5	8.7	9.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.3	0.4	1.1

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	12	37	18	15	1	31	206	6	2	232	8
Future Vol, veh/h	10	12	37	18	15	1	31	206	6	2	232	8
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	14	42	20	17	1	35	234	7	2	264	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	590	584	269	605	581	234	273	0	0	241	0	0
Stage 1	273	273	-	304	304	-	-	-	-	-	-	-
Stage 2	317	311	-	301	277	-	-	-	-	-	-	-
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	419	423	770	410	425	805	1290	-	-	1326	-	-
Stage 1	733	684	-	705	663	-	-	-	-	-	-	-
Stage 2	694	658	-	708	681	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	396	411	770	369	413	805	1290	-	-	1326	-	-
Mov Cap-2 Maneuver	396	411	-	369	413	-	-	-	-	-	-	-
Stage 1	713	683	-	686	645	-	-	-	-	-	-	-
Stage 2	656	640	-	655	680	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	15.1	1	0.1
HCM LOS	B	C		

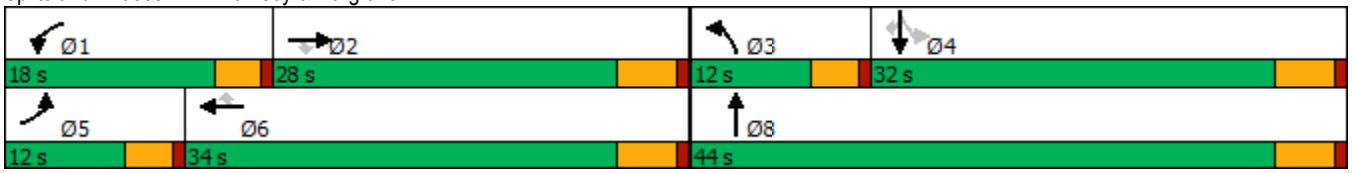
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1290	-	-	576	394	1326	-	-
HCM Lane V/C Ratio	0.027	-	-	0.116	0.098	0.002	-	-
HCM Control Delay (s)	7.9	-	-	12.1	15.1	7.7	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	45	57	149	87	32	85	176	127	28	282	52
Future Volume (vph)	37	45	57	149	87	32	85	176	127	28	282	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3252	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.539		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3252	0	985	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		149				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2104			270			624	
Travel Time (s)		51.1			41.0			6.1			14.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	53	67	175	102	38	100	356	0	33	332	61
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	28.0	28.0	18.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.0	12.1	12.1	12.7	18.6	18.6	8.0	41.8		32.3	32.3	32.3
Actuated g/C Ratio	0.10	0.16	0.16	0.16	0.24	0.24	0.10	0.54		0.42	0.42	0.42
v/c Ratio	0.25	0.19	0.18	0.63	0.24	0.08	0.56	0.20		0.08	0.44	0.08
Control Delay	38.1	30.1	1.0	42.5	25.1	0.3	48.2	7.0		20.1	22.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	38.1	30.1	1.0	42.5	25.1	0.3	48.2	7.0		20.1	22.5	0.2
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		20.3			31.8			16.0			19.1	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.4			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 48.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	32	5	44	76	358	0	0	252	274
Future Vol, veh/h	0	0	0	32	5	44	76	358	0	0	252	274
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	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	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	37	6	51	87	411	0	0	290	315

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	1033	1190	411	605	0	-	-	-	0
Stage 1	585	585	-	-	-	-	-	-	-
Stage 2	448	605	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	255	186	636	963	-	0	0	-	-
Stage 1	553	494	-	-	-	0	0	-	-
Stage 2	639	484	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	232	0	636	963	-	-	-	-	-
Mov Cap-2 Maneuver	232	0	-	-	-	-	-	-	-
Stage 1	503	0	-	-	-	-	-	-	-
Stage 2	639	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	963	-	367	-	-
HCM Lane V/C Ratio	0.091	-	0.254	-	-
HCM Control Delay (s)	9.1	-	18.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1	-	-

Intersection												
Int Delay, s/veh	46.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	292	4	48	0	0	0	0	141	45	164	120	0
Future Vol, veh/h	292	4	48	0	0	0	0	141	45	164	120	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	340	5	56	0	0	0	0	164	52	191	140	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	712	738	140				-	0	0	216	0	0
Stage 1	522	522	-				-	-	-	-	-	-
Stage 2	190	216	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	396	343	903				0	-	-	1342	-	0
Stage 1	591	528	-				0	-	-	-	-	0
Stage 2	838	720	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	~ 335	0	903				-	-	-	1342	-	-
Mov Cap-2 Maneuver	~ 335	0	-				-	-	-	-	-	-
Stage 1	591	0	-				-	-	-	-	-	-
Stage 2	709	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	106.2	0	4.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	368	1342	-
HCM Lane V/C Ratio	-	-	1.087	0.142	-
HCM Control Delay (s)	-	-	106.2	8.1	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	14.4	0.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	1	19	100	12	25
Future Vol, veh/h	55	1	19	100	12	25
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	35	35	35	35
Mvmt Flow	65	1	22	118	14	29
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8	8	8.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	98%	32%
Vol Thru, %	16%	0%	68%
Vol Right, %	84%	2%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	119	56	37
LT Vol	0	55	12
Through Vol	19	0	25
RT Vol	100	1	0
Lane Flow Rate	140	66	44
Geometry Grp	1	1	1
Degree of Util (X)	0.161	0.083	0.058
Departure Headway (Hd)	4.141	4.542	4.784
Convergence, Y/N	Yes	Yes	Yes
Cap	858	794	740
Service Time	2.205	2.542	2.865
HCM Lane V/C Ratio	0.163	0.083	0.059
HCM Control Delay	8	8	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.3	0.2

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	15	16	109	73	14
Future Vol, veh/h	12	15	16	109	73	14
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	88	88	88	88	88	88
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	14	17	18	124	83	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	251	91	99	0	-	0
Stage 1	91	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	738	967	1422	-	-	-
Stage 1	933	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	728	967	1422	-	-	-
Mov Cap-2 Maneuver	728	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1422	-	844	-	-
HCM Lane V/C Ratio	0.013	-	0.036	-	-
HCM Control Delay (s)	7.6	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	5	4	114	85	4
Future Vol, veh/h	6	5	4	114	85	4
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	88	88	88	88	88	88
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	7	6	5	130	97	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	240	100	102	0	-	0
Stage 1	100	-	-	-	-	-
Stage 2	140	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	748	956	1418	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	745	956	1418	-	-	-
Mov Cap-2 Maneuver	745	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	887	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1418	-	828	-	-
HCM Lane V/C Ratio	0.003	-	0.015	-	-
HCM Control Delay (s)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	7	8	115	85	7
Future Vol, veh/h	6	7	8	115	85	7
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	7	8	9	129	96	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	247	100	104	0	-	0
Stage 1	100	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	741	956	1416	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	736	956	1416	-	-	-
Mov Cap-2 Maneuver	736	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.5	0
HCM LOS	A		

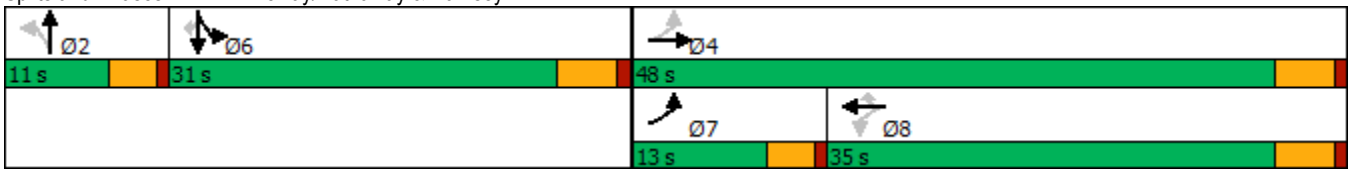
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1416	-	840	-	-
HCM Lane V/C Ratio	0.006	-	0.017	-	-
HCM Control Delay (s)	7.6	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	15	0	0	152	37	0	1	0	7	1	72
Future Volume (vph)	93	15	0	0	152	37	0	1	0	7	1	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1300	1346
Flt Permitted	0.452									0.950	0.999	
Satd. Flow (perm)	810	1792	0	0	3406	1524	0	1863	0	1504	1300	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121					47	121
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		473			630			194			646	
Travel Time (s)		8.1			10.7			4.4			12.6	
Peak Hour Factor	0.75	0.75	0.92	0.92	0.75	0.75	0.92	0.92	0.92	0.75	0.92	0.75
Heavy Vehicles (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		49%
Lane Group Flow (vph)	124	20	0	0	203	49	0	1	0	8	49	49
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	21.5	20.5			10.5	10.5		7.0		26.2	26.2	26.2
Actuated g/C Ratio	0.32	0.30			0.15	0.15		0.10		0.39	0.39	0.39
v/c Ratio	0.34	0.04			0.39	0.14		0.01		0.01	0.09	0.08
Control Delay	19.1	16.1			29.1	0.9		29.0		14.7	5.9	0.3
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	19.1	16.1			29.1	0.9		29.0		14.7	5.9	0.3
LOS	B	B			C	A		C		B	A	A
Approach Delay		18.7			23.6			29.0			3.9	
Approach LOS		B			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 67.8			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 36.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey

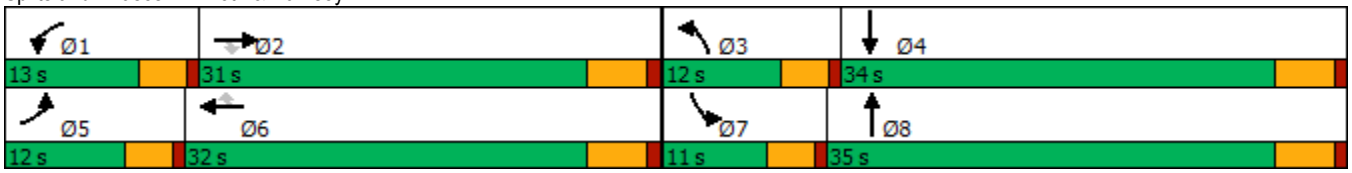


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	289	194	181	282	41	174	219	132	31	219	77
Future Volume (vph)	97	289	194	181	282	41	174	219	132	31	219	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1758	0	1770	1790	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1758	0	1770	1790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200			121		36			21	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	298	200	187	291	42	179	362	0	32	305	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.8	18.8	18.8	9.0	22.5	22.5	8.0	37.0		7.0	29.1	
Actuated g/C Ratio	0.09	0.23	0.23	0.11	0.27	0.27	0.10	0.45		0.08	0.35	
v/c Ratio	0.62	0.73	0.40	1.01	0.60	0.08	1.05	0.45		0.21	0.48	
Control Delay	56.5	40.9	6.5	110.6	33.1	0.3	123.2	19.2		41.3	23.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	56.5	40.9	6.5	110.6	33.1	0.3	123.2	19.2		41.3	23.6	
LOS	E	D	A	F	C	A	F	B		D	C	
Approach Delay		32.0			58.3			53.6			25.3	
Approach LOS		C			E			D			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 83.1			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 43.6		Intersection LOS: D	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	18	14	21	12	6	32	198	19	7	141	8
Future Vol, veh/h	10	18	14	21	12	6	32	198	19	7	141	8
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	22	17	25	14	7	39	239	23	8	170	10
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	8.3	8.5	9.9	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	24%	54%	4%
Vol Thru, %	80%	43%	31%	90%
Vol Right, %	8%	33%	15%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	249	42	39	156
LT Vol	32	10	21	7
Through Vol	198	18	12	141
RT Vol	19	14	6	8
Lane Flow Rate	300	51	47	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.364	0.069	0.067	0.234
Departure Headway (Hd)	4.363	4.93	5.102	4.474
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	825	725	701	803
Service Time	2.387	2.972	3.144	2.502
HCM Lane V/C Ratio	0.364	0.07	0.067	0.234
HCM Control Delay	9.9	8.3	8.5	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.7	0.2	0.2	0.9

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	19	47	10	15	6	26	208	10	3	177	7
Future Vol, veh/h	6	19	47	10	15	6	26	208	10	3	177	7
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	22	55	12	18	7	31	245	12	4	208	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	546	539	212	566	531	245	216	0	0	257	0	0
Stage 1	220	220	-	307	307	-	-	-	-	-	-	-
Stage 2	326	319	-	259	224	-	-	-	-	-	-	-
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	448	449	828	435	454	794	1354	-	-	1308	-	-
Stage 1	782	721	-	703	661	-	-	-	-	-	-	-
Stage 2	687	653	-	746	718	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	422	437	828	382	442	794	1354	-	-	1308	-	-
Mov Cap-2 Maneuver	422	437	-	382	442	-	-	-	-	-	-	-
Stage 1	764	719	-	687	646	-	-	-	-	-	-	-
Stage 2	647	638	-	672	716	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	13.5	0.8	0.1
HCM LOS	B	B		

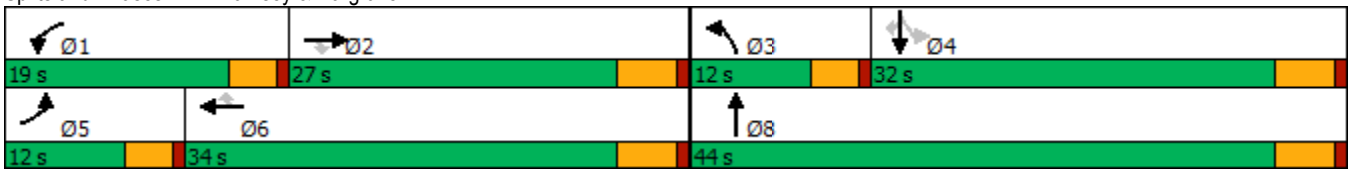
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1354	-	-	629	458	1308	-	-
HCM Lane V/C Ratio	0.023	-	-	0.135	0.08	0.003	-	-
HCM Control Delay (s)	7.7	-	-	11.6	13.5	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	87	92	191	124	57	79	183	103	17	217	46
Future Volume (vph)	60	87	92	191	124	57	79	183	103	17	217	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3284	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.573		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3284	0	1047	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		105				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2104			270			624	
Travel Time (s)		51.1			41.0			6.1			14.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	89	94	195	127	58	81	292	0	17	221	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	27.0	27.0	19.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.3	12.3	13.5	19.4	19.4	8.1	40.6		31.3	31.3	31.3
Actuated g/C Ratio	0.11	0.16	0.16	0.18	0.25	0.25	0.11	0.53		0.41	0.41	0.41
v/c Ratio	0.34	0.31	0.24	0.65	0.28	0.12	0.45	0.16		0.04	0.30	0.06
Control Delay	40.7	32.7	1.7	42.8	25.3	0.5	43.7	7.9		20.2	21.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	40.7	32.7	1.7	42.8	25.3	0.5	43.7	7.9		20.2	21.3	0.2
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		22.7			30.5			15.6			17.7	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 76.9			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 21.9		Intersection LOS: C	
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	45	3	58	81	328	0	0	224	305
Future Vol, veh/h	0	0	0	45	3	58	81	328	0	0	224	305
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	50	3	64	90	364	0	0	249	339

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	963	1132	364	588	0	-	-	-	0
Stage 1	544	544	-	-	-	-	-	-	-
Stage 2	419	588	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	281	201	676	977	-	0	0	-	-
Stage 1	578	516	-	-	-	0	0	-	-
Stage 2	659	493	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	255	0	676	977	-	-	-	-	-
Mov Cap-2 Maneuver	255	0	-	-	-	-	-	-	-
Stage 1	525	0	-	-	-	-	-	-	-
Stage 2	659	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18	1.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	977	-	393	-	-
HCM Lane V/C Ratio	0.092	-	0.3	-	-
HCM Control Delay (s)	9.1	-	18	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.2	-	-

Intersection												
Int Delay, s/veh	16.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	256	5	47	0	0	0	0	152	56	161	105	0
Future Vol, veh/h	256	5	47	0	0	0	0	152	56	161	105	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	269	5	49	0	0	0	0	160	59	169	111	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	639	668	111				-	0	0	219	0	0
Stage 1	449	449	-				-	-	-	-	-	-
Stage 2	190	219	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	437	377	937				0	-	-	1339	-	0
Stage 1	639	569	-				0	-	-	-	-	0
Stage 2	838	718	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	378	0	937				-	-	-	1339	-	-
Mov Cap-2 Maneuver	378	0	-				-	-	-	-	-	-
Stage 1	639	0	-				-	-	-	-	-	-
Stage 2	726	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.9	0	4.9
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	417	1339	-
HCM Lane V/C Ratio	-	-	0.777	0.127	-
HCM Control Delay (s)	-	-	37.9	8.1	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	6.7	0.4	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	8	26	59	11	25
Future Vol, veh/h	97	8	26	59	11	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	35	35	35	35
Mvmt Flow	105	9	28	64	12	27
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.1	7.9	8.2
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	92%	31%
Vol Thru, %	31%	0%	69%
Vol Right, %	69%	8%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	85	105	36
LT Vol	0	97	11
Through Vol	26	0	25
RT Vol	59	8	0
Lane Flow Rate	92	114	39
Geometry Grp	1	1	1
Degree of Util (X)	0.111	0.136	0.052
Departure Headway (Hd)	4.309	4.3	4.829
Convergence, Y/N	Yes	Yes	Yes
Cap	820	822	731
Service Time	2.394	2.388	2.926
HCM Lane V/C Ratio	0.112	0.139	0.053
HCM Control Delay	7.9	8.1	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.5	0.2

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	16	14	96	121	15
Future Vol, veh/h	6	16	14	96	121	15
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	6	16	14	99	125	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	260	133	140	0	-	0
Stage 1	133	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	729	916	1373	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	721	916	1373	-	-	-
Mov Cap-2 Maneuver	721	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1373	-	853	-	-
HCM Lane V/C Ratio	0.011	-	0.027	-	-
HCM Control Delay (s)	7.7	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	15	3	93	131	3
Future Vol, veh/h	6	15	3	93	131	3
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	7	17	3	104	147	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	259	149	150	0	-	0
Stage 1	149	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	730	898	1361	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	729	898	1361	-	-	-
Mov Cap-2 Maneuver	729	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	915	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1361	-	842	-	-
HCM Lane V/C Ratio	0.002	-	0.028	-	-
HCM Control Delay (s)	7.7	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	7	8	99	124	15
Future Vol, veh/h	8	7	8	99	124	15
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	9	8	9	111	139	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	277	148	156	0	-	0
Stage 1	148	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	713	899	1354	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	708	899	1354	-	-	-
Mov Cap-2 Maneuver	708	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	897	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.6	0
HCM LOS	A		

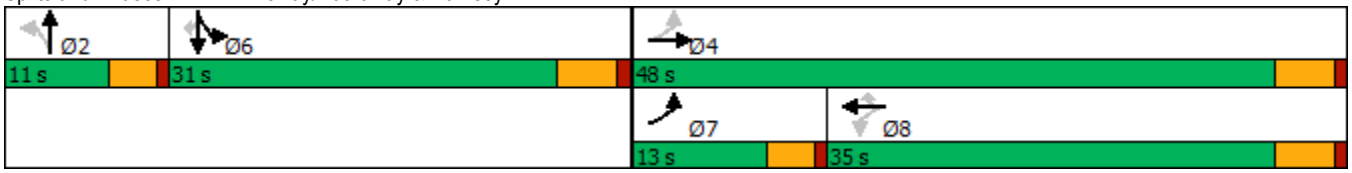
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1354	-	786	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s)	7.7	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	14	0	0	181	53	0	1	0	6	1	92
Future Volume (vph)	86	14	0	0	181	53	0	1	0	6	1	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1298	1346
Flt Permitted	0.444									0.950	0.999	
Satd. Flow (perm)	796	1792	0	0	3406	1524	0	1863	0	1504	1298	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121					57	121
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		473			630			194			646	
Travel Time (s)		8.1			10.7			4.4			12.6	
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 (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		49%
Lane Group Flow (vph)	109	18	0	0	229	67	0	1	0	7	59	59
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	21.6	20.6			10.8	10.8		7.1		26.2	26.2	26.2
Actuated g/C Ratio	0.32	0.30			0.16	0.16		0.10		0.39	0.39	0.39
v/c Ratio	0.30	0.03			0.42	0.20		0.01		0.01	0.11	0.10
Control Delay	18.4	15.9			29.4	2.7		29.0		14.8	5.7	0.7
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	18.4	15.9			29.4	2.7		29.0		14.8	5.7	0.7
LOS	B	B			C	A		C		B	A	A
Approach Delay		18.0			23.4			29.0			3.8	
Approach LOS		B			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 68			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 36.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey



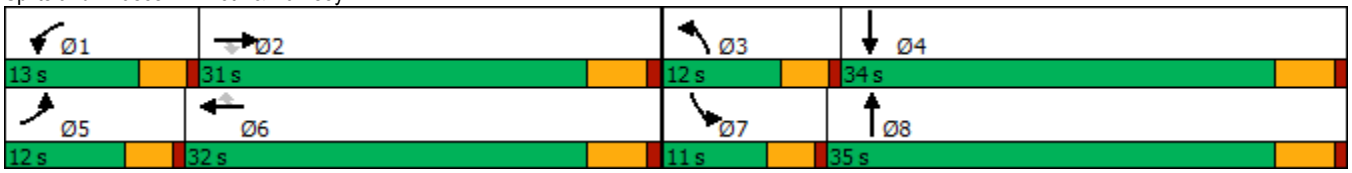
Opening Year Conditions - Plus Project

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	226	122	100	190	28	132	147	199	41	220	66
Future Volume (vph)	38	226	122	100	190	28	132	147	199	41	220	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1703	0	1770	1798	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1703	0	1770	1798	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			121		81			18	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	257	139	114	216	32	150	393	0	47	325	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.6	16.9	16.9	8.6	20.2	20.2	8.1	35.6		7.1	29.5	
Actuated g/C Ratio	0.10	0.21	0.21	0.11	0.26	0.26	0.10	0.45		0.09	0.37	
v/c Ratio	0.26	0.67	0.32	0.61	0.47	0.07	0.82	0.48		0.30	0.48	
Control Delay	40.6	37.7	6.9	51.7	29.1	0.2	72.8	18.1		42.1	22.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.6	37.7	6.9	51.7	29.1	0.2	72.8	18.1		42.1	22.7	
LOS	D	D	A	D	C	A	E	B		D	C	
Approach Delay		28.3			33.7			33.2			25.2	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 78.7			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 30.3		Intersection LOS: C	
Intersection Capacity Utilization 58.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	21	25	38	23	7	23	172	24	3	178	17
Future Vol, veh/h	20	21	25	38	23	7	23	172	24	3	178	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	24	28	43	26	8	26	193	27	3	200	19
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	8.6	8.8	9.6	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	30%	56%	2%
Vol Thru, %	79%	32%	34%	90%
Vol Right, %	11%	38%	10%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	66	68	198
LT Vol	23	20	38	3
Through Vol	172	21	23	178
RT Vol	24	25	7	17
Lane Flow Rate	246	74	76	222
Geometry Grp	1	1	1	1
Degree of Util (X)	0.309	0.102	0.109	0.281
Departure Headway (Hd)	4.519	4.936	5.145	4.542
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	792	722	693	790
Service Time	2.558	2.99	3.201	2.58
HCM Lane V/C Ratio	0.311	0.102	0.11	0.281
HCM Control Delay	9.6	8.6	8.8	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.3	0.4	1.2

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	13	37	18	15	1	31	220	6	2	235	8
Future Vol, veh/h	10	13	37	18	15	1	31	220	6	2	235	8
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	15	42	20	17	1	35	250	7	2	267	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	609	603	272	624	600	250	276	0	0	257	0	0
Stage 1	276	276	-	320	320	-	-	-	-	-	-	-
Stage 2	333	327	-	304	280	-	-	-	-	-	-	-
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	407	413	767	398	415	789	1287	-	-	1308	-	-
Stage 1	730	682	-	692	652	-	-	-	-	-	-	-
Stage 2	681	648	-	705	679	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	385	401	767	358	403	789	1287	-	-	1308	-	-
Mov Cap-2 Maneuver	385	401	-	358	403	-	-	-	-	-	-	-
Stage 1	710	681	-	673	634	-	-	-	-	-	-	-
Stage 2	644	631	-	651	678	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	15.5	1	0.1
HCM LOS	B	C		

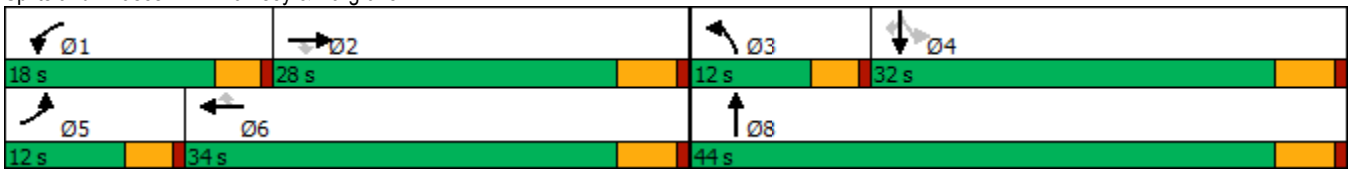
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	563	383	1308	-	-
HCM Lane V/C Ratio	0.027	-	-	0.121	0.101	0.002	-	-
HCM Control Delay (s)	7.9	-	-	12.3	15.5	7.8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	50	57	178	88	32	85	190	171	28	285	52
Future Volume (vph)	37	50	57	178	88	32	85	190	171	28	285	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3225	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.504		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3225	0	921	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		201				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2094			270			624	
Travel Time (s)		51.1			40.8			6.1			14.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	59	67	209	104	38	100	425	0	33	335	61
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	28.0	28.0	18.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.2	12.2	13.3	19.1	19.1	8.1	41.1		31.8	31.8	31.8
Actuated g/C Ratio	0.10	0.16	0.16	0.17	0.25	0.25	0.10	0.53		0.41	0.41	0.41
v/c Ratio	0.25	0.21	0.17	0.71	0.23	0.08	0.55	0.23		0.09	0.45	0.08
Control Delay	38.2	30.6	1.0	46.8	24.9	0.3	48.2	6.6		20.4	23.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	38.2	30.6	1.0	46.8	24.9	0.3	48.2	6.6		20.4	23.0	0.2
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		20.9			35.3			14.5			19.5	
Approach LOS		C			D			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.2			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 21.7		Intersection LOS: C	
Intersection Capacity Utilization 49.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	32	5	44	76	416	0	0	252	305
Future Vol, veh/h	0	0	0	32	5	44	76	416	0	0	252	305
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	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	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	37	6	51	87	478	0	0	290	351

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	1118	1293	478	641	0	-	-	-	0
Stage 1	652	652	-	-	-	-	-	-	-
Stage 2	466	641	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	227	161	583	934	-	0	0	-	-
Stage 1	515	461	-	-	-	0	0	-	-
Stage 2	627	466	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	206	0	583	934	-	-	-	-	-
Mov Cap-2 Maneuver	206	0	-	-	-	-	-	-	-
Stage 1	467	0	-	-	-	-	-	-	-
Stage 2	627	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	934	-	329	-	-
HCM Lane V/C Ratio	0.094	-	0.283	-	-
HCM Control Delay (s)	9.3	-	20.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.1	-	-

Intersection												
Int Delay, s/veh	84.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	349	4	48	0	0	0	0	142	45	164	120	0
Future Vol, veh/h	349	4	48	0	0	0	0	142	45	164	120	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	406	5	56	0	0	0	0	165	52	191	140	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	713	739	140				-	0	0	217	0	0
Stage 1	522	522	-				-	-	-	-	-	-
Stage 2	191	217	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 395	343	903				0	-	-	1341	-	0
Stage 1	591	528	-				0	-	-	-	-	0
Stage 2	837	720	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	~ 334	0	903				-	-	-	1341	-	-
Mov Cap-2 Maneuver	~ 334	0	-				-	-	-	-	-	-
Stage 1	591	0	-				-	-	-	-	-	-
Stage 2	708	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	179.6	0	4.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	362	1341	-
HCM Lane V/C Ratio	-	-	1.288	0.142	-
HCM Control Delay (s)	-	-	179.6	8.1	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	21.3	0.5	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	349	4	48	0	0	0	0	142	45	164	120	0
Future Vol, veh/h	349	4	48	0	0	0	0	142	45	164	120	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	406	5	56	0	0	0	0	165	52	191	140	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	22.5	12	15.6
HCM LOS	C	B	C

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	87%	58%
Vol Thru, %	76%	1%	42%
Vol Right, %	24%	12%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	187	401	284
LT Vol	0	349	164
Through Vol	142	4	120
RT Vol	45	48	0
Lane Flow Rate	217	466	330
Geometry Grp	1	1	1
Degree of Util (X)	0.351	0.73	0.538
Departure Headway (Hd)	5.813	5.633	5.87
Convergence, Y/N	Yes	Yes	Yes
Cap	615	639	611
Service Time	3.877	3.68	3.928
HCM Lane V/C Ratio	0.353	0.729	0.54
HCM Control Delay	12	22.5	15.6
HCM Lane LOS	B	C	C
HCM 95th-tile Q	1.6	6.3	3.2

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations								
Traffic Vol, veh/h	55	1	19	100	10	25	2	0
Future Vol, veh/h	55	1	19	100	10	25	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.85
Heavy Vehicles, %	2	2	35	35	2	35	2	2
Mvmt Flow	65	1	22	118	12	29	2	0
Number of Lanes	1	0	1	1	0	1	1	1

Approach	WB	NB	SB	NW
Opposing Approach		SB	NB	
Opposing Lanes	0	1	2	0
Conflicting Approach Left	NW		NW	NB
Conflicting Lanes Left	2	0	2	2
Conflicting Approach Right	SB	NW		SB
Conflicting Lanes Right	1	2	0	1
HCM Control Delay	7.8	8.2	8.4	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	NWLn1	NWLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	0%	98%	29%
Vol Thru, %	100%	0%	0%	100%	0%	71%
Vol Right, %	0%	100%	0%	0%	2%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	115	2	0	56	35
LT Vol	0	0	2	0	55	10
Through Vol	19	0	0	0	0	25
RT Vol	0	115	0	0	1	0
Lane Flow Rate	22	135	2	0	66	41
Geometry Grp	7	7	7	7	2	6
Degree of Util (X)	0.032	0.169	0.003	0	0.079	0.059
Departure Headway (Hd)	5.206	4.505	5.606	5.104	4.312	5.118
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	684	791	642	0	818	704
Service Time	2.964	2.263	3.308	2.805	2.408	3.118
HCM Lane V/C Ratio	0.032	0.171	0.003	0	0.081	0.058
HCM Control Delay	8.1	8.2	8.3	7.8	7.8	8.4
HCM Lane LOS	A	A	A	N	A	A
HCM 95th-tile Q	0.1	0.6	0	0	0.3	0.2

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	12	15	20	2	0	16	124	27	0	75	14
Future Vol, veh/h	12	12	15	20	2	0	16	124	27	0	75	14
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	-	-	-	-	-	-	100	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	88	88	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	14	13	17	22	2	0	18	141	29	0	85	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	201	299	93	285	278	71	101	0	0	170	0	0
Stage 1	93	93	-	177	177	-	-	-	-	-	-	-
Stage 2	108	206	-	108	101	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	748	613	964	656	629	977	1413	-	-	1406	-	-
Stage 1	913	818	-	808	752	-	-	-	-	-	-	-
Stage 2	886	731	-	897	811	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	739	605	964	628	621	977	1413	-	-	1406	-	-
Mov Cap-2 Maneuver	739	605	-	628	621	-	-	-	-	-	-	-
Stage 1	901	818	-	797	742	-	-	-	-	-	-	-
Stage 2	872	721	-	867	811	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	11	0.7	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1413	-	-	758	627	1406	-	-
HCM Lane V/C Ratio	0.013	-	-	0.058	0.038	-	-	-
HCM Control Delay (s)	7.6	-	-	10	11	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

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	6	9	5	31	2	0	4	155	51	0	107	4
Future Vol, veh/h	6	9	5	31	2	0	4	155	51	0	107	4
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	-	-	100	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	88	88	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	7	10	6	34	2	0	5	176	55	0	122	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	224	366	125	319	313	88	127	0	0	231	0	0
Stage 1	125	125	-	186	186	-	-	-	-	-	-	-
Stage 2	99	241	-	133	127	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	722	562	925	622	602	953	1381	-	-	1335	-	-
Stage 1	878	792	-	798	745	-	-	-	-	-	-	-
Stage 2	897	706	-	870	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	718	560	925	608	600	953	1381	-	-	1335	-	-
Mov Cap-2 Maneuver	718	560	-	608	600	-	-	-	-	-	-	-
Stage 1	874	792	-	795	742	-	-	-	-	-	-	-
Stage 2	891	703	-	854	790	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	11.3	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1381	-	-	673	608	600	1335	-	-
HCM Lane V/C Ratio	0.003	-	-	0.033	0.055	0.004	-	-	-
HCM Control Delay (s)	7.6	-	-	10.5	11.3	11	0	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	0	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	7	8	206	137	7
Future Vol, veh/h	7	7	8	206	137	7
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	8	8	9	231	154	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	407	158	162	0	-	0
Stage 1	158	-	-	-	-	-
Stage 2	249	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	600	887	1347	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	595	887	1347	-	-	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	864	-	-	-	-	-
Stage 2	792	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.3	0
HCM LOS	B		

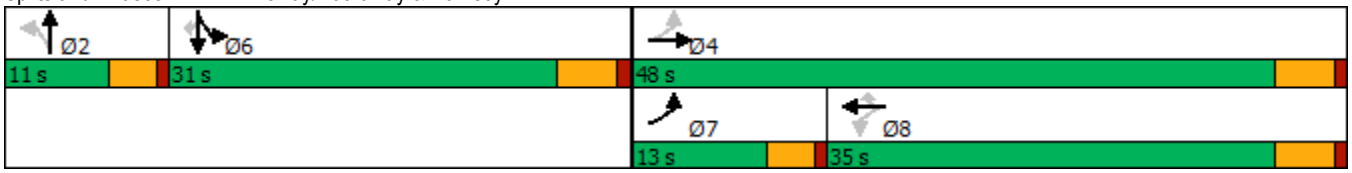
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1347	-	712	-	-
HCM Lane V/C Ratio	0.007	-	0.022	-	-
HCM Control Delay (s)	7.7	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	15	0	0	152	79	0	1	0	29	1	102
Future Volume (vph)	142	15	0	0	152	79	0	1	0	29	1	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1304	1346
Flt Permitted	0.452									0.950	0.997	
Satd. Flow (perm)	810	1792	0	0	3406	1524	0	1863	0	1504	1304	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121					65	121
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		483			630			194			646	
Travel Time (s)		8.2			10.7			4.4			12.6	
Peak Hour Factor	0.75	0.75	0.92	0.92	0.75	0.75	0.92	0.92	0.92	0.75	0.92	0.75
Heavy Vehicles (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		48%
Lane Group Flow (vph)	189	20	0	0	203	105	0	1	0	35	70	71
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	24.4	23.4			10.5	10.5		7.0		26.0	26.0	26.0
Actuated g/C Ratio	0.35	0.33			0.15	0.15		0.10		0.37	0.37	0.37
v/c Ratio	0.48	0.03			0.40	0.32		0.01		0.06	0.13	0.12
Control Delay	21.5	16.0			29.7	7.5		29.0		15.1	5.8	1.5
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	21.5	16.0			29.7	7.5		29.0		15.1	5.8	1.5
LOS	C	B			C	A		C		B	A	A
Approach Delay		21.0			22.2			29.0			5.9	
Approach LOS		C			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.4			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 37.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey

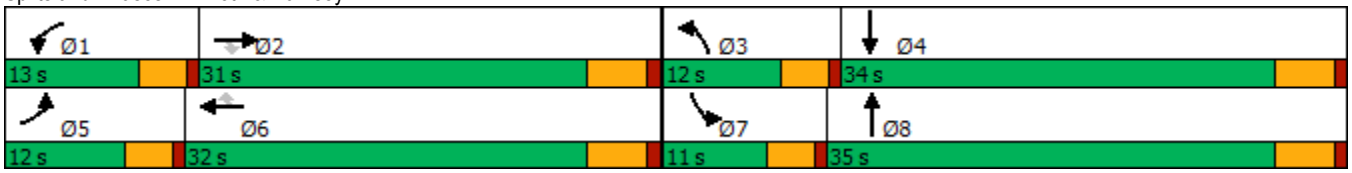


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	291	194	181	287	41	174	219	132	31	219	77
Future Volume (vph)	97	291	194	181	287	41	174	219	132	31	219	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1758	0	1770	1790	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1758	0	1770	1790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200			121		36			21	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	300	200	187	296	42	179	362	0	32	305	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.8	18.9	18.9	9.0	22.5	22.5	8.0	37.0		7.0	29.1	
Actuated g/C Ratio	0.09	0.23	0.23	0.11	0.27	0.27	0.10	0.45		0.08	0.35	
v/c Ratio	0.63	0.74	0.40	1.01	0.61	0.08	1.05	0.45		0.21	0.48	
Control Delay	56.6	41.0	6.4	110.9	33.4	0.3	123.3	19.3		41.3	23.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	56.6	41.0	6.4	110.9	33.4	0.3	123.3	19.3		41.3	23.6	
LOS	E	D	A	F	C	A	F	B		D	C	
Approach Delay		32.1			58.3			53.7			25.3	
Approach LOS		C			E			D			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 83.1			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 43.7		Intersection LOS: D	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	19	14	30	14	6	32	202	23	7	150	8
Future Vol, veh/h	10	19	14	30	14	6	32	202	23	7	150	8
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	23	17	36	17	7	39	243	28	8	181	10
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	8.4	8.7	10.1	9.1
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	23%	60%	4%
Vol Thru, %	79%	44%	28%	91%
Vol Right, %	9%	33%	12%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	257	43	50	165
LT Vol	32	10	30	7
Through Vol	202	19	14	150
RT Vol	23	14	6	8
Lane Flow Rate	310	52	60	199
Geometry Grp	1	1	1	1
Degree of Util (X)	0.379	0.072	0.087	0.25
Departure Headway (Hd)	4.412	5.008	5.19	4.534
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	814	713	689	791
Service Time	2.44	3.055	3.237	2.565
HCM Lane V/C Ratio	0.381	0.073	0.087	0.252
HCM Control Delay	10.1	8.4	8.7	9.1
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.8	0.2	0.3	1

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	20	47	10	17	6	26	215	10	3	195	7
Future Vol, veh/h	6	20	47	10	17	6	26	215	10	3	195	7
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	24	55	12	20	7	31	253	12	4	229	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	576	568	233	596	560	253	237	0	0	265	0	0
Stage 1	241	241	-	315	315	-	-	-	-	-	-	-
Stage 2	335	327	-	281	245	-	-	-	-	-	-	-
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	428	432	806	415	437	786	1330	-	-	1299	-	-
Stage 1	762	706	-	696	656	-	-	-	-	-	-	-
Stage 2	679	648	-	726	703	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	401	421	806	363	426	786	1330	-	-	1299	-	-
Mov Cap-2 Maneuver	401	421	-	363	426	-	-	-	-	-	-	-
Stage 1	744	704	-	680	641	-	-	-	-	-	-	-
Stage 2	637	633	-	652	701	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	14	0.8	0.1
HCM LOS	B	B		

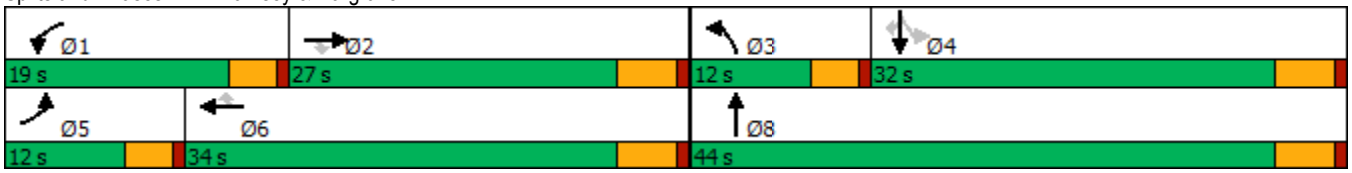
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1330	-	-	604	439	1299	-	-
HCM Lane V/C Ratio	0.023	-	-	0.142	0.088	0.003	-	-
HCM Control Delay (s)	7.8	-	-	11.9	14	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	90	92	229	130	57	79	190	126	17	235	46
Future Volume (vph)	60	90	92	229	130	57	79	190	126	17	235	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3263	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.556		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3263	0	1016	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		129				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2094			270			624	
Travel Time (s)		51.1			40.8			6.1			14.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	92	94	234	133	58	81	323	0	17	240	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	27.0	27.0	19.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.4	12.4	14.2	20.0	20.0	8.1	40.1		31.0	31.0	31.0
Actuated g/C Ratio	0.11	0.16	0.16	0.18	0.26	0.26	0.11	0.52		0.40	0.40	0.40
v/c Ratio	0.34	0.32	0.24	0.75	0.29	0.12	0.44	0.18		0.04	0.33	0.06
Control Delay	41.0	33.1	1.7	48.1	25.2	0.5	43.9	7.6		20.4	22.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	41.0	33.1	1.7	48.1	25.2	0.5	43.9	7.6		20.4	22.0	0.2
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		23.1			34.4			14.9			18.5	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.1			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	45	3	58	81	358	0	0	226	359
Future Vol, veh/h	0	0	0	45	3	58	81	358	0	0	226	359
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	50	3	64	90	398	0	0	251	399

Major/Minor	Minor1			Major1				Major2		
Conflicting Flow All	1029	1228	398	650	0	-	-	-	0	
Stage 1	578	578	-	-	-	-	-	-	-	
Stage 2	451	650	-	-	-	-	-	-	-	
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-	
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-	
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-	
Pot Cap-1 Maneuver	257	176	647	927	-	0	0	-	-	
Stage 1	557	498	-	-	-	0	0	-	-	
Stage 2	637	462	-	-	-	0	0	-	-	
Platoon blocked, %					-			-	-	
Mov Cap-1 Maneuver	232	0	647	927	-	-	-	-	-	
Mov Cap-2 Maneuver	232	0	-	-	-	-	-	-	-	
Stage 1	503	0	-	-	-	-	-	-	-	
Stage 2	637	0	-	-	-	-	-	-	-	

Approach	WB	NB	SB
HCM Control Delay, s	19.6	1.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	927	-	363	-	-
HCM Lane V/C Ratio	0.097	-	0.324	-	-
HCM Control Delay (s)	9.3	-	19.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.4	-	-

Intersection												
Int Delay, s/veh	21.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	285	5	47	0	0	0	0	153	56	161	107	0
Future Vol, veh/h	285	5	47	0	0	0	0	153	56	161	107	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	300	5	49	0	0	0	0	161	59	169	113	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	642	671	113				-	0	0	220	0	0
Stage 1	451	451	-				-	-	-	-	-	-
Stage 2	191	220	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	435	375	934				0	-	-	1337	-	0
Stage 1	637	568	-				0	-	-	-	-	0
Stage 2	837	717	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	376	0	934				-	-	-	1337	-	-
Mov Cap-2 Maneuver	376	0	-				-	-	-	-	-	-
Stage 1	637	0	-				-	-	-	-	-	-
Stage 2	724	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	48.9	0	4.9
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	411	1337	-
HCM Lane V/C Ratio	-	-	0.863	0.127	-
HCM Control Delay (s)	-	-	48.9	8.1	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	8.5	0.4	-

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	285	5	47	0	0	0	0	153	56	161	107	0
Future Vol, veh/h	285	5	47	0	0	0	0	153	56	161	107	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	300	5	49	0	0	0	0	161	59	169	113	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	14.4	10.8	12.5
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	85%	60%
Vol Thru, %	73%	1%	40%
Vol Right, %	27%	14%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	209	337	268
LT Vol	0	285	161
Through Vol	153	5	107
RT Vol	56	47	0
Lane Flow Rate	220	355	282
Geometry Grp	1	1	1
Degree of Util (X)	0.322	0.532	0.427
Departure Headway (Hd)	5.274	5.397	5.451
Convergence, Y/N	Yes	Yes	Yes
Cap	682	670	660
Service Time	3.308	3.424	3.481
HCM Lane V/C Ratio	0.323	0.53	0.427
HCM Control Delay	10.8	14.4	12.5
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.4	3.2	2.1

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations								
Traffic Vol, veh/h	97	8	26	59	11	25	11	0
Future Vol, veh/h	97	8	26	59	11	25	11	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	35	35	2	35	2	2
Mvmt Flow	105	9	28	64	12	27	12	0
Number of Lanes	1	0	1	1	0	1	1	1

Approach	WB	NB	SB	NW
Opposing Approach		SB	NB	
Opposing Lanes	0	1	2	0
Conflicting Approach Left	NW		NW	NB
Conflicting Lanes Left	2	0	2	2
Conflicting Approach Right	SB	NW		SB
Conflicting Lanes Right	1	2	0	1
HCM Control Delay	8	7.9	8.4	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	NWLn1	NWLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	0%	92%	31%
Vol Thru, %	100%	0%	0%	100%	0%	69%
Vol Right, %	0%	100%	0%	0%	8%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	66	11	0	105	36
LT Vol	0	0	11	0	97	11
Through Vol	26	0	0	0	0	25
RT Vol	0	66	0	0	8	0
Lane Flow Rate	28	72	12	0	114	39
Geometry Grp	7	7	7	7	2	6
Degree of Util (X)	0.041	0.091	0.019	0	0.134	0.056
Departure Headway (Hd)	5.244	4.543	5.577	5.075	4.237	5.112
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	677	780	646	0	833	705
Service Time	3.023	2.321	3.278	2.776	2.33	3.113
HCM Lane V/C Ratio	0.041	0.092	0.019	0	0.137	0.055
HCM Control Delay	8.3	7.8	8.4	7.8	8	8.4
HCM Lane LOS	A	A	A	N	A	A
HCM 95th-tile Q	0.1	0.3	0.1	0	0.5	0.2

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	6	16	28	15	0	14	103	13	0	132	15
Future Vol, veh/h	6	6	16	28	15	0	14	103	13	0	132	15
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	-	-	-	-	-	-	100	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	92	97	92	92	92	97	97	92	92	97	97
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	6	7	16	30	16	0	14	106	14	0	136	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	233	292	144	289	285	53	151	0	0	120	0	0
Stage 1	144	144	-	134	134	-	-	-	-	-	-	-
Stage 2	89	148	-	155	151	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	712	618	903	652	624	1004	1352	-	-	1467	-	-
Stage 1	858	777	-	856	785	-	-	-	-	-	-	-
Stage 2	909	774	-	847	772	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	692	612	903	630	618	1004	1352	-	-	1467	-	-
Mov Cap-2 Maneuver	692	612	-	630	618	-	-	-	-	-	-	-
Stage 1	849	777	-	847	777	-	-	-	-	-	-	-
Stage 2	881	766	-	825	772	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	11.2	0.8	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1352	-	-	771	626	1467	-	-
HCM Lane V/C Ratio	0.011	-	-	0.038	0.075	-	-	-
HCM Control Delay (s)	7.7	-	-	9.9	11.2	0	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	4	15	47	11	0	3	113	26	0	170	3
Future Vol, veh/h	6	4	15	47	11	0	3	113	26	0	170	3
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	-	-	100	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	7	4	17	53	12	0	3	127	29	0	191	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	269	355	193	336	327	64	194	0	0	156	0	0
Stage 1	193	193	-	133	133	-	-	-	-	-	-	-
Stage 2	76	162	-	203	194	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	673	570	848	606	591	988	1302	-	-	1423	-	-
Stage 1	808	740	-	857	786	-	-	-	-	-	-	-
Stage 2	925	763	-	798	740	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	661	569	848	590	590	988	1302	-	-	1423	-	-
Mov Cap-2 Maneuver	661	569	-	590	590	-	-	-	-	-	-	-
Stage 1	806	740	-	855	784	-	-	-	-	-	-	-
Stage 2	908	761	-	777	740	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	11.6	0.2	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1302	-	-	740	590	590	1423	-	-
HCM Lane V/C Ratio	0.003	-	-	0.038	0.09	0.021	-	-	-
HCM Control Delay (s)	7.8	-	-	10.1	11.7	11.2	0	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	7	8	145	208	17
Future Vol, veh/h	9	7	8	145	208	17
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	10	8	9	163	234	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	425	244	253	0	-	0
Stage 1	244	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	586	795	1245	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	581	795	1245	-	-	-
Mov Cap-2 Maneuver	581	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	850	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.4	0
HCM LOS	B		

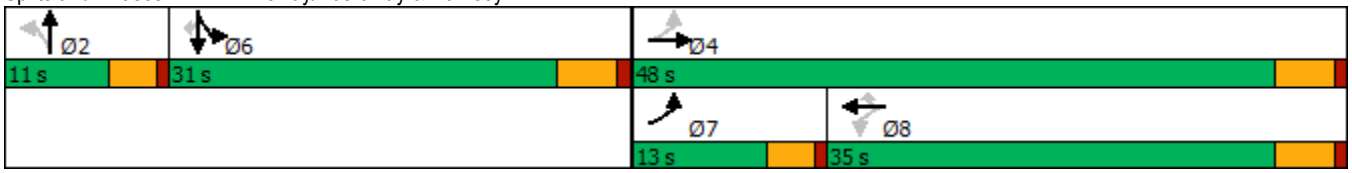
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1245	-	659	-	-
HCM Lane V/C Ratio	0.007	-	0.027	-	-
HCM Control Delay (s)	7.9	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	14	0	0	181	74	0	1	0	46	1	136
Future Volume (vph)	111	14	0	0	181	74	0	1	0	46	1	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1305	1346
Flt Permitted	0.444									0.950	0.997	
Satd. Flow (perm)	796	1792	0	0	3406	1524	0	1863	0	1504	1305	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121					83	121
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		483			630			194			646	
Travel Time (s)		8.2			10.7			4.4			12.6	
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 (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		48%
Lane Group Flow (vph)	141	18	0	0	229	94	0	1	0	52	90	89
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	24.4	23.4			10.7	10.7		7.0		26.0	26.0	26.0
Actuated g/C Ratio	0.35	0.33			0.15	0.15		0.10		0.37	0.37	0.37
v/c Ratio	0.37	0.03			0.44	0.28		0.01		0.09	0.17	0.16
Control Delay	19.3	15.9			30.1	5.9		29.0		15.7	5.7	2.6
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	19.3	15.9			30.1	5.9		29.0		15.7	5.7	2.6
LOS	B	B			C	A		C		B	A	A
Approach Delay		18.9			23.1			29.0			6.7	
Approach LOS		B			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.4			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey



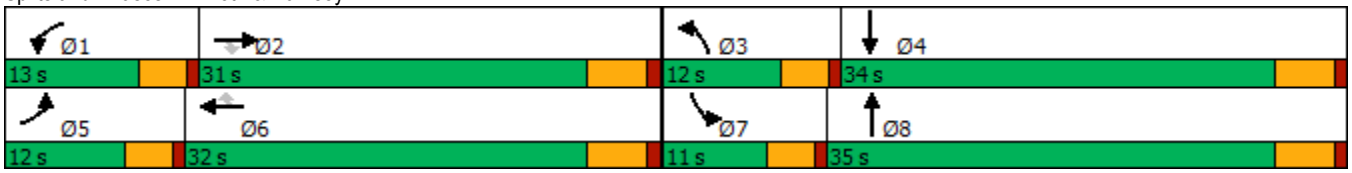
Cumulative Conditions - Without Project

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	244	122	102	204	32	132	172	200	47	259	75
Future Volume (vph)	44	244	122	102	204	32	132	172	200	47	259	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1712	0	1770	1799	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1712	0	1770	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			121		70			17	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	277	139	116	232	36	150	422	0	53	379	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.6	17.7	17.7	8.6	23.5	23.5	8.0	34.9		7.0	29.1	
Actuated g/C Ratio	0.09	0.22	0.22	0.11	0.29	0.29	0.10	0.43		0.09	0.36	
v/c Ratio	0.32	0.71	0.32	0.65	0.45	0.07	0.86	0.55		0.35	0.58	
Control Delay	42.3	40.1	6.8	54.7	28.3	0.2	80.5	20.4		44.1	25.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	42.3	40.1	6.8	54.7	28.3	0.2	80.5	20.4		44.1	25.9	
LOS	D	D	A	D	C	A	F	C		D	C	
Approach Delay		30.4			33.6			36.2			28.1	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 81.6			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 32.3		Intersection LOS: C	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	24	27	36	24	7	24	167	17	3	181	17
Future Vol, veh/h	20	24	27	36	24	7	24	167	17	3	181	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	27	30	40	27	8	27	188	19	3	203	19
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	8.6	8.8	9.5	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	28%	54%	1%
Vol Thru, %	80%	34%	36%	90%
Vol Right, %	8%	38%	10%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	71	67	201
LT Vol	24	20	36	3
Through Vol	167	24	24	181
RT Vol	17	27	7	17
Lane Flow Rate	234	80	75	226
Geometry Grp	1	1	1	1
Degree of Util (X)	0.296	0.109	0.107	0.285
Departure Headway (Hd)	4.552	4.911	5.131	4.54
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	788	726	695	790
Service Time	2.591	2.966	3.187	2.579
HCM Lane V/C Ratio	0.297	0.11	0.108	0.286
HCM Control Delay	9.5	8.6	8.8	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.4	0.4	1.2

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	16	39	20	16	1	32	210	7	2	240	8
Future Vol, veh/h	10	16	39	20	16	1	32	210	7	2	240	8
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	18	44	23	18	1	36	239	8	2	273	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	607	601	278	624	597	239	282	0	0	247	0	0
Stage 1	282	282	-	311	311	-	-	-	-	-	-	-
Stage 2	325	319	-	313	286	-	-	-	-	-	-	-
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	408	414	761	398	416	800	1280	-	-	1319	-	-
Stage 1	725	678	-	699	658	-	-	-	-	-	-	-
Stage 2	687	653	-	698	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	385	402	761	354	404	800	1280	-	-	1319	-	-
Mov Cap-2 Maneuver	385	402	-	354	404	-	-	-	-	-	-	-
Stage 1	705	677	-	679	640	-	-	-	-	-	-	-
Stage 2	648	635	-	639	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	15.6	1	0.1
HCM LOS	B	C		

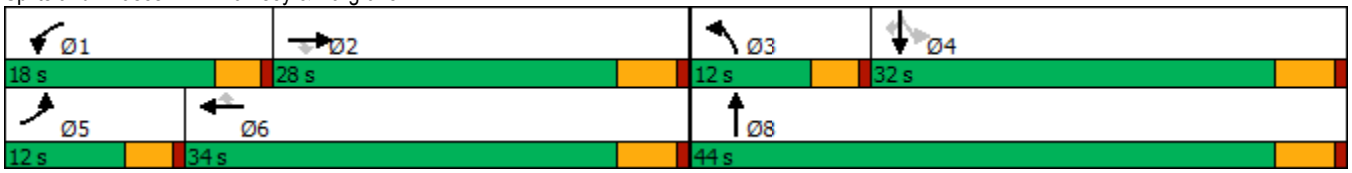
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	555	380	1319	-	-
HCM Lane V/C Ratio	0.028	-	-	0.133	0.111	0.002	-	-
HCM Control Delay (s)	7.9	-	-	12.5	15.6	7.7	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	55	60	170	95	41	87	234	194	34	325	67
Future Volume (vph)	59	55	60	170	95	41	87	234	194	34	325	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3235	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.467		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3235	0	853	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		228				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2104			270			624	
Travel Time (s)		51.1			41.0			6.1			14.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	69	65	71	200	112	48	102	503	0	40	382	79
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	28.0	28.0	18.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.2	12.2	13.2	16.6	16.6	8.1	40.9		31.6	31.6	31.6
Actuated g/C Ratio	0.11	0.16	0.16	0.17	0.22	0.22	0.11	0.53		0.41	0.41	0.41
v/c Ratio	0.39	0.23	0.19	0.69	0.29	0.11	0.56	0.28		0.11	0.51	0.11
Control Delay	41.6	30.9	1.1	45.3	26.9	0.5	48.6	6.9		20.9	24.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	41.6	30.9	1.1	45.3	26.9	0.5	48.6	6.9		20.9	24.1	0.3
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		24.2			33.6			13.9			20.1	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 76.9			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 21.3		Intersection LOS: C	
Intersection Capacity Utilization 51.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	84	5	61	102	467	0	0	281	313
Future Vol, veh/h	0	0	0	84	5	61	102	467	0	0	281	313
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	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	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	97	6	70	117	537	0	0	323	360

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	1274	1454	537	683	0	-	-	-	0
Stage 1	771	771	-	-	-	-	-	-	-
Stage 2	503	683	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	183	129	540	901	-	0	0	-	-
Stage 1	453	407	-	-	-	0	0	-	-
Stage 2	603	446	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	159	0	540	901	-	-	-	-	-
Mov Cap-2 Maneuver	159	0	-	-	-	-	-	-	-
Stage 1	394	0	-	-	-	-	-	-	-
Stage 2	603	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	58.8	1.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	901	-	226	-	-
HCM Lane V/C Ratio	0.13	-	0.763	-	-
HCM Control Delay (s)	9.6	-	58.8	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	5.4	-	-

Intersection												
Int Delay, s/veh	202.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	384	4	107	0	0	0	0	183	68	176	189	0
Future Vol, veh/h	384	4	107	0	0	0	0	183	68	176	189	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	447	5	124	0	0	0	0	213	79	205	220	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	883	922	220				-	0	0	292	0	0
Stage 1	630	630	-				-	-	-	-	-	-
Stage 2	253	292	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 314	268	815				0	-	-	1258	-	0
Stage 1	527	472	-				0	-	-	-	-	0
Stage 2	785	667	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	~ 256	0	815				-	-	-	1258	-	-
Mov Cap-2 Maneuver	~ 256	0	-				-	-	-	-	-	-
Stage 1	527	0	-				-	-	-	-	-	-
Stage 2	639	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 451.2	0	4.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	301	1258	-
HCM Lane V/C Ratio	-	-	1.912	0.163	-
HCM Control Delay (s)	-	-	$ 451.2	8.4	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	39.8	0.6	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	15	16	239	113	15
Future Vol, veh/h	15	15	16	239	113	15
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	88	88	88	88	88	88
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	17	17	18	272	128	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	445	137	145	0	-	0
Stage 1	137	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	571	911	1367	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	562	911	1367	-	-	-
Mov Cap-2 Maneuver	562	-	-	-	-	-
Stage 1	876	-	-	-	-	-
Stage 2	745	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1367	-	695	-	-
HCM Lane V/C Ratio	0.013	-	0.049	-	-
HCM Control Delay (s)	7.7	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	5	4	241	124	5
Future Vol, veh/h	9	5	4	241	124	5
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	88	88	88	88	88	88
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	10	6	5	274	141	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	428	144	147	0	-	0
Stage 1	144	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	584	903	1364	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	582	903	1364	-	-	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	764	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1364	-	667	-	-
HCM Lane V/C Ratio	0.003	-	0.024	-	-
HCM Control Delay (s)	7.6	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	7	8	239	123	8
Future Vol, veh/h	9	7	8	239	123	8
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	10	8	9	269	138	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	430	143	147	0	-	0
Stage 1	143	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	582	905	1364	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	577	905	1364	-	-	-
Mov Cap-2 Maneuver	577	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

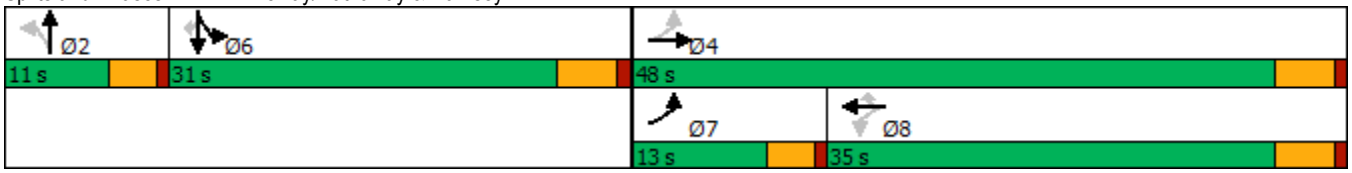
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1364	-	686	-	-
HCM Lane V/C Ratio	0.007	-	0.026	-	-
HCM Control Delay (s)	7.7	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	15	0	0	152	88	0	1	0	22	1	95
Future Volume (vph)	166	15	0	0	152	88	0	1	0	22	1	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1302	1346
Flt Permitted	0.452									0.950	0.998	
Satd. Flow (perm)	810	1792	0	0	3406	1524	0	1863	0	1504	1302	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121					62	121
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		473			630			194			646	
Travel Time (s)		8.1			10.7			4.4			12.6	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		49%
Lane Group Flow (vph)	221	20	0	0	203	117	0	1	0	26	66	65
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	24.5	23.5			10.5	10.5		7.0		26.0	26.0	26.0
Actuated g/C Ratio	0.35	0.33			0.15	0.15		0.10		0.37	0.37	0.37
v/c Ratio	0.56	0.03			0.40	0.36		0.01		0.05	0.13	0.11
Control Delay	23.5	16.0			29.8	9.0		29.0		14.9	5.7	1.2
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	23.5	16.0			29.8	9.0		29.0		14.9	5.7	1.2
LOS	C	B			C	A		C		B	A	A
Approach Delay		22.9			22.2			29.0			5.4	
Approach LOS		C			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.5			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 38.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey

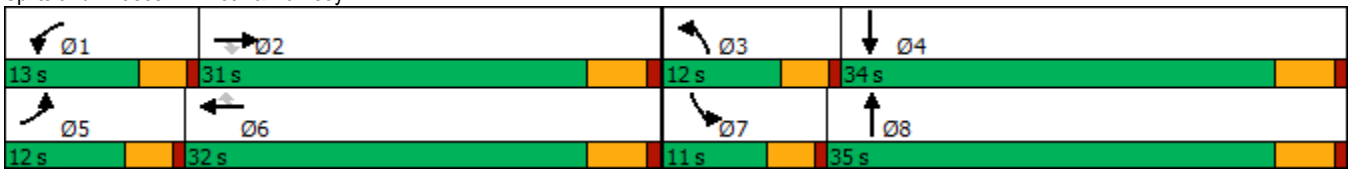


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	305	194	182	301	48	174	260	134	36	251	85
Future Volume (vph)	107	305	194	182	301	48	174	260	134	36	251	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1768	0	1770	1792	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1768	0	1770	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			121		31			20	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	314	200	188	310	49	179	406	0	37	347	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.9	19.5	19.5	9.0	20.6	20.6	8.0	34.8		7.0	29.1	
Actuated g/C Ratio	0.09	0.23	0.23	0.11	0.25	0.25	0.10	0.42		0.08	0.35	
v/c Ratio	0.69	0.75	0.40	1.03	0.70	0.11	1.06	0.54		0.25	0.55	
Control Delay	61.9	41.8	7.0	114.3	37.8	0.5	125.7	22.9		42.4	25.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	61.9	41.8	7.0	114.3	37.8	0.5	125.7	22.9		42.4	25.6	
LOS	E	D	A	F	D	A	F	C		D	C	
Approach Delay		34.2			60.7			54.3			27.2	
Approach LOS		C			E			D			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 83.7			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 45.2		Intersection LOS: D	
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	20	16	21	15	6	34	203	19	7	143	8
Future Vol, veh/h	10	20	16	21	15	6	34	203	19	7	143	8
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	24	19	25	18	7	41	245	23	8	172	10
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	8.4	8.6	10.1	9
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	22%	50%	4%
Vol Thru, %	79%	43%	36%	91%
Vol Right, %	7%	35%	14%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	256	46	42	158
LT Vol	34	10	21	7
Through Vol	203	20	15	143
RT Vol	19	16	6	8
Lane Flow Rate	308	55	51	190
Geometry Grp	1	1	1	1
Degree of Util (X)	0.376	0.076	0.072	0.239
Departure Headway (Hd)	4.393	4.952	5.138	4.511
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	820	722	695	796
Service Time	2.418	2.996	3.182	2.538
HCM Lane V/C Ratio	0.376	0.076	0.073	0.239
HCM Control Delay	10.1	8.4	8.6	9
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.8	0.2	0.2	0.9

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	21	49	12	18	6	28	216	12	3	182	7
Future Vol, veh/h	6	21	49	12	18	6	28	216	12	3	182	7
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	25	58	14	21	7	33	254	14	4	214	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	567	560	218	588	550	254	222	0	0	268	0	0
Stage 1	226	226	-	320	320	-	-	-	-	-	-	-
Stage 2	341	334	-	268	230	-	-	-	-	-	-	-
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	434	437	822	421	443	785	1347	-	-	1296	-	-
Stage 1	777	717	-	692	652	-	-	-	-	-	-	-
Stage 2	674	643	-	738	714	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	405	425	822	366	431	785	1347	-	-	1296	-	-
Mov Cap-2 Maneuver	405	425	-	366	431	-	-	-	-	-	-	-
Stage 1	758	715	-	675	636	-	-	-	-	-	-	-
Stage 2	630	628	-	660	712	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	14.1	0.8	0.1
HCM LOS	B	B		

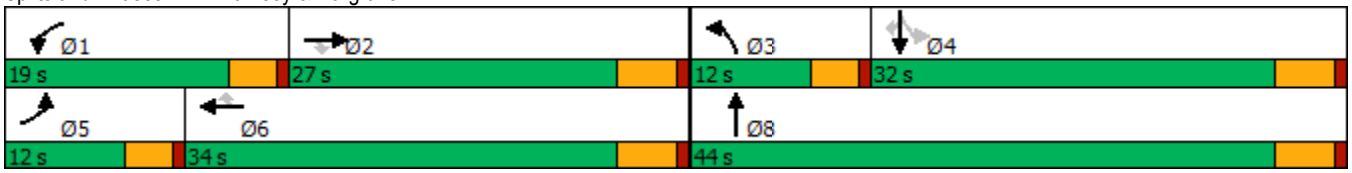
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1347	-	-	614	438	1296	-	-
HCM Lane V/C Ratio	0.024	-	-	0.146	0.097	0.003	-	-
HCM Control Delay (s)	7.7	-	-	11.9	14.1	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	92	94	247	131	66	82	244	128	25	273	67
Future Volume (vph)	82	92	94	247	131	66	82	244	128	25	273	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3291	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.526		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3291	0	961	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		131				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2104			270			624	
Travel Time (s)		51.1			41.0			6.1			14.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	94	96	252	134	67	84	380	0	26	279	68
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	27.0	27.0	19.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.4	12.4	14.5	17.9	17.9	8.1	39.7		30.5	30.5	30.5
Actuated g/C Ratio	0.11	0.16	0.16	0.19	0.23	0.23	0.11	0.52		0.40	0.40	0.40
v/c Ratio	0.47	0.33	0.25	0.79	0.32	0.15	0.46	0.22		0.07	0.38	0.09
Control Delay	45.1	33.2	1.8	51.2	26.9	1.5	44.5	8.3		20.7	22.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	45.1	33.2	1.8	51.2	26.9	1.5	44.5	8.3		20.7	22.8	0.3
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		25.9			36.6			14.9			18.5	
Approach LOS		C			D			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 76.9			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 24.0		Intersection LOS: C	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	73	3	75	149	400	0	0	258	385
Future Vol, veh/h	0	0	0	73	3	75	149	400	0	0	258	385
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	81	3	83	166	444	0	0	287	428

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	1277	1491	444	715	0	-	-	-	0
Stage 1	776	776	-	-	-	-	-	-	-
Stage 2	501	715	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	182	122	610	876	-	0	0	-	-
Stage 1	450	405	-	-	-	0	0	-	-
Stage 2	605	432	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	148	0	610	876	-	-	-	-	-
Mov Cap-2 Maneuver	148	0	-	-	-	-	-	-	-
Stage 1	365	0	-	-	-	-	-	-	-
Stage 2	605	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	48.7	2.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	876	-	240	-	-
HCM Lane V/C Ratio	0.189	-	0.699	-	-
HCM Control Delay (s)	10.1	-	48.7	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.7	-	4.6	-	-

Intersection												
Int Delay, s/veh	69.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	306	5	77	0	0	0	0	241	117	178	150	0
Future Vol, veh/h	306	5	77	0	0	0	0	241	117	178	150	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	322	5	81	0	0	0	0	254	123	187	158	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	848	909	158				-	0	0	377	0	0
Stage 1	532	532	-				-	-	-	-	-	-
Stage 2	316	377	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	329	273	882				0	-	-	1171	-	0
Stage 1	585	522	-				0	-	-	-	-	0
Stage 2	735	612	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	~ 271	0	882				-	-	-	1171	-	-
Mov Cap-2 Maneuver	~ 271	0	-				-	-	-	-	-	-
Stage 1	585	0	-				-	-	-	-	-	-
Stage 2	606	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	188.6	0	4.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	315	1171	-
HCM Lane V/C Ratio	-	-	1.297	0.16	-
HCM Control Delay (s)	-	-	188.6	8.7	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	19.5	0.6	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	16	14	142	228	17
Future Vol, veh/h	7	16	14	142	228	17
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	7	16	14	146	235	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	418	244	253	0	-	0
Stage 1	244	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	591	795	1245	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	584	795	1245	-	-	-
Mov Cap-2 Maneuver	584	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	856	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1245	-	716	-	-
HCM Lane V/C Ratio	0.012	-	0.033	-	-
HCM Control Delay (s)	7.9	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	15	3	138	236	5
Future Vol, veh/h	7	15	3	138	236	5
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	8	17	3	155	265	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	429	268	271	0	-	0
Stage 1	268	-	-	-	-	-
Stage 2	161	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	583	771	1226	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	581	771	1226	-	-	-
Mov Cap-2 Maneuver	581	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1226	-	698	-	-
HCM Lane V/C Ratio	0.003	-	0.035	-	-
HCM Control Delay (s)	7.9	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	7	8	143	227	17
Future Vol, veh/h	9	7	8	143	227	17
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	10	8	9	161	255	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	444	265	274	0	-	0
Stage 1	265	-	-	-	-	-
Stage 2	179	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	571	774	1223	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	566	774	1223	-	-	-
Mov Cap-2 Maneuver	566	-	-	-	-	-
Stage 1	773	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	0.4	0
HCM LOS	B		

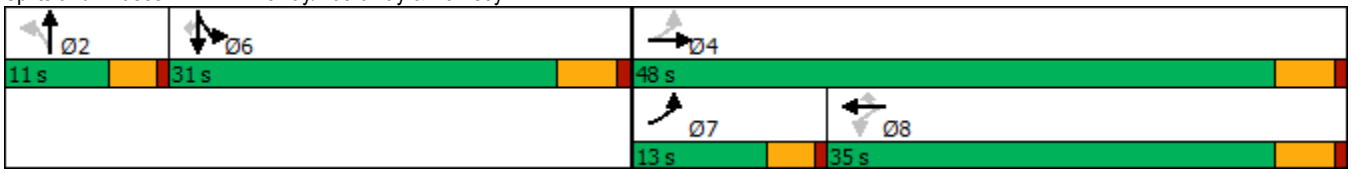
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1223	-	641	-	-
HCM Lane V/C Ratio	0.007	-	0.028	-	-
HCM Control Delay (s)	8	0	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	14	0	0	181	70	0	1	0	48	1	153
Future Volume (vph)	113	14	0	0	181	70	0	1	0	48	1	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1302	1346
Flt Permitted	0.444									0.950	0.997	
Satd. Flow (perm)	796	1792	0	0	3406	1524	0	1863	0	1504	1302	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121					93	121
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		473			630			194			646	
Travel Time (s)		8.1			10.7			4.4			12.6	
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 (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		48%
Lane Group Flow (vph)	143	18	0	0	229	89	0	1	0	55	100	101
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	24.4	23.4			10.7	10.7		7.0		26.0	26.0	26.0
Actuated g/C Ratio	0.35	0.33			0.15	0.15		0.10		0.37	0.37	0.37
v/c Ratio	0.37	0.03			0.44	0.27		0.01		0.10	0.19	0.18
Control Delay	19.4	15.9			30.1	5.2		29.0		15.7	5.5	3.4
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	19.4	15.9			30.1	5.2		29.0		15.7	5.5	3.4
LOS	B	B			C	A		C		B	A	A
Approach Delay		19.0			23.1			29.0			6.9	
Approach LOS		B			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.4			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 38.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey



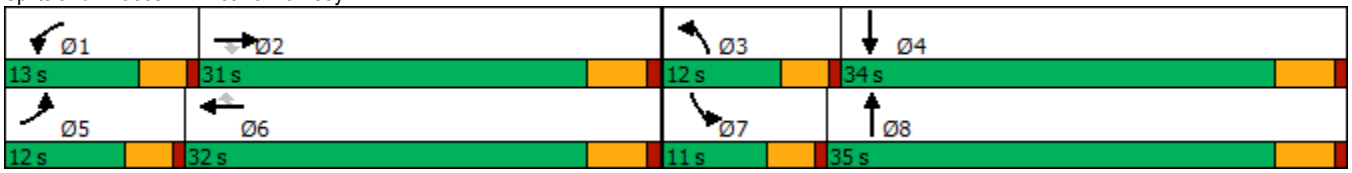
Cumulative Conditions - Plus Project

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	248	122	102	205	32	132	172	200	47	259	75
Future Volume (vph)	44	248	122	102	205	32	132	172	200	47	259	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1712	0	1770	1799	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1712	0	1770	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			121		70			17	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	282	139	116	233	36	150	422	0	53	379	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.6	17.9	17.9	8.6	23.7	23.7	8.0	34.9		7.0	29.1	
Actuated g/C Ratio	0.09	0.22	0.22	0.11	0.29	0.29	0.10	0.43		0.09	0.36	
v/c Ratio	0.32	0.72	0.31	0.65	0.45	0.07	0.87	0.55		0.35	0.58	
Control Delay	42.4	40.3	6.7	54.9	28.2	0.2	81.0	20.5		44.3	26.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	42.4	40.3	6.7	54.9	28.2	0.2	81.0	20.5		44.3	26.0	
LOS	D	D	A	D	C	A	F	C		D	C	
Approach Delay		30.6			33.6			36.4			28.2	
Approach LOS		C			C			D			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 81.8			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 32.5		Intersection LOS: C	
Intersection Capacity Utilization 61.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	25	27	38	24	7	24	174	24	3	183	17
Future Vol, veh/h	20	25	27	38	24	7	24	174	24	3	183	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	28	30	43	27	8	27	196	27	3	206	19
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	8.6	8.9	9.7	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	28%	55%	1%
Vol Thru, %	78%	35%	35%	90%
Vol Right, %	11%	38%	10%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	222	72	69	203
LT Vol	24	20	38	3
Through Vol	174	25	24	183
RT Vol	24	27	7	17
Lane Flow Rate	249	81	78	228
Geometry Grp	1	1	1	1
Degree of Util (X)	0.315	0.111	0.112	0.29
Departure Headway (Hd)	4.551	4.959	5.179	4.57
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	788	718	688	785
Service Time	2.592	3.018	3.238	2.612
HCM Lane V/C Ratio	0.316	0.113	0.113	0.29
HCM Control Delay	9.7	8.6	8.9	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.4	0.4	0.4	1.2

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	17	39	20	16	1	32	224	7	2	243	8
Future Vol, veh/h	10	17	39	20	16	1	32	224	7	2	243	8
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	19	44	23	18	1	36	255	8	2	276	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	626	620	281	643	616	255	285	0	0	263	0	0
Stage 1	285	285	-	327	327	-	-	-	-	-	-	-
Stage 2	341	335	-	316	289	-	-	-	-	-	-	-
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	397	404	758	386	406	784	1277	-	-	1301	-	-
Stage 1	722	676	-	686	648	-	-	-	-	-	-	-
Stage 2	674	643	-	695	673	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	374	392	758	342	394	784	1277	-	-	1301	-	-
Mov Cap-2 Maneuver	374	392	-	342	394	-	-	-	-	-	-	-
Stage 1	702	675	-	667	630	-	-	-	-	-	-	-
Stage 2	635	625	-	635	672	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	16	1	0.1
HCM LOS	B	C		

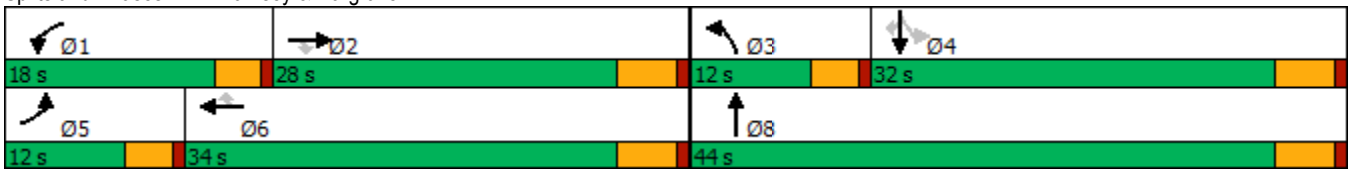
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1277	-	-	543	369	1301	-	-
HCM Lane V/C Ratio	0.028	-	-	0.138	0.114	0.002	-	-
HCM Control Delay (s)	7.9	-	-	12.7	16	7.8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	60	60	199	96	41	87	248	238	34	328	67
Future Volume (vph)	59	60	60	199	96	41	87	248	238	34	328	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3218	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.437		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3218	0	798	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		280				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2094			270			624	
Travel Time (s)		51.1			40.8			6.1			14.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	69	71	71	234	113	48	102	572	0	40	386	79
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	28.0	28.0	18.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.2	12.2	13.6	16.9	16.9	8.1	40.3		31.1	31.1	31.1
Actuated g/C Ratio	0.11	0.16	0.16	0.18	0.22	0.22	0.11	0.53		0.41	0.41	0.41
v/c Ratio	0.39	0.25	0.18	0.78	0.29	0.11	0.56	0.31		0.12	0.52	0.11
Control Delay	41.6	31.3	1.1	51.3	26.8	0.5	48.5	6.7		21.1	24.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	41.6	31.3	1.1	51.3	26.8	0.5	48.5	6.7		21.1	24.5	0.3
LOS	D	C	A	D	C	A	D	A		C	C	A
Approach Delay		24.5			38.1			13.0			20.4	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 76.6			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 22.0		Intersection LOS: C	
Intersection Capacity Utilization 53.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	84	5	61	102	525	0	0	281	345
Future Vol, veh/h	0	0	0	84	5	61	102	525	0	0	281	345
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	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	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	97	6	70	117	603	0	0	323	397

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	1359	1557	603	720	0	-	-	-	0
Stage 1	837	837	-	-	-	-	-	-	-
Stage 2	522	720	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	162	111	495	872	-	0	0	-	-
Stage 1	422	379	-	-	-	0	0	-	-
Stage 2	591	429	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	140	0	495	872	-	-	-	-	-
Mov Cap-2 Maneuver	140	0	-	-	-	-	-	-	-
Stage 1	365	0	-	-	-	-	-	-	-
Stage 2	591	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	81.1	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	872	-	200	-	-
HCM Lane V/C Ratio	0.134	-	0.862	-	-
HCM Control Delay (s)	9.8	-	81.1	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.5	-	6.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	84	3	61	102	525	0	0	281	345
Future Volume (vph)	0	0	0	84	3	61	102	525	0	0	281	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		25	90		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1676	0	1736	1827	0	0	1692	0
Flt Permitted					0.972		0.347					
Satd. Flow (perm)	0	0	0	0	1676	0	634	1827	0	0	1692	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					36						147	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1076			1183			286			270	
Travel Time (s)		16.3			17.9			6.5			6.1	
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%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	164	0	113	583	0	0	695	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Total Split (s)				25.0	25.0		65.0	65.0			65.0	
Total Lost Time (s)					5.0		5.0	5.0			5.0	
Act Effct Green (s)					12.3		67.7	67.7			67.7	
Actuated g/C Ratio					0.14		0.75	0.75			0.75	
v/c Ratio					0.63		0.24	0.42			0.53	
Control Delay					38.6		2.2	2.0			3.0	
Queue Delay					0.0		0.0	1.0			0.3	
Total Delay					38.6		2.2	3.0			3.3	
LOS					D		A	A			A	
Approach Delay					38.6			2.9			3.3	
Approach LOS					D			A			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 34 (38%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 6.8		Intersection LOS: A	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: Hargrave & I-10 WB

Intersection												
Int Delay, s/veh	269.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	441	4	107	0	0	0	0	184	68	176	189	0
Future Vol, veh/h	441	4	107	0	0	0	0	184	68	176	189	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	513	5	124	0	0	0	0	214	79	205	220	0

Major/Minor	Minor2					Major1			Major2		
Conflicting Flow All	884	923	220			-	0	0	293	0	0
Stage 1	630	630	-			-	-	-	-	-	-
Stage 2	254	293	-			-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24			-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-			-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-			-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336			-	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 313	268	815			0	-	-	1257	-	0
Stage 1	527	472	-			0	-	-	-	-	0
Stage 2	784	667	-			0	-	-	-	-	0
Platoon blocked, %							-	-		-	
Mov Cap-1 Maneuver	~ 255	0	815			-	-	-	1257	-	-
Mov Cap-2 Maneuver	~ 255	0	-			-	-	-	-	-	-
Stage 1	527	0	-			-	-	-	-	-	-
Stage 2	638	0	-			-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 568	0	4.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	295	1257	-
HCM Lane V/C Ratio	-	-	2.176	0.163	-
HCM Control Delay (s)	-	-	$ 568	8.4	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	48.3	0.6	-

Notes

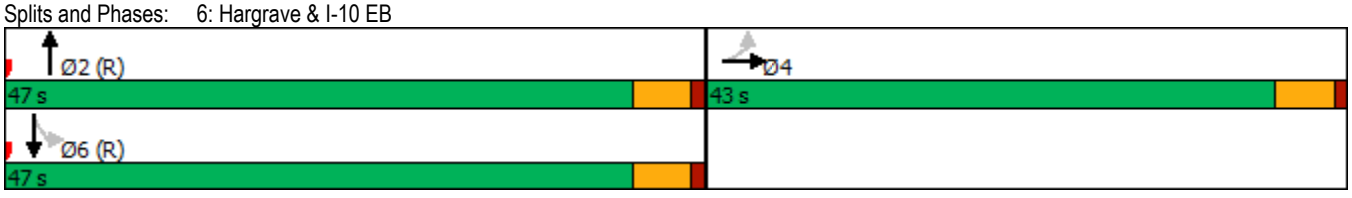
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	441	5	107	0	0	0	0	184	68	176	189	0
Future Volume (vph)	441	5	107	0	0	0	0	184	68	176	189	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		0	0		0	90		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1712	0	0	0	0	0	1759	0	0	1783	0
Flt Permitted		0.962									0.676	
Satd. Flow (perm)	0	1712	0	0	0	0	0	1759	0	0	1235	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17						28				
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1055			1016			863			286	
Travel Time (s)		16.0			15.4			19.6			6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	582	0	0	0	0	0	266	0	0	384	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	43.0	43.0						47.0		47.0	47.0	
Total Lost Time (s)		5.0						5.0			5.0	
Act Effct Green (s)		34.1						45.9			45.9	
Actuated g/C Ratio		0.38						0.51			0.51	
v/c Ratio		0.88						0.29			0.61	
Control Delay		41.4						13.3			16.4	
Queue Delay		0.0						0.0			2.1	
Total Delay		41.4						13.3			18.5	
LOS		D						B			B	
Approach Delay		41.4						13.3			18.5	
Approach LOS		D						B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 71 (79%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 77.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 6: Hargrave & I-10 EB



Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	252	15	0	120
Future Vol, veh/h	2	0	252	15	0	120
Peak Hour Factor	0.92	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	35	2	2	35
Mvmt Flow	2	0	296	18	0	141
Number of Lanes	1	1	1	1	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9	11.4	9.6
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	100%	100%
Vol Right, %	0%	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	252	15	2	0	120
LT Vol	0	0	2	0	0
Through Vol	252	0	0	0	120
RT Vol	0	15	0	0	0
Lane Flow Rate	296	18	2	0	141
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.426	0.019	0.004	0	0.206
Departure Headway (Hd)	5.167	3.905	6.222	5.718	5.262
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	694	911	578	0	686
Service Time	2.915	1.652	3.931	3.427	3.264
HCM Lane V/C Ratio	0.427	0.02	0.003	0	0.206
HCM Control Delay	11.7	6.7	9	8.4	9.6
HCM Lane LOS	B	A	A	N	A
HCM 95th-tile Q	2.1	0.1	0	0	0.8

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	12	15	20	3	0	16	254	27	0	115	15
Future Vol, veh/h	15	12	15	20	3	0	16	254	27	0	115	15
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	-	-	-	-	-	-	100	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	88	88	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	17	13	17	22	3	0	18	289	29	0	131	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	322	494	140	480	473	145	148	0	0	318	0	0
Stage 1	140	140	-	325	325	-	-	-	-	-	-	-
Stage 2	182	354	-	155	148	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	619	476	907	482	489	877	1355	-	-	1240	-	-
Stage 1	862	780	-	662	648	-	-	-	-	-	-	-
Stage 2	803	630	-	847	774	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	610	470	907	458	483	877	1355	-	-	1240	-	-
Mov Cap-2 Maneuver	610	470	-	458	483	-	-	-	-	-	-	-
Stage 1	851	780	-	653	640	-	-	-	-	-	-	-
Stage 2	788	622	-	817	774	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	13.3	0.4	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1355	-	-	633	461	1240	-	-
HCM Lane V/C Ratio	0.013	-	-	0.074	0.054	-	-	-
HCM Control Delay (s)	7.7	-	-	11.1	13.3	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	9	5	31	2	0	4	282	51	0	146	5
Future Vol, veh/h	9	9	5	31	2	0	4	282	51	0	146	5
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	-	-	100	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	88	92	92	92	88	88	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	10	10	6	34	2	0	5	320	55	0	166	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	340	554	169	507	502	160	172	0	0	375	0	0
Stage 1	169	169	-	330	330	-	-	-	-	-	-	-
Stage 2	171	385	-	177	172	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	602	440	874	462	471	857	1327	-	-	1182	-	-
Stage 1	832	758	-	658	645	-	-	-	-	-	-	-
Stage 2	815	610	-	824	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	598	438	874	450	469	857	1327	-	-	1182	-	-
Mov Cap-2 Maneuver	598	438	-	450	469	-	-	-	-	-	-	-
Stage 1	829	758	-	655	642	-	-	-	-	-	-	-
Stage 2	809	608	-	808	756	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	13.5	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1327	-	-	559	450	469	1182	-	-
HCM Lane V/C Ratio	0.003	-	-	0.046	0.075	0.005	-	-	-
HCM Control Delay (s)	7.7	-	-	11.8	13.6	12.7	0	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	0	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	7	8	330	175	8
Future Vol, veh/h	10	7	8	330	175	8
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	11	8	9	371	197	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	591	202	206	0	-	0
Stage 1	202	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	470	839	1297	-	-	-
Stage 1	832	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	466	839	1297	-	-	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	0.2	0
HCM LOS	B		

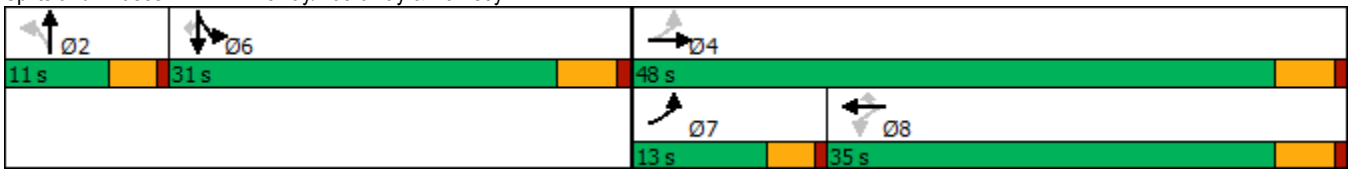
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1297	-	570	-	-
HCM Lane V/C Ratio	0.007	-	0.034	-	-
HCM Control Delay (s)	7.8	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	15	0	0	152	130	0	1	0	44	1	125
Future Volume (vph)	215	15	0	0	152	130	0	1	0	44	1	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1305	1346
Flt Permitted	0.453									0.950	0.997	
Satd. Flow (perm)	812	1792	0	0	3406	1524	0	1863	0	1504	1305	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						173					80	121
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		483			630			194			646	
Travel Time (s)		8.2			10.7			4.4			12.6	
Peak Hour Factor	0.75	0.75	0.92	0.92	0.75	0.75	0.92	0.92	0.92	0.75	0.92	0.75
Heavy Vehicles (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		48%
Lane Group Flow (vph)	287	20	0	0	203	173	0	1	0	53	87	87
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	24.7	23.7			10.7	10.7		7.0		26.0	26.0	26.0
Actuated g/C Ratio	0.35	0.34			0.15	0.15		0.10		0.37	0.37	0.37
v/c Ratio	0.72	0.03			0.40	0.46		0.01		0.10	0.16	0.15
Control Delay	30.8	15.9			29.5	9.2		29.0		15.7	5.7	2.4
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	30.8	15.9			29.5	9.2		29.0		15.7	5.7	2.4
LOS	C	B			C	A		C		B	A	A
Approach Delay		29.8			20.2			29.0			6.8	
Approach LOS		C			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.7			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 20.1		Intersection LOS: C	
Intersection Capacity Utilization 41.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey

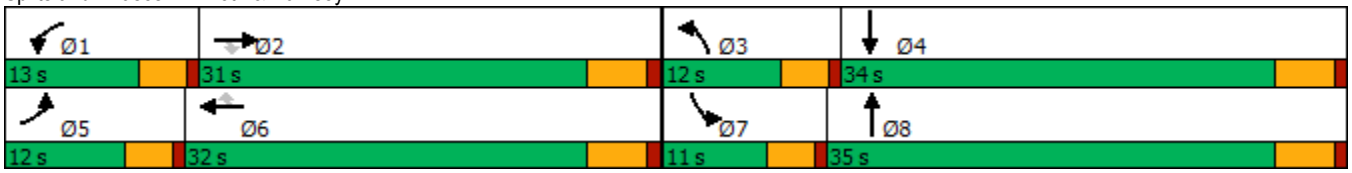


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	307	194	182	306	48	174	260	134	36	251	85
Future Volume (vph)	107	307	194	182	306	48	174	260	134	36	251	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	115		110	120		125	90		0	70		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1770	1768	0	1770	1792	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1770	1768	0	1770	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			192			121		31			20	
Link Speed (mph)		40			35			40			30	
Link Distance (ft)		1098			292			262			623	
Travel Time (s)		18.7			5.7			4.5			14.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	316	200	188	315	49	179	406	0	37	347	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	12.0	31.0	31.0	13.0	32.0	32.0	12.0	35.0		11.0	34.0	
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		4.0	5.0	
Act Effct Green (s)	7.9	19.5	19.5	9.0	20.7	20.7	8.0	34.8		7.0	29.1	
Actuated g/C Ratio	0.09	0.23	0.23	0.11	0.25	0.25	0.10	0.42		0.08	0.35	
v/c Ratio	0.69	0.76	0.40	1.03	0.71	0.10	1.06	0.54		0.25	0.55	
Control Delay	61.9	41.9	7.0	114.3	38.2	0.5	126.1	22.9		42.4	25.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	61.9	41.9	7.0	114.3	38.2	0.5	126.1	22.9		42.4	25.6	
LOS	E	D	A	F	D	A	F	C		D	C	
Approach Delay		34.3			60.7			54.5			27.2	
Approach LOS		C			E			D			C	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 83.8			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 45.3		Intersection LOS: D	
Intersection Capacity Utilization 69.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: 8th & Ramsey



Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	21	16	30	17	6	34	207	23	7	152	8
Future Vol, veh/h	10	21	16	30	17	6	34	207	23	7	152	8
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	25	19	36	20	7	41	249	28	8	183	10
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	8.5	8.8	10.3	9.2
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	21%	57%	4%
Vol Thru, %	78%	45%	32%	91%
Vol Right, %	9%	34%	11%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	47	53	167
LT Vol	34	10	30	7
Through Vol	207	21	17	152
RT Vol	23	16	6	8
Lane Flow Rate	318	57	64	201
Geometry Grp	1	1	1	1
Degree of Util (X)	0.392	0.079	0.093	0.255
Departure Headway (Hd)	4.44	5.03	5.224	4.568
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	709	683	785
Service Time	2.473	3.082	3.275	2.604
HCM Lane V/C Ratio	0.392	0.08	0.094	0.256
HCM Control Delay	10.3	8.5	8.8	9.2
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.9	0.3	0.3	1

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	22	49	12	20	6	28	223	12	3	200	7
Future Vol, veh/h	6	22	49	12	20	6	28	223	12	3	200	7
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	-	-	-	-	-	-	50	-	0	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	26	58	14	24	7	33	262	14	4	235	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	598	589	239	617	579	262	243	0	0	276	0	0
Stage 1	247	247	-	328	328	-	-	-	-	-	-	-
Stage 2	351	342	-	289	251	-	-	-	-	-	-	-
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	414	421	800	402	426	777	1323	-	-	1287	-	-
Stage 1	757	702	-	685	647	-	-	-	-	-	-	-
Stage 2	666	638	-	719	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	384	409	800	347	414	777	1323	-	-	1287	-	-
Mov Cap-2 Maneuver	384	409	-	347	414	-	-	-	-	-	-	-
Stage 1	738	700	-	668	631	-	-	-	-	-	-	-
Stage 2	619	622	-	641	697	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.2	14.6	0.8	0.1
HCM LOS	B	B		

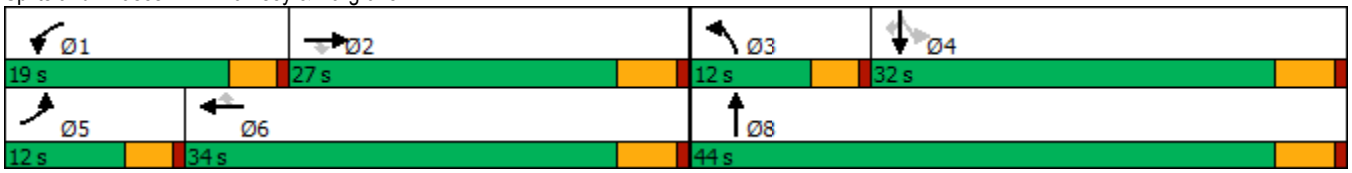
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1323	-	-	589	419	1287	-	-
HCM Lane V/C Ratio	0.025	-	-	0.154	0.107	0.003	-	-
HCM Control Delay (s)	7.8	-	-	12.2	14.6	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	95	94	285	137	66	82	251	151	25	291	67
Future Volume (vph)	82	95	94	285	137	66	82	251	151	25	291	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		100	90		0	90		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1736	3277	0	1736	1827	1553
Flt Permitted	0.950			0.950			0.950			0.511		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1736	3277	0	934	1827	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			121		154				170
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2625			2094			270			624	
Travel Time (s)		51.1			40.8			6.1			14.2	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	97	96	291	140	67	84	410	0	26	297	68
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6				4		4
Total Split (s)	12.0	27.0	27.0	19.0	34.0	34.0	12.0	44.0		32.0	32.0	32.0
Total Lost Time (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	8.1	12.4	12.4	15.2	18.8	18.8	8.1	39.5		30.3	30.3	30.3
Actuated g/C Ratio	0.10	0.16	0.16	0.20	0.24	0.24	0.10	0.51		0.39	0.39	0.39
v/c Ratio	0.47	0.34	0.25	0.87	0.32	0.15	0.46	0.24		0.07	0.42	0.10
Control Delay	45.5	33.4	1.8	60.5	26.9	1.4	44.8	8.1		20.8	23.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	45.5	33.4	1.8	60.5	26.9	1.4	44.8	8.1		20.8	23.3	0.3
LOS	D	C	A	E	C	A	D	A		C	C	A
Approach Delay		26.1			43.1			14.3			19.1	
Approach LOS		C			D			B			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.6			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 26.0		Intersection LOS: C	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Ramsey & Hargrave



Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	73	3	75	149	430	0	0	260	439
Future Vol, veh/h	0	0	0	73	3	75	149	430	0	0	260	439
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	-	-	-	-	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	0	81	3	83	166	478	0	0	289	488

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	1343	1587	478	777	0	-	-	-	0
Stage 1	810	810	-	-	-	-	-	-	-
Stage 2	533	777	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24	4.14	-	-	-	-	-
Critical Hdwy Stg 1	5.44	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	2.236	-	-	-	-	-
Pot Cap-1 Maneuver	166	107	583	831	-	0	0	-	-
Stage 1	434	390	-	-	-	0	0	-	-
Stage 2	584	404	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	133	0	583	831	-	-	-	-	-
Mov Cap-2 Maneuver	133	0	-	-	-	-	-	-	-
Stage 1	347	0	-	-	-	-	-	-	-
Stage 2	584	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	61.4	2.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	831	-	218	-	-
HCM Lane V/C Ratio	0.199	-	0.77	-	-
HCM Control Delay (s)	10.4	-	61.4	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	5.4	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	73	3	75	149	430	0	0	260	439
Future Volume (vph)	0	0	0	73	3	75	149	430	0	0	260	439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		25	90		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	0	0	0	1664	0	1736	1827	0	0	1672	0
Flt Permitted					0.976		0.312					
Satd. Flow (perm)	0	0	0	0	1664	0	570	1827	0	0	1672	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					51						217	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1076			1183			286			270	
Travel Time (s)		16.3			17.9			6.5			6.1	
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%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	167	0	166	478	0	0	777	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Total Split (s)				24.0	24.0		66.0	66.0			66.0	
Total Lost Time (s)					4.0		4.0	4.0			4.0	
Act Effct Green (s)					11.9		70.1	70.1			70.1	
Actuated g/C Ratio					0.13		0.78	0.78			0.78	
v/c Ratio					0.63		0.37	0.34			0.58	
Control Delay					35.6		3.7	1.9			3.1	
Queue Delay					0.0		0.0	0.8			0.5	
Total Delay					35.6		3.7	2.7			3.6	
LOS					D		A	A			A	
Approach Delay					35.6			2.9			3.6	
Approach LOS					D			A			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 42 (47%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 67.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: Hargrave & I-10 WB

Intersection												
Int Delay, s/veh	90.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	335	5	77	0	0	0	0	242	117	178	152	0
Future Vol, veh/h	335	5	77	0	0	0	0	242	117	178	152	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	2	2	2	4	4	4	4	4	4
Mvmt Flow	353	5	81	0	0	0	0	255	123	187	160	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	851	912	160				-	0	0	378	0	0
Stage 1	534	534	-				-	-	-	-	-	-
Stage 2	317	378	-				-	-	-	-	-	-
Critical Hdwy	6.44	6.54	6.24				-	-	-	4.14	-	-
Critical Hdwy Stg 1	5.44	5.54	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.44	5.54	-				-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336				-	-	-	2.236	-	-
Pot Cap-1 Maneuver	~ 328	272	880				0	-	-	1170	-	0
Stage 1	584	521	-				0	-	-	-	-	0
Stage 2	734	612	-				0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	~ 271	0	880				-	-	-	1170	-	-
Mov Cap-2 Maneuver	~ 271	0	-				-	-	-	-	-	-
Stage 1	584	0	-				-	-	-	-	-	-
Stage 2	606	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	235.3	0	4.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	311	1170	-
HCM Lane V/C Ratio	-	-	1.411	0.16	-
HCM Control Delay (s)	-	-	235.3	8.7	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	23.1	0.6	-

Notes

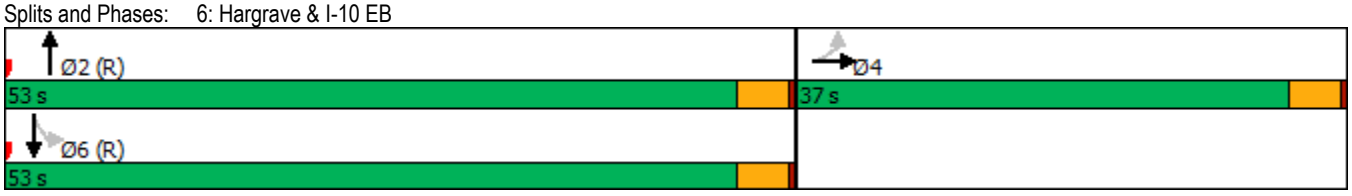
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	5	77	0	0	0	0	242	117	178	152	0
Future Volume (vph)	335	5	77	0	0	0	0	242	117	178	152	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		25	0		0	0		0	90		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1712	0	0	0	0	0	1747	0	0	1779	0
Flt Permitted		0.961									0.610	
Satd. Flow (perm)	0	1712	0	0	0	0	0	1747	0	0	1114	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14						42				
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1055			1016			863			286	
Travel Time (s)		16.0			15.4			19.6			6.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	439	0	0	0	0	0	378	0	0	347	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Total Split (s)	37.0	37.0						53.0		53.0	53.0	
Total Lost Time (s)		4.0						4.0			4.0	
Act Effct Green (s)		27.1						54.9			54.9	
Actuated g/C Ratio		0.30						0.61			0.61	
v/c Ratio		0.84						0.35			0.51	
Control Delay		42.6						9.7			12.7	
Queue Delay		0.0						0.0			1.2	
Total Delay		42.6						9.7			13.9	
LOS		D						A			B	
Approach Delay		42.6						9.7			13.9	
Approach LOS		D						A			B	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 72 (80%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 23.3		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Hargrave & I-10 EB



Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	0	132	7	0	232
Future Vol, veh/h	11	0	132	7	0	232
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	35	2	2	35
Mvmt Flow	12	0	143	8	0	252
Number of Lanes	1	1	1	1	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.9	9.3	10.9
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	0%
Vol Thru, %	100%	0%	0%	100%	100%
Vol Right, %	0%	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	7	11	0	232
LT Vol	0	0	11	0	0
Through Vol	132	0	0	0	232
RT Vol	0	7	0	0	0
Lane Flow Rate	143	8	12	0	252
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.209	0.008	0.02	0	0.352
Departure Headway (Hd)	5.24	3.977	6.089	5.585	5.028
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	677	886	591	0	709
Service Time	3.031	1.766	3.789	3.285	3.115
HCM Lane V/C Ratio	0.211	0.009	0.02	0	0.355
HCM Control Delay	9.4	6.8	8.9	8.3	10.9
HCM Lane LOS	A	A	A	N	B
HCM 95th-tile Q	0.8	0	0.1	0	1.6

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	6	16	28	15	0	14	149	13	0	239	17
Future Vol, veh/h	7	6	16	28	15	0	14	149	13	0	239	17
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	-	-	-	-	-	-	100	-	100	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	92	97	92	92	92	97	97	92	92	97	97
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	7	7	16	30	16	0	14	154	14	0	246	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	368	451	255	449	446	77	264	0	0	168	0	0
Stage 1	255	255	-	182	182	-	-	-	-	-	-	-
Stage 2	113	196	-	267	264	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	576	503	783	507	506	969	1224	-	-	1408	-	-
Stage 1	749	696	-	803	748	-	-	-	-	-	-	-
Stage 2	880	738	-	738	689	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	557	497	783	487	500	969	1224	-	-	1408	-	-
Mov Cap-2 Maneuver	557	497	-	487	500	-	-	-	-	-	-	-
Stage 1	741	696	-	794	740	-	-	-	-	-	-	-
Stage 2	851	730	-	716	689	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	13.1	0.6	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1224	-	-	641	491	1408	-	-
HCM Lane V/C Ratio	0.012	-	-	0.047	0.095	-	-	-
HCM Control Delay (s)	8	-	-	10.9	13.1	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	15	47	11	0	3	158	26	0	275	5
Future Vol, veh/h	7	4	15	47	11	0	3	158	26	0	275	5
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	-	-	100	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	14	14	2	2	14	14
Mvmt Flow	8	4	17	53	12	0	3	178	29	0	309	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	413	525	312	507	499	89	315	0	0	207	0	0
Stage 1	312	312	-	184	184	-	-	-	-	-	-	-
Stage 2	101	213	-	323	315	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.31	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.333	-	-	2.219	-	-
Pot Cap-1 Maneuver	536	457	727	462	473	952	1170	-	-	1363	-	-
Stage 1	698	657	-	801	747	-	-	-	-	-	-	-
Stage 2	895	726	-	688	655	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	524	456	727	447	472	952	1170	-	-	1363	-	-
Mov Cap-2 Maneuver	524	456	-	447	472	-	-	-	-	-	-	-
Stage 1	696	657	-	799	745	-	-	-	-	-	-	-
Stage 2	878	724	-	667	655	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.2	13.9	0.1	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1170	-	-	608	447	472	1363	-	-
HCM Lane V/C Ratio	0.003	-	-	0.048	0.118	0.026	-	-	-
HCM Control Delay (s)	8.1	-	-	11.2	14.1	12.8	0	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0.1	0	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	7	8	189	311	19
Future Vol, veh/h	10	7	8	189	311	19
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	89	89	89	89	89	89
Heavy Vehicles, %	2	2	14	14	14	14
Mvmt Flow	11	8	9	212	349	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	590	360	370	0	-	0
Stage 1	360	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.24	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.326	-	-	-
Pot Cap-1 Maneuver	470	684	1125	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	466	684	1125	-	-	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	808	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.3	0
HCM LOS	B		

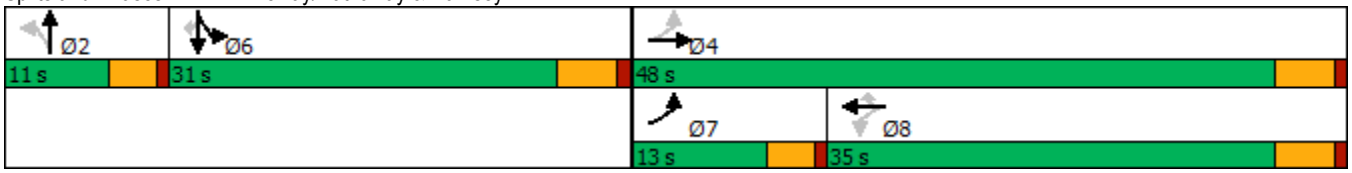
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1125	-	536	-	-
HCM Lane V/C Ratio	0.008	-	0.036	-	-
HCM Control Delay (s)	8.2	0	12	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	14	0	0	181	91	0	1	0	88	1	197
Future Volume (vph)	138	14	0	0	181	91	0	1	0	88	1	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	0		50	0		0	150		150
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1703	1792	0	0	3406	1524	0	1863	0	1504	1306	1346
Flt Permitted	0.445									0.950	0.996	
Satd. Flow (perm)	798	1792	0	0	3406	1524	0	1863	0	1504	1306	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						121					120	129
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		483			630			194			646	
Travel Time (s)		8.2			10.7			4.4			12.6	
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 (%)	6%	6%	2%	2%	6%	6%	2%	2%	2%	14%	2%	14%
Shared Lane Traffic (%)										10%		48%
Lane Group Flow (vph)	175	18	0	0	229	115	0	1	0	100	132	129
Turn Type	pm+pt	NA			NA	Perm		NA		Split	NA	Perm
Protected Phases	7	4			8			2		6	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	13.0	48.0		35.0	35.0	35.0	11.0	11.0		31.0	31.0	31.0
Total Lost Time (s)	4.0	5.0			5.0	5.0		4.0		5.0	5.0	5.0
Act Effct Green (s)	24.8	23.8			10.9	10.9		7.0		26.0	26.0	26.0
Actuated g/C Ratio	0.35	0.34			0.15	0.15		0.10		0.37	0.37	0.37
v/c Ratio	0.45	0.03			0.44	0.34		0.01		0.18	0.24	0.22
Control Delay	20.6	15.8			29.9	8.4		30.0		16.8	5.5	4.5
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	20.6	15.8			29.9	8.4		30.0		16.8	5.5	4.5
LOS	C	B			C	A		C		B	A	A
Approach Delay		20.2			22.7			30.0			8.3	
Approach LOS		C			C			C			A	

Intersection Summary

Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 70.8			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 40.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 11: Driveway/Hathaway & Ramsey



Roundabout Analysis

Opening Year Conditions - Plus Project

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 6. Hargrave & I-10 EB

Opening Year Plus Project - AM Peak Hour

Volume Display Method: Total and %

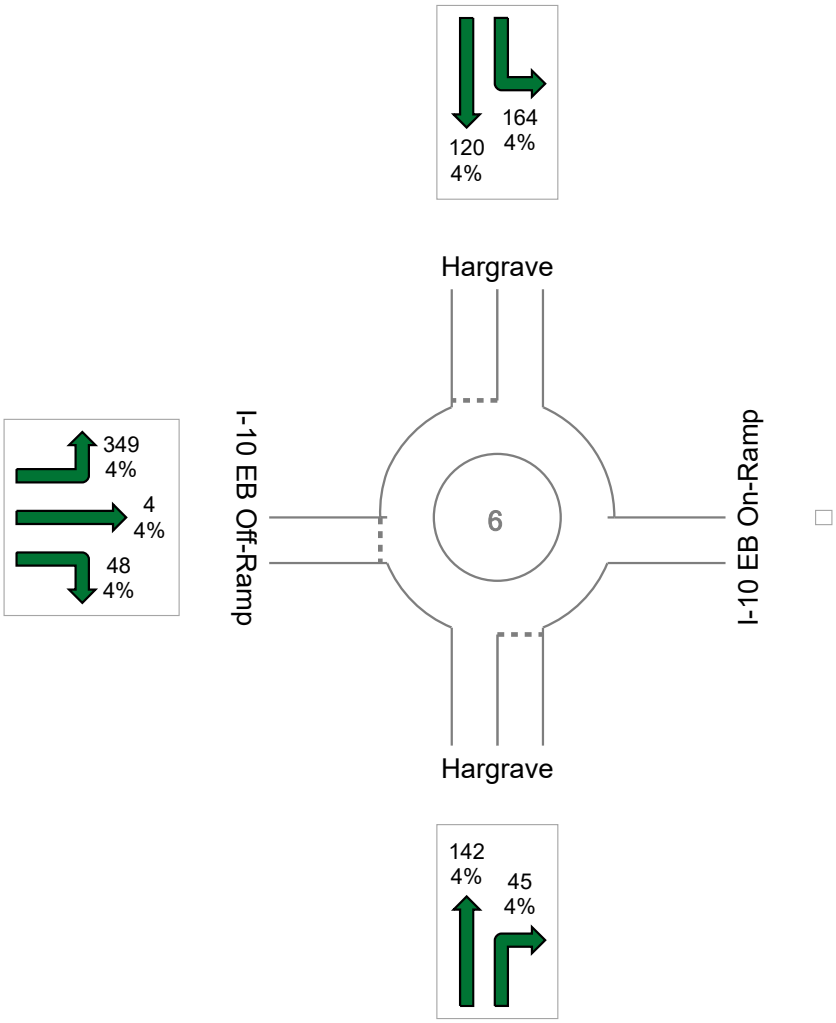
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 872

Light Vehicles (LV): 837

Heavy Vehicles (HV): 35



DELAY (AVERAGE)

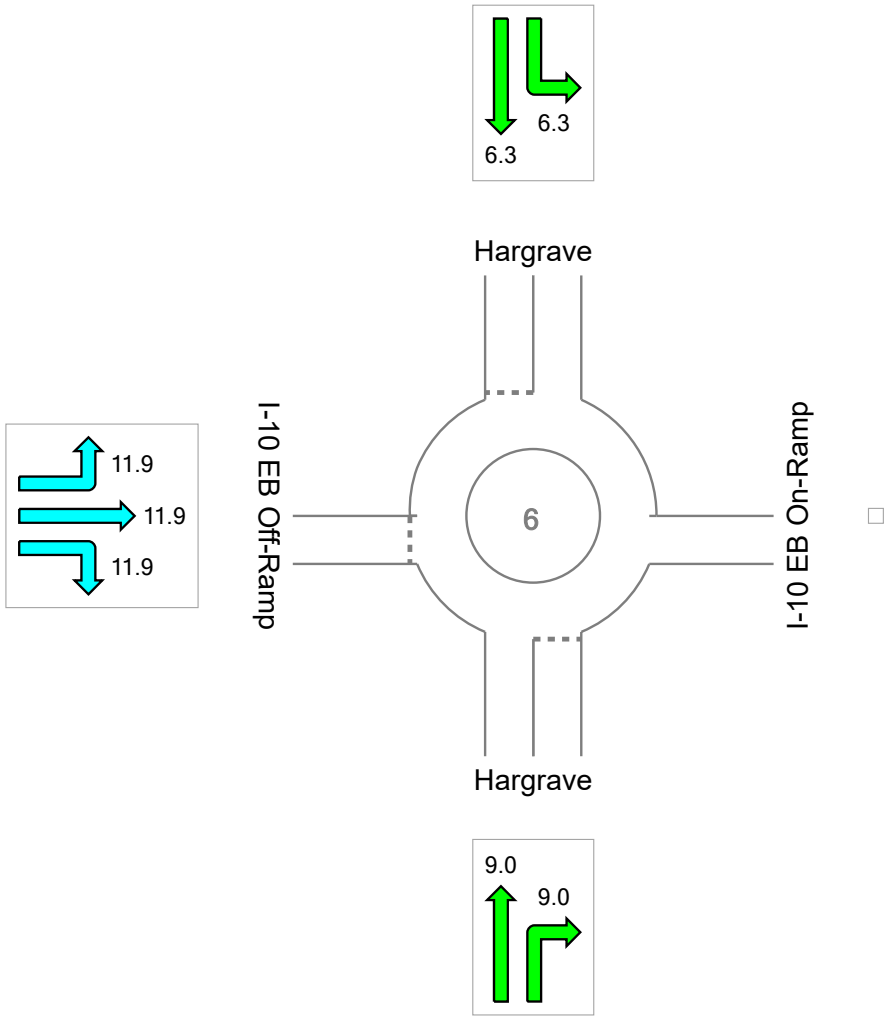
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 6. Hargrave & I-10 EB

Opening Year Plus Project - AM Peak Hour
Roundabout

All Movement Classes

	South	North	West	Intersection
Delay (Average)	9.0	6.3	11.9	9.4
LOS	A	A	B	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F | Continuous

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 6. Hargrave & I-10 EB

Opening Year Plus Project - PM Peak Hour

Volume Display Method: Total and %

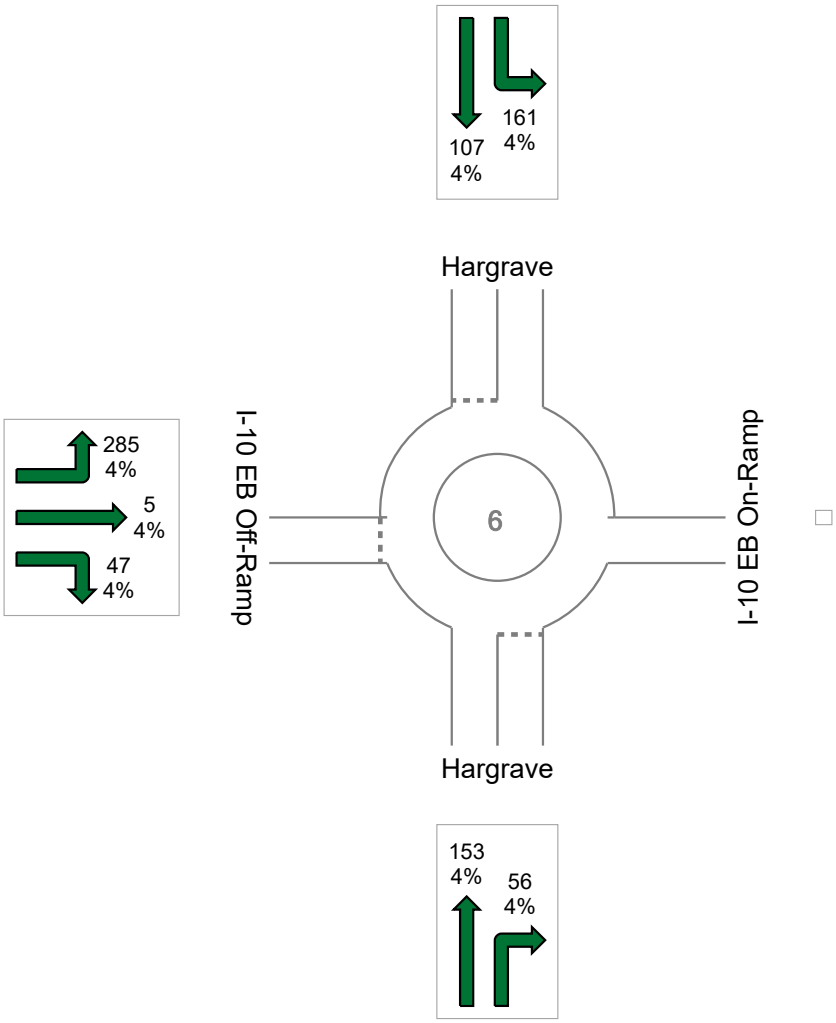
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 814

Light Vehicles (LV): 781

Heavy Vehicles (HV): 33



DELAY (AVERAGE)

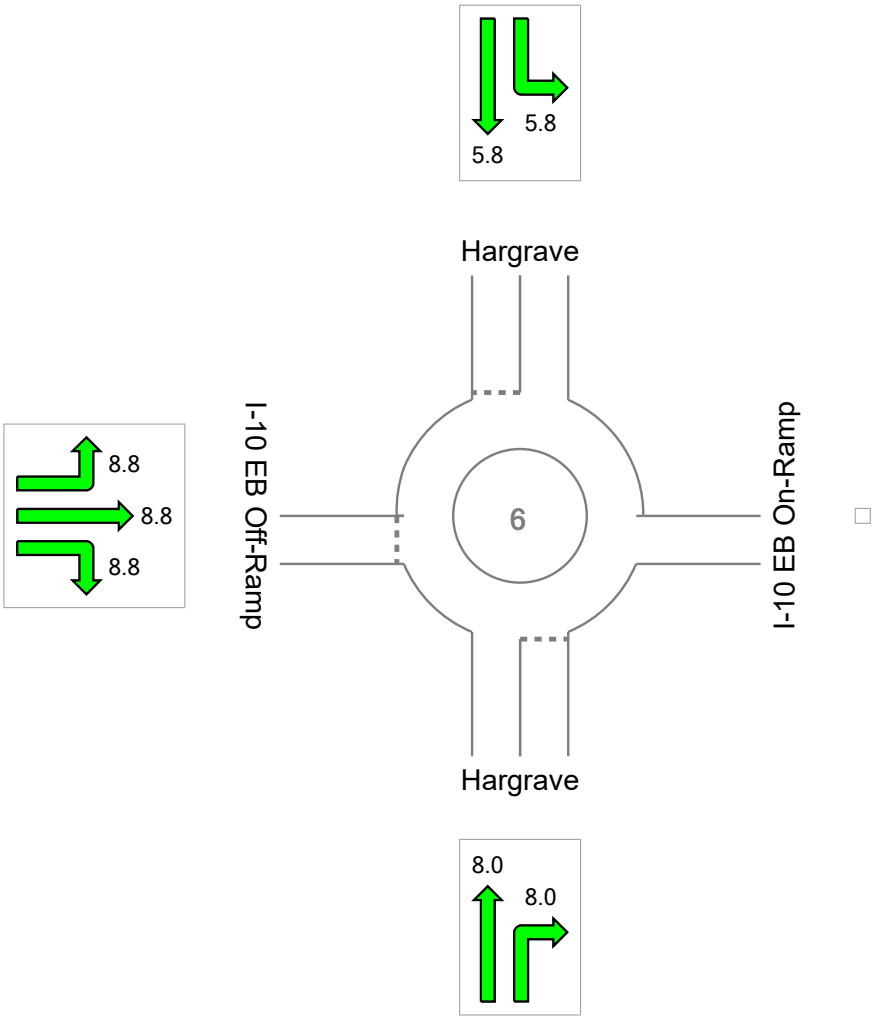
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 6. Hargrave & I-10 EB

Opening Year Plus Project - PM Peak Hour
Roundabout

All Movement Classes

	South	North	West	Intersection
Delay (Average)	8.0	5.8	8.8	7.6
LOS	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F | Continuous

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Cumulative Conditions - Plus Project

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 5. Hargrave & I-10 WB

Cumulative Conditions Plus Project - AM Peak Hour

Volume Display Method: Total and %

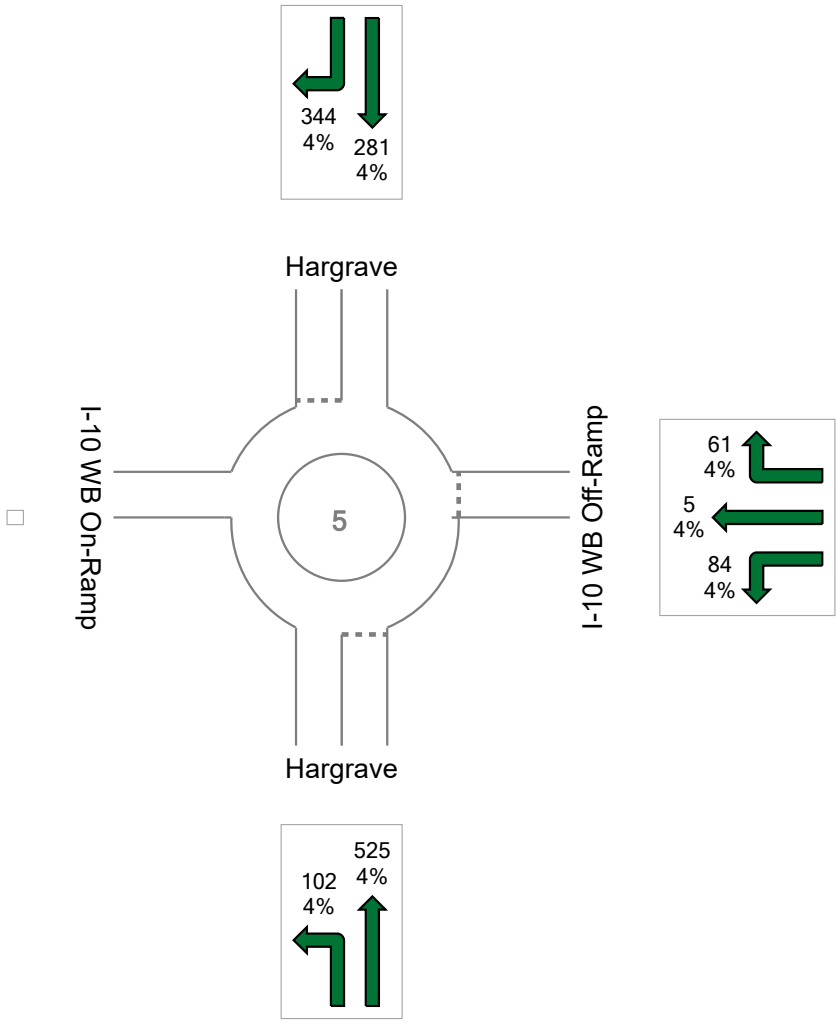
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 1402

Light Vehicles (LV): 1346

Heavy Vehicles (HV): 56



DELAY (AVERAGE)

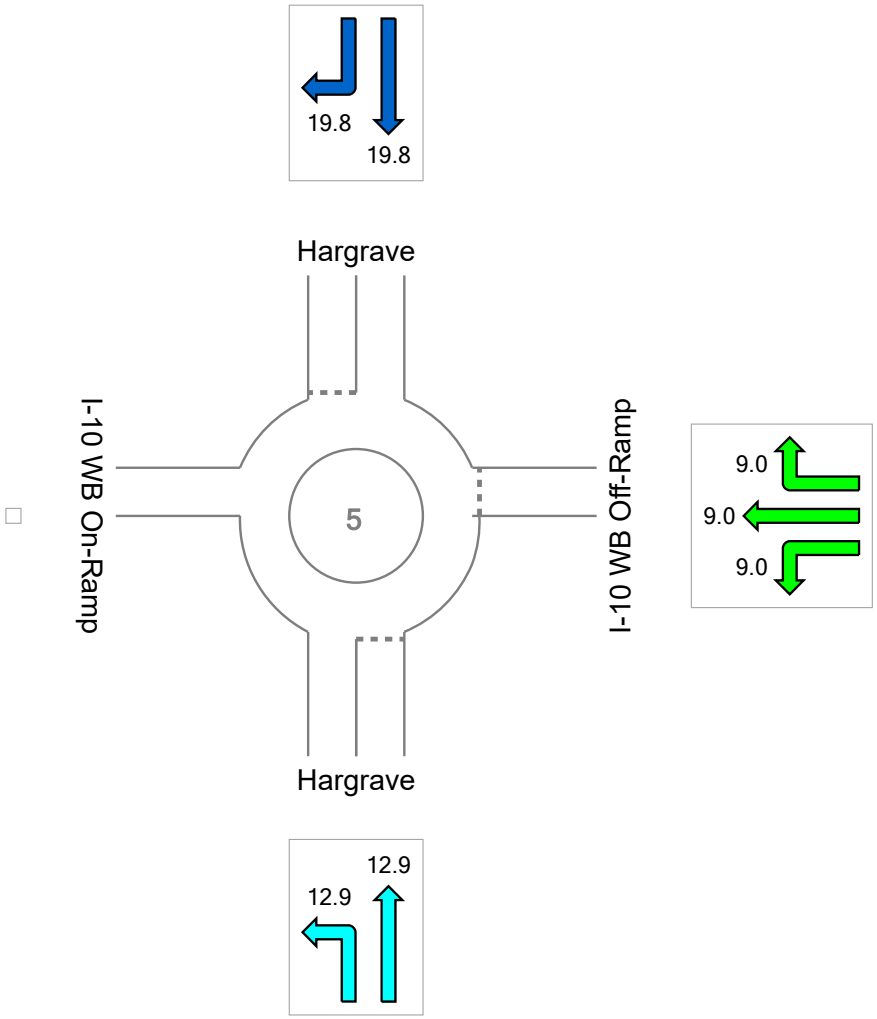
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 5. Hargrave & I-10 WB

Cumulative Conditions Plus Project - AM Peak Hour
Roundabout

All Movement Classes

	South	East	North	Intersection
Delay (Average)	12.9	9.0	19.8	15.5
LOS	B	A	C	C



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F | Continuous

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 6. Hargrave & I-10 EB

Cumulative Conditions Plus Project - AM Peak Hour

Volume Display Method: Total and %

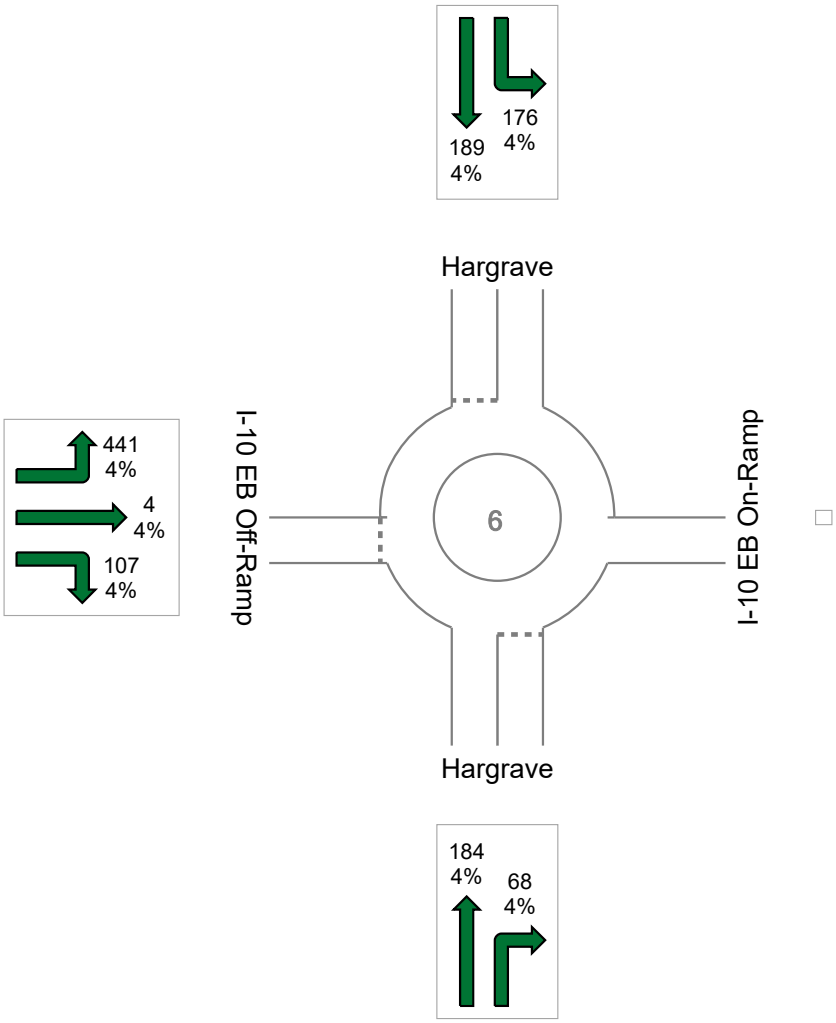
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 1169

Light Vehicles (LV): 1122

Heavy Vehicles (HV): 47



DELAY (AVERAGE)

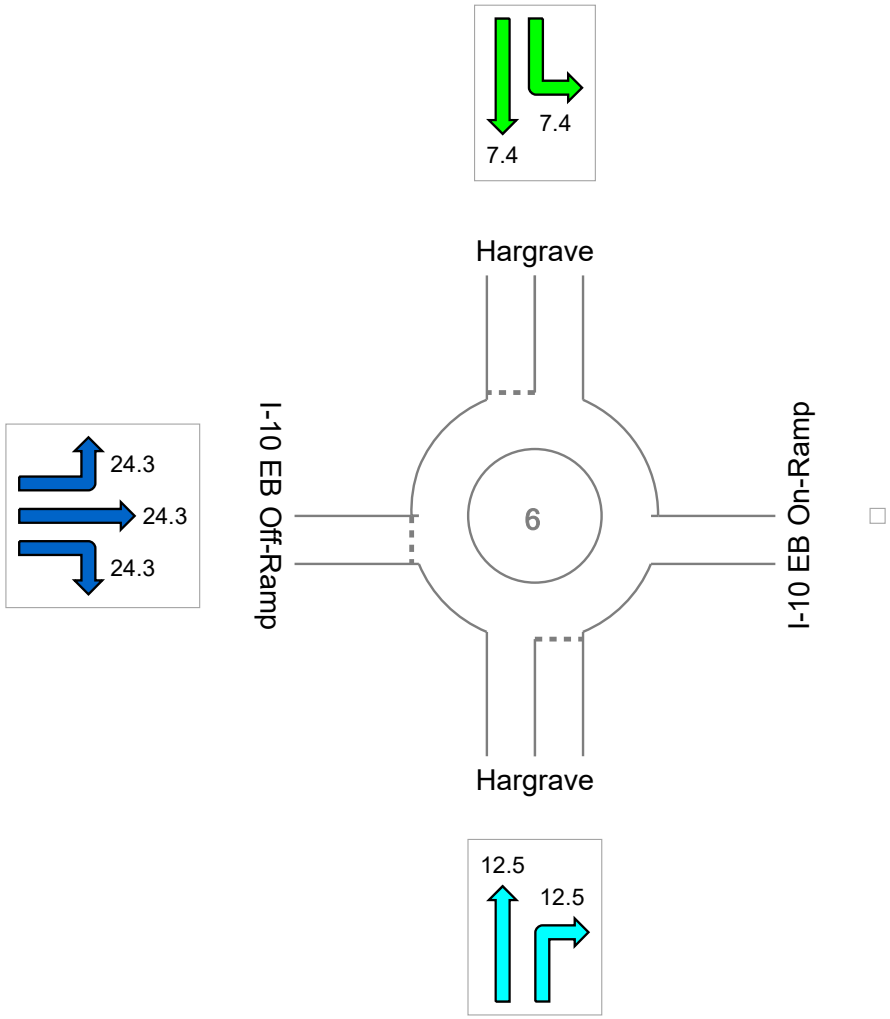
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 6. Hargrave & I-10 EB

Cumulative Conditions Plus Project - AM Peak Hour
Roundabout

All Movement Classes

	South	North	West	Intersection
Delay (Average)	12.5	7.4	24.3	16.5
LOS	B	A	C	C



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F | Continuous

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 5. Hargrave & I-10 WB

Cumulative Conditions Plus Project - PM Peak Hour

Volume Display Method: Total and %

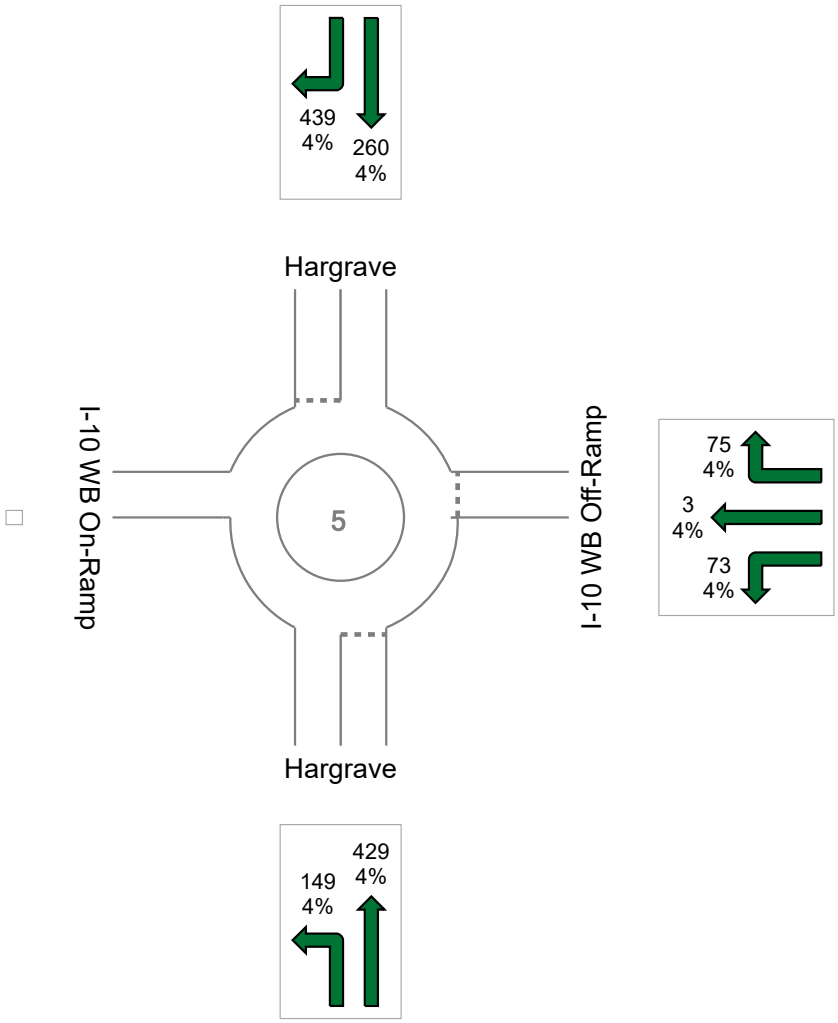
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 1428

Light Vehicles (LV): 1371

Heavy Vehicles (HV): 57



DELAY (AVERAGE)

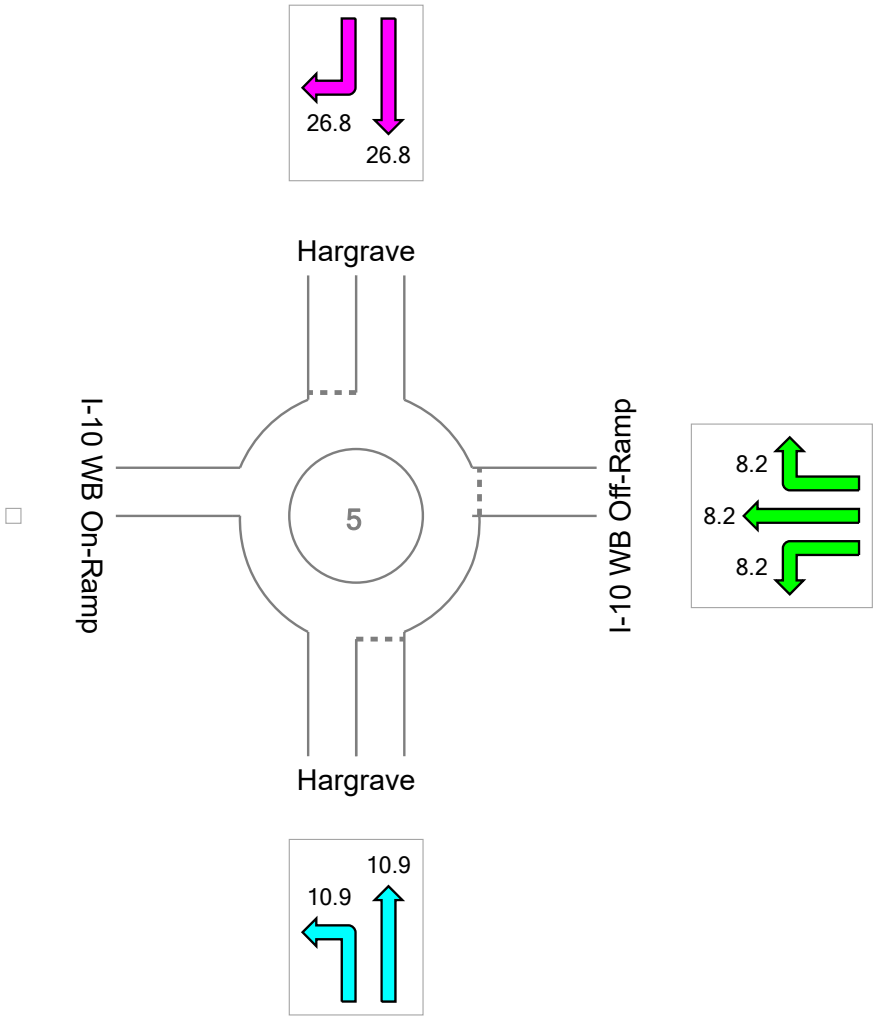
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 5. Hargrave & I-10 WB

Cumulative Conditions Plus Project - PM Peak Hour
Roundabout

All Movement Classes

	South	East	North	Intersection
Delay (Average)	10.9	8.2	26.8	18.4
LOS	B	A	D	C



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F | Continuous

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: 6. Hargrave & I-10 EB

Cumulative Conditions Plus Project - PM Peak Hour

Volume Display Method: Total and %

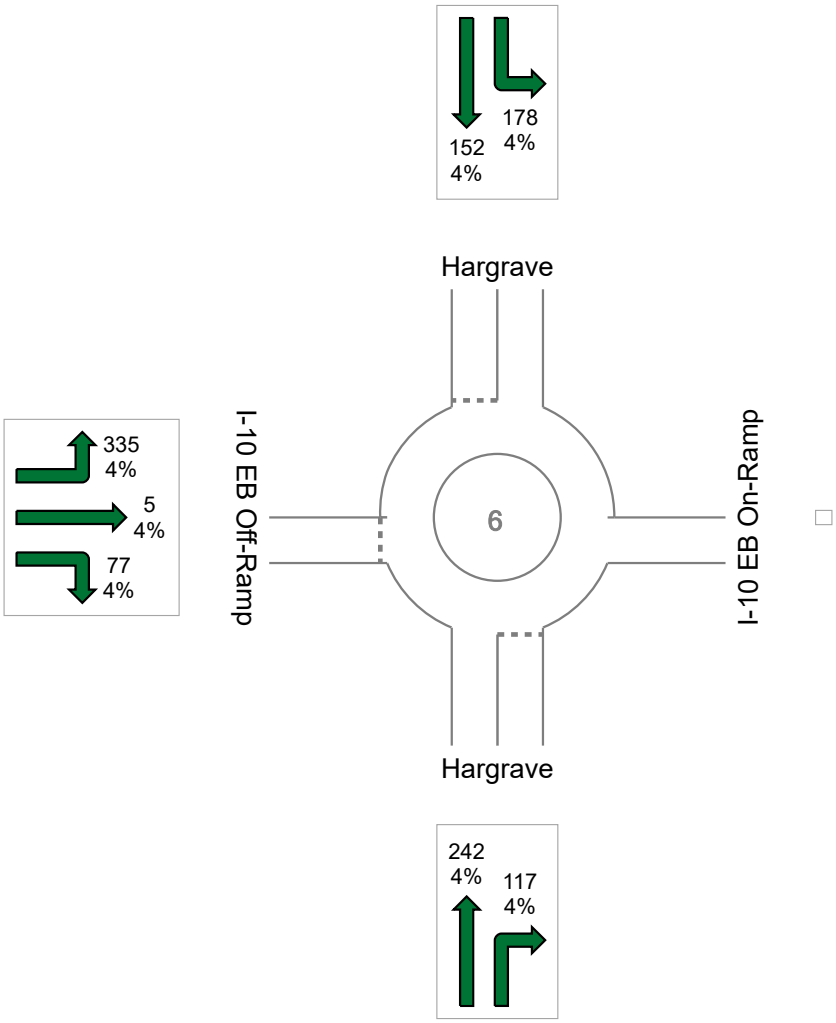
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 1106

Light Vehicles (LV): 1062

Heavy Vehicles (HV): 44



DELAY (AVERAGE)

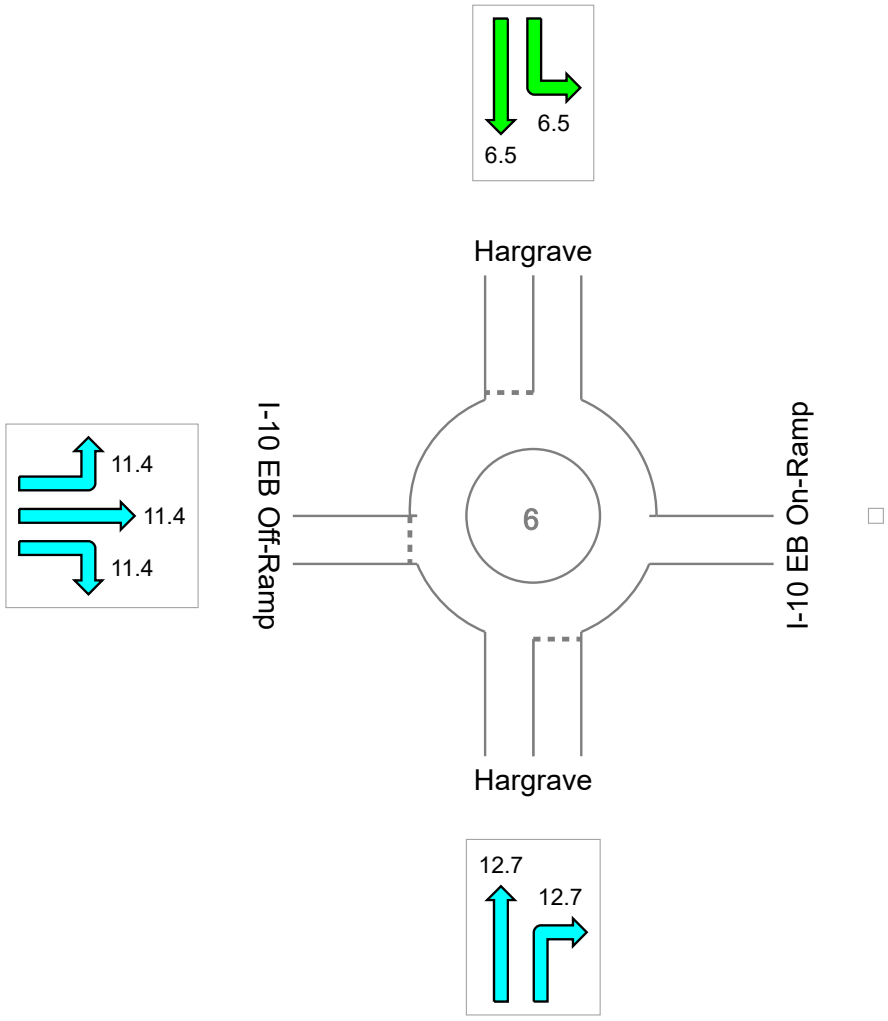
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 6. Hargrave & I-10 EB

Cumulative Conditions Plus Project - PM Peak Hour
Roundabout

All Movement Classes

	South	North	West	Intersection
Delay (Average)	12.7	6.5	11.4	10.3
LOS	B	A	B	B

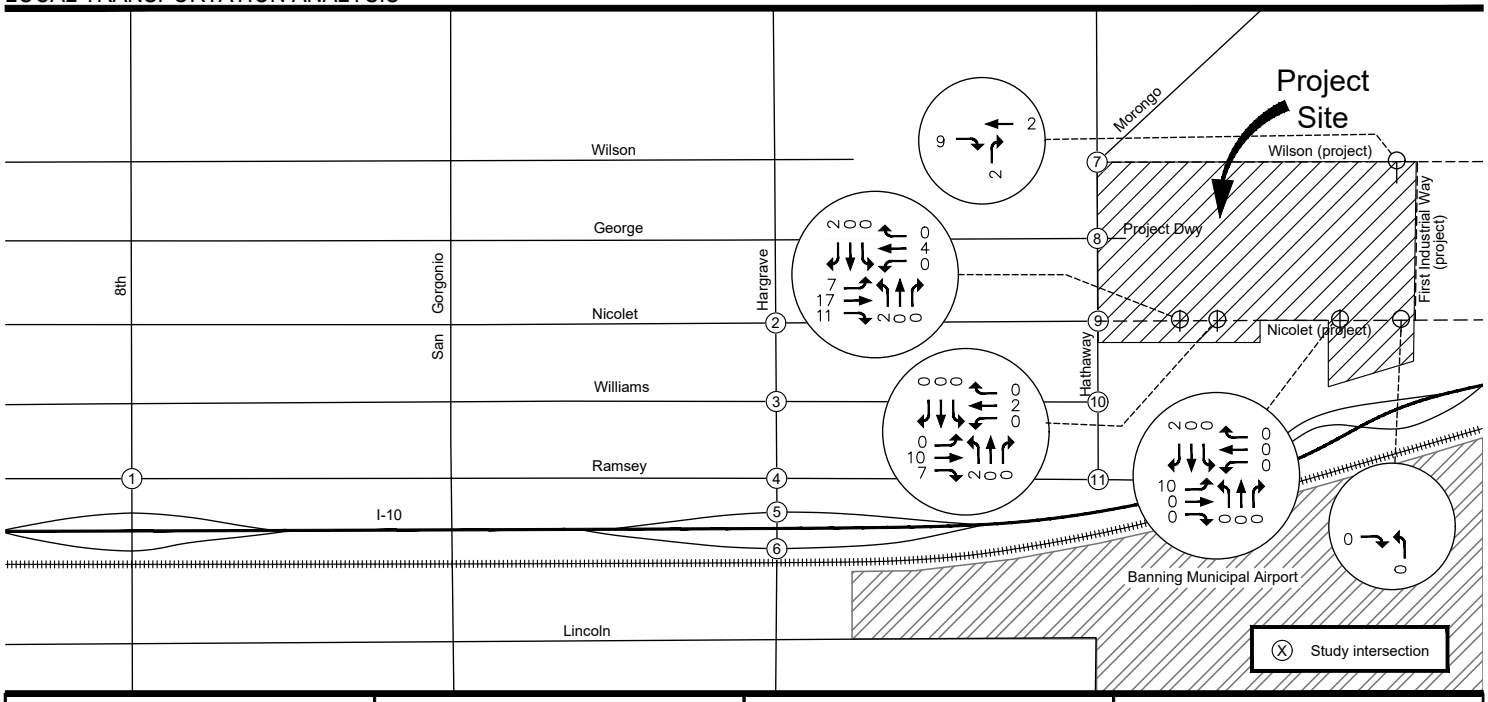


Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F | Continuous

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Appendix C PROJECT PEAK HOUR TURNING MOVEMENT TRIPS – TRUCKS AND PASSENGER VEHICLES



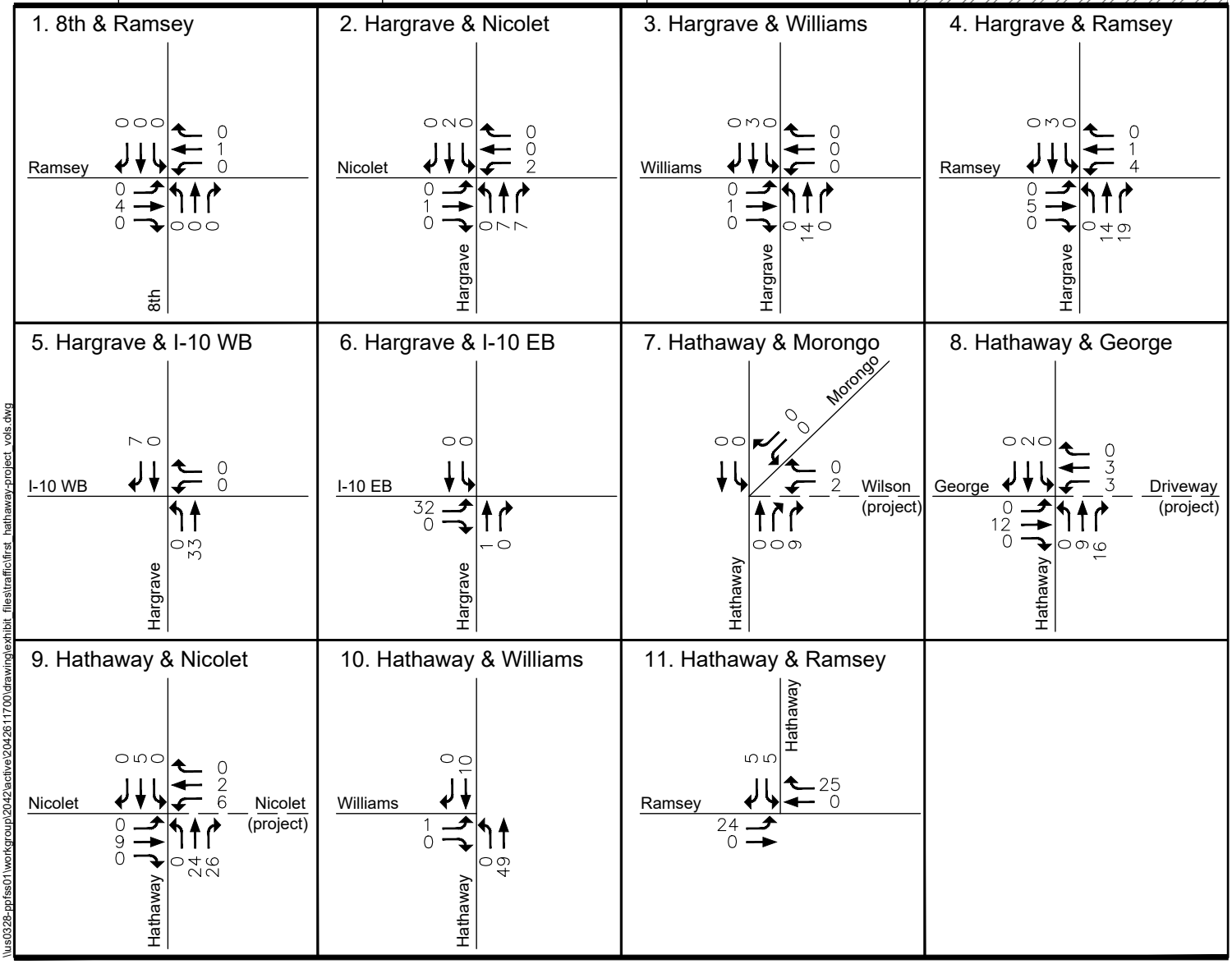


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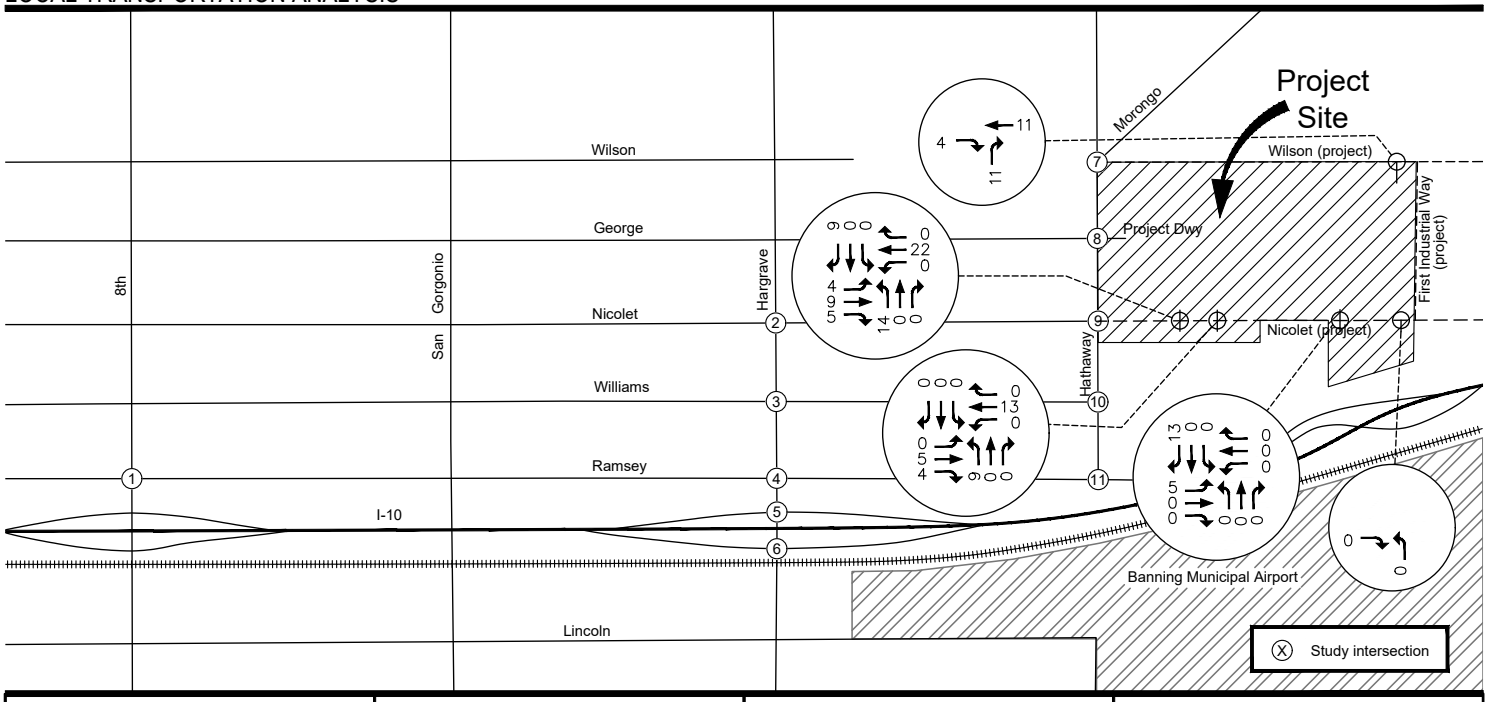
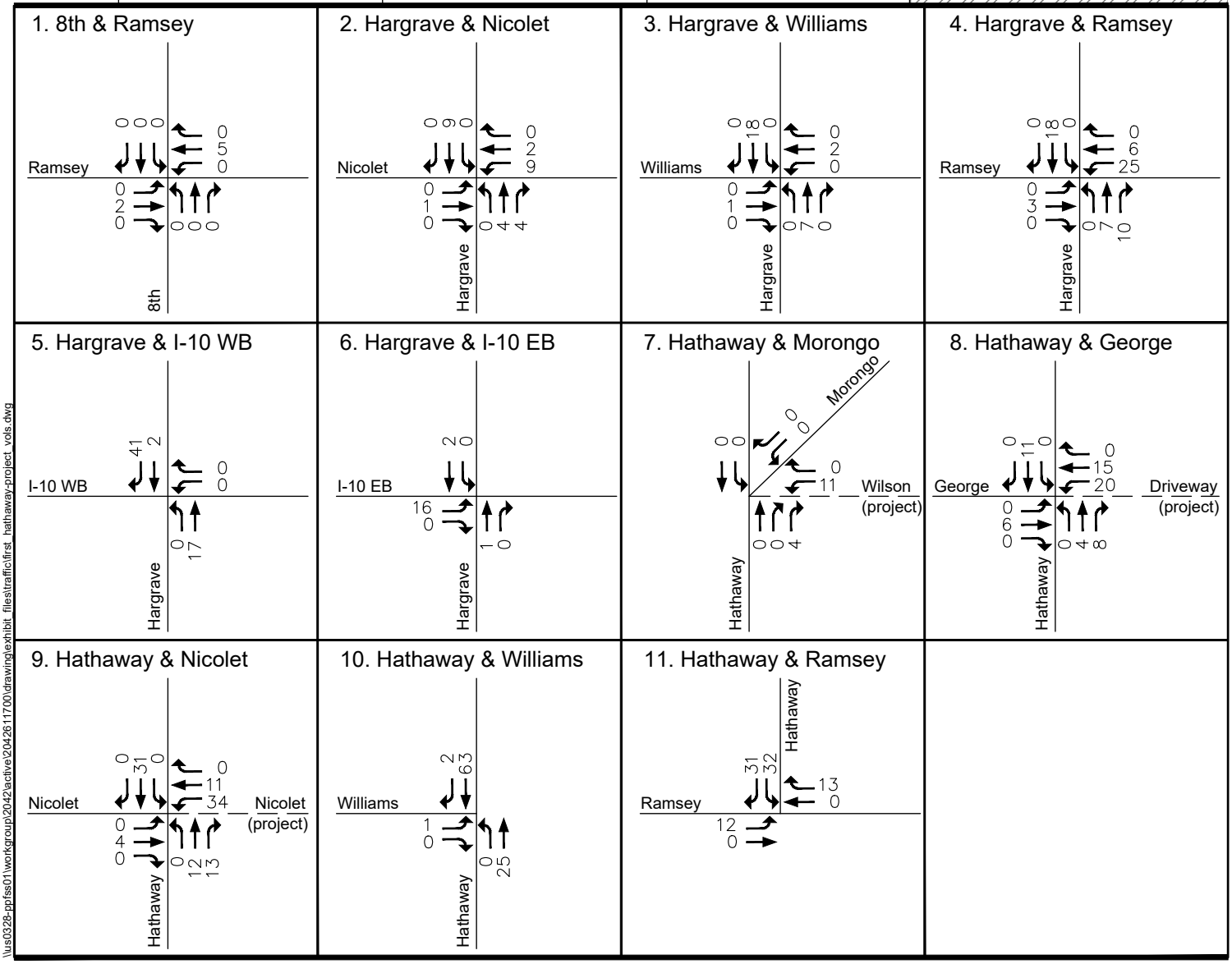
Figure C-1
Project AM Peak Hour Trips - Auto





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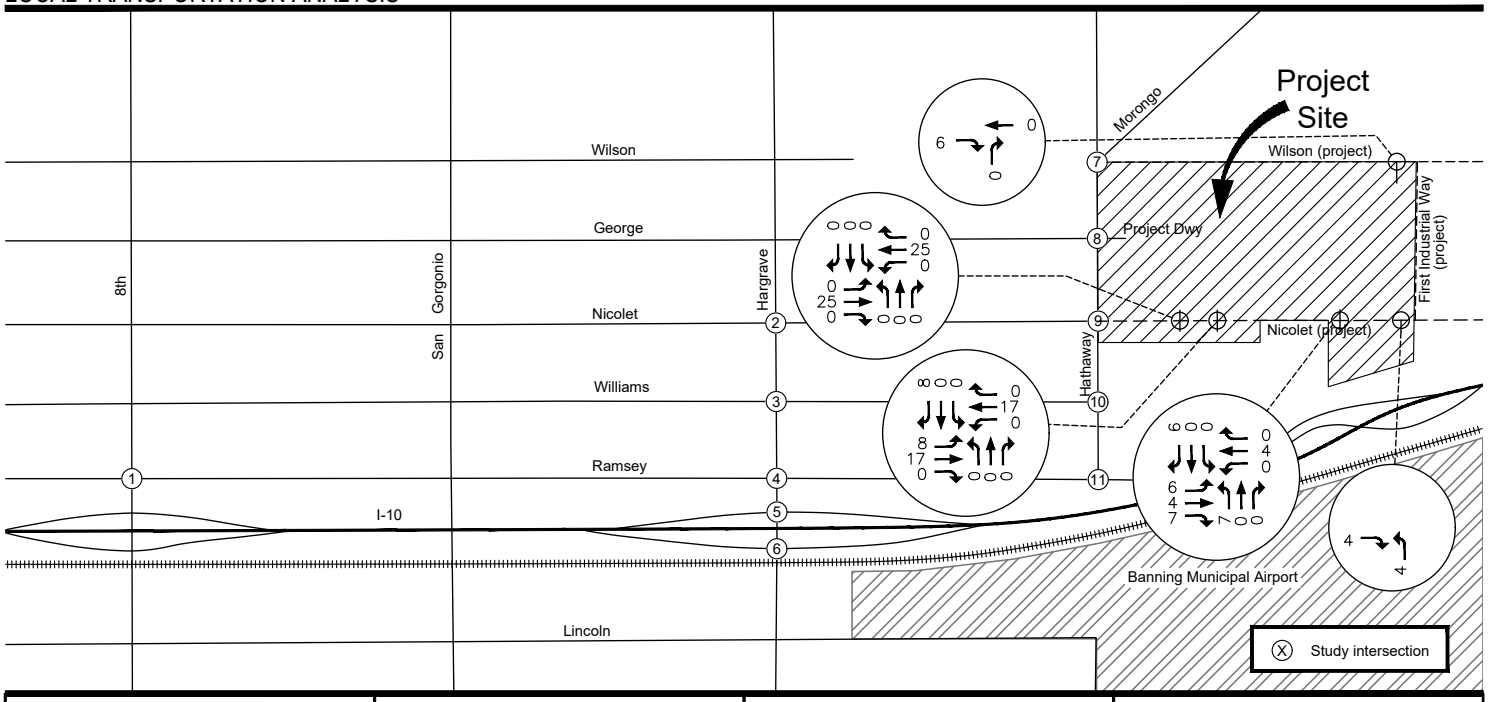
N

Figure C-2
Project PM Peak Hour Trips - Auto



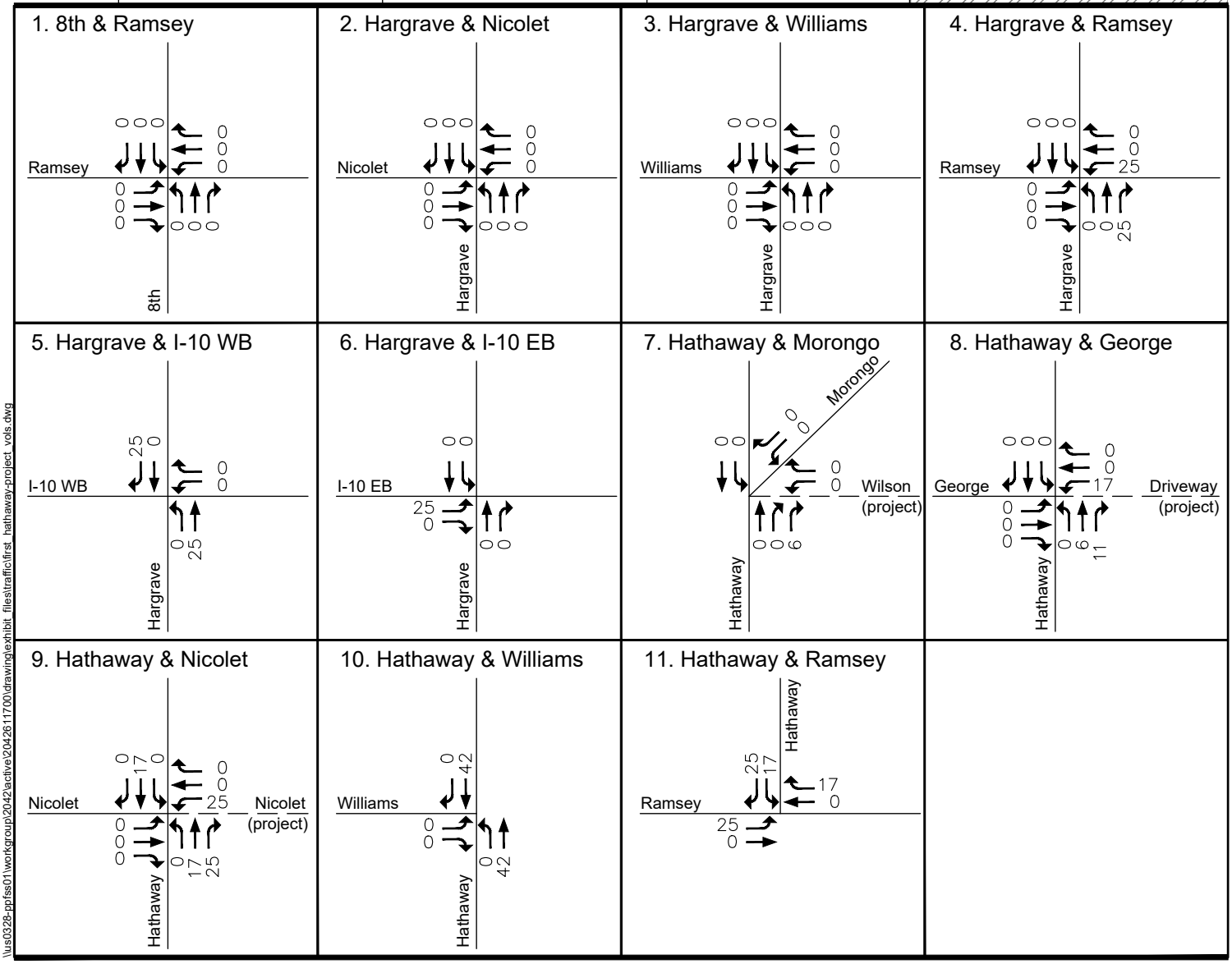


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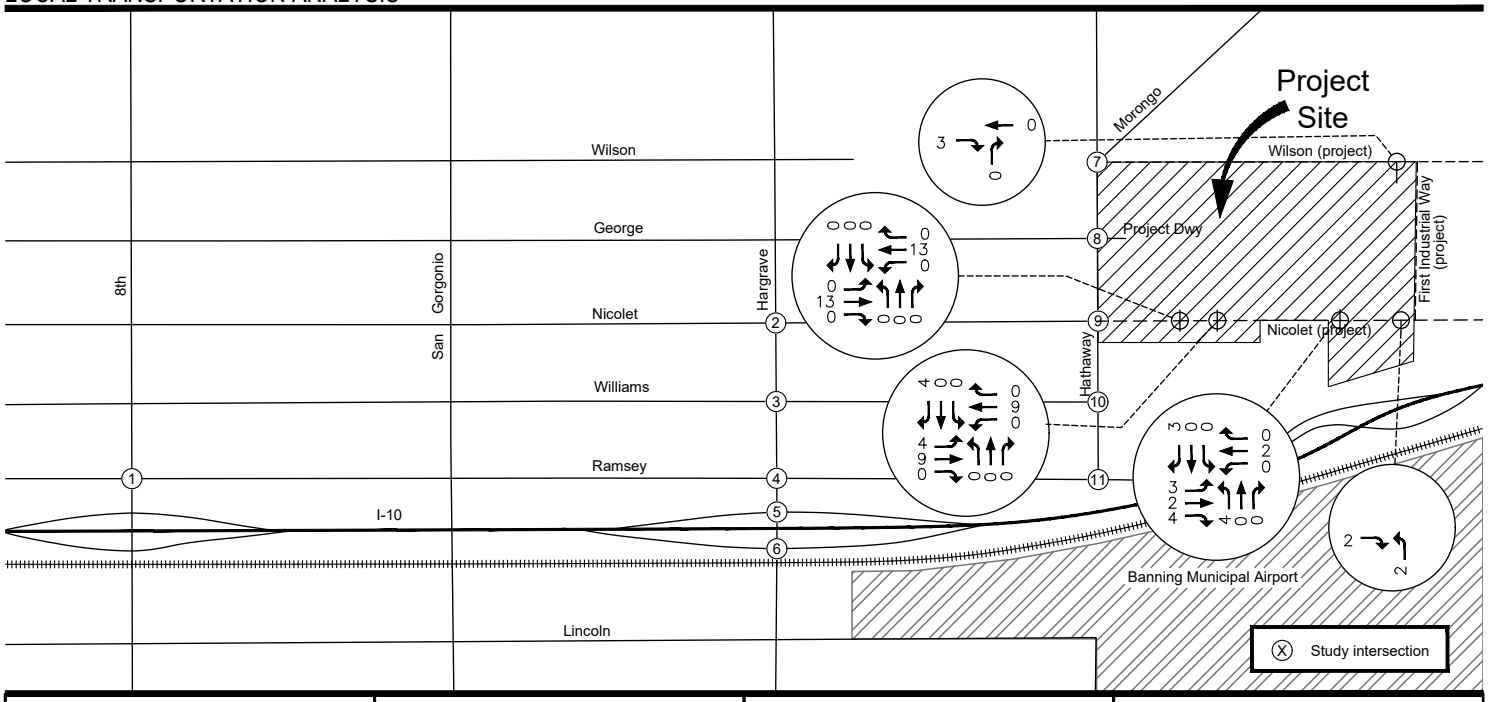
Figure C-3
Project AM Peak Hour Trips - Truck PCE



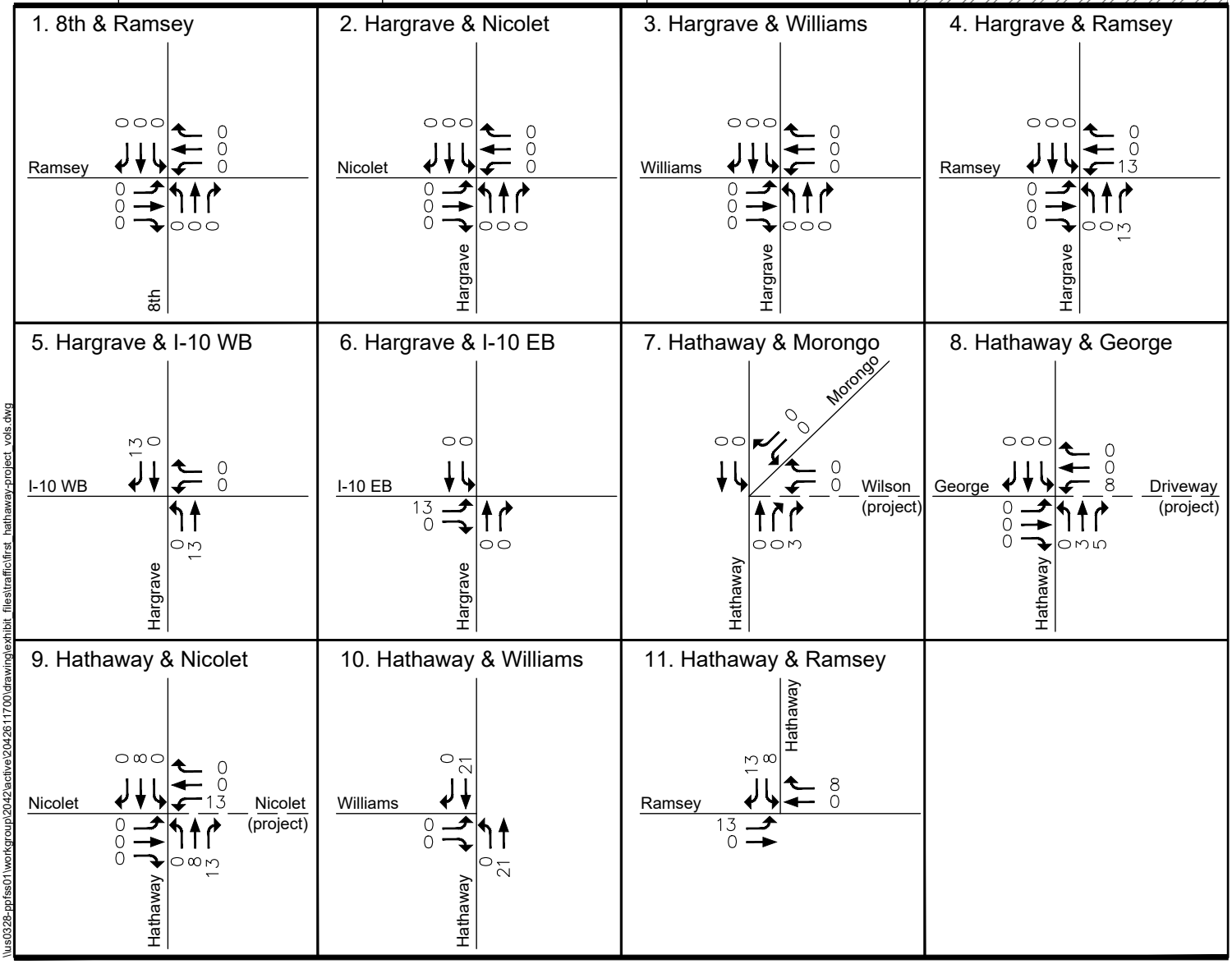


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Figure C-4

Project PM Peak Hour Trips - Truck PCE

Appendix D FREEWAY RAMP QUEUE ANALYSIS CALCULATIONS

Opening Year Conditions - Without Project

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	56	50	18
Average Queue (ft)	28	26	3
95th Queue (ft)	47	52	17
Link Distance (ft)	1132		197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	185	4	82
Average Queue (ft)	93	0	31
95th Queue (ft)	169	5	74
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	62	58	18
Average Queue (ft)	32	28	2
95th Queue (ft)	58	54	12
Link Distance (ft)	1132		197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	157	11	74
Average Queue (ft)	76	1	27
95th Queue (ft)	134	11	63
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Opening Year Conditions - Plus Project

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	56	75	19
Average Queue (ft)	28	32	2
95th Queue (ft)	48	66	11
Link Distance (ft)	1132		197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		2	

Intersection: 6: Hargrave & I-10 EB

Movement	EB	SB
Directions Served	LTR	LT
Maximum Queue (ft)	187	69
Average Queue (ft)	105	24
95th Queue (ft)	187	58
Link Distance (ft)	1021	249
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 2

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	135	78	85
Average Queue (ft)	70	47	52
95th Queue (ft)	120	74	80
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	81	67	13
Average Queue (ft)	35	28	1
95th Queue (ft)	67	59	10
Link Distance (ft)	1132		197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 6: Hargrave & I-10 EB

Movement	EB	SB
Directions Served	LTR	LT
Maximum Queue (ft)	162	74
Average Queue (ft)	90	30
95th Queue (ft)	157	72
Link Distance (ft)	1021	249
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	110	95	103
Average Queue (ft)	63	53	51
95th Queue (ft)	101	84	88
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Cumulative Conditions - Without Project

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	103	77	22
Average Queue (ft)	50	38	2
95th Queue (ft)	93	71	13
Link Distance (ft)	1132		197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		1	

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	585	32	81
Average Queue (ft)	317	3	34
95th Queue (ft)	674	20	76
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 1

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	SB
Directions Served	LTR	L	TR
Maximum Queue (ft)	178	91	30
Average Queue (ft)	69	46	5
95th Queue (ft)	148	84	21
Link Distance (ft)	1132		197
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)		1	
Queuing Penalty (veh)		2	

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	310	29	104
Average Queue (ft)	169	3	49
95th Queue (ft)	309	18	95
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 2

Cumulative Conditions - Plus Project

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	NB	SB
Directions Served	LTR	L	T	TR
Maximum Queue (ft)	150	80	4	23
Average Queue (ft)	56	39	0	2
95th Queue (ft)	125	72	4	14
Link Distance (ft)	1132		249	197
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)		0		
Queuing Penalty (veh)		1		

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	865	8	84
Average Queue (ft)	634	1	32
95th Queue (ft)	1213	8	72
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)	19		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 1

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	NB	SB
Directions Served	LTR	L	T	TR
Maximum Queue (ft)	175	86	100	141
Average Queue (ft)	83	45	27	72
95th Queue (ft)	156	80	81	145
Link Distance (ft)	1132		249	197
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)		1	0	
Queuing Penalty (veh)		3	0	

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	393	183	245
Average Queue (ft)	257	80	136
95th Queue (ft)	388	163	235
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			0
Queuing Penalty (veh)			1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 4

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	NB	SB
Directions Served	LTR	L	T	TR
Maximum Queue (ft)	195	97	19	28
Average Queue (ft)	80	55	2	4
95th Queue (ft)	161	98	27	21
Link Distance (ft)	1132		249	197
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)		2	0	
Queuing Penalty (veh)		9	0	

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	491	16	114
Average Queue (ft)	206	2	44
95th Queue (ft)	453	13	96
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 9

Intersection: 5: Hargrave & I-10 WB

Movement	WB	NB	NB	SB
Directions Served	LTR	L	T	TR
Maximum Queue (ft)	161	110	196	156
Average Queue (ft)	76	62	46	44
95th Queue (ft)	149	110	148	120
Link Distance (ft)	1132		249	197
Upstream Blk Time (%)			0	1
Queuing Penalty (veh)			1	5
Storage Bay Dist (ft)		90		
Storage Blk Time (%)		5	1	
Queuing Penalty (veh)		23	1	

Intersection: 6: Hargrave & I-10 EB

Movement	EB	NB	SB
Directions Served	LTR	TR	LT
Maximum Queue (ft)	318	233	221
Average Queue (ft)	204	89	115
95th Queue (ft)	308	184	219
Link Distance (ft)	1021	835	249
Upstream Blk Time (%)			2
Queuing Penalty (veh)			5
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 35

Appendix E APPROVED SCOPING AGREEMENT

TIA SCOPING FORM

This completed Scoping Form must be submitted to City staff for review before initiation of the TIA:

Project Identification:

Case Number:	DR 21-7015, TPM 21-4002
Related Cases:	
SP No.	
EIR No.	ENV 21 1519
GPA No.	
CZ No.	
Project Name:	First Hathaway Logistics Center
Project Opening Year:	2023
Project Description:	1.4 million square feet logistics warehouse building

	Consultant	Developer
Name:	Stantec Consulting Services Inc	First Industrial Realty Trust, Inc
Address:	38 Technology Dr Irvine CA 92618	
Telephone:	949-923-6064	
Fax/Email:	Cathy.Lawrence@stantec.com	

Trip Generation Information:

Source of Trip Generation Data: ITE, 10 ed. High-Cube Transload and Short-Term Warehouse (Category 154)

Current General Plan Land Use	Proposed General Plan Land Use
Business Park	Warehouse
Current Zoning	**Proposed Zoning**
Business Park	Business Park

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Peak Hour:	Nom.	Nom.	Nom.	112	56	168
PM Peak Hour:	Nom.	Nom.	Nom.	56	113	169

Trip Internalization: __ Yes __X__ No _____ Percentage (if Yes)

Pass-By Allowance: __ Yes __X__ No _____ Percentage (if Yes)

Diverted Trips Allowance: __ Yes __X__ No _____ Percentage (if Yes)

Potential Screening Checks:

Is your project screened from a Local Transportation Analysis (LTA), pursuant to the criteria in Section 2.1 of the guidelines?

__ Yes __X__ No

LTA Screening Justification:

_____
_____
_____
_____
_____
_____

Is your project screened from a VMT analysis, as per the criteria in Section 2.2 of the guidelines?

__ Yes __X__ No

VMT Screening Justification:

_____
_____
_____
_____
_____
_____

Level of Service Analysis Scoping:

Project Trip Distribution Percentages (Attach exhibit for detailed distribution):

North	South	East	West
Auto 4%, Trucks 0%	Auto 4%, Trucks 0%	Auto 35%, Trucks 40%	Auto 61%, Trucks 60%

- Attach list of Approved and Pending Projects that need to be considered (provided by City staff and adjacent jurisdictions)
- Attach list of study intersections/roadway segments
- Attach site plan
- Note other specific items to be addressed:
  a. Site access
  b. On-site circulation
  c. Parking
  d. Consistency with Plans supporting Bikes/Peds/Transit
  e. Other _____
- Date of Traffic Counts 2018 & 2021
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

Vehicle Miles Traveled Analysis Scoping:

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used: RIVCOM
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Any other specific issues to be addressed in the LTA or VMT analysis, apart from those stated in the Guidelines?

_____

Stantec

Memo

To:	Kevin Sin City of Banning Public Works Department - Engineering 99 E. Ramsey Street Banning, CA 92220	From:	Cathy Lawrence Stantec 38 Technology Drive Irvine, CA 92618
File:	2042611700	Date:	December 8, 2021

Reference: Proposed Traffic Study Scope of Work for First Hathaway Logistics

The First Hathaway Logistics Center is proposed for a site within the City of Banning. Stantec Consulting Services Inc. (Stantec) is pleased to provide you with the following Traffic Study Scope of Work for the City's review and approval. This site was previously referred to as the Stagecoach Business Park, and a Traffic Impact Analysis was prepared in April 2018 based on a scope of work approved by the City in March 2018. The previously proposed land use on the site was an on-line auto auction facility and industrial park, and the current Project proposes a logistics center as described below. This current proposed scope of work identifies the same study area and analysis scenarios as the previously approved scope. The scope of work is based on the City of Banning Traffic Impact Analysis Guidelines for Local Transportation Analysis and Vehicle Miles Traveled Analysis (September 2021).

SCOPE OF WORK

1. Project Location: The First Hathaway Logistics Center is located on an approximately 95-acre site on the east side of Hathaway Street between the future extension of Wilson Street and Nicolet Street. There would be one additional remaining parcel located on the south side of the future extension of Nicolet Street which would be used for trailer parking. The location of the project is illustrated in Figure 1.

2. Project Description: The Project would consist of one 1.4 million square feet (MSF) warehouse building and associated truck docks, trailer, and office parking. The main building would be accessed by four driveways, two located on the future extension of Nicolet Street, one on Hathaway Street, and one on the future extension of Wilson Street.

3. Trip Generation: Trip generation was determined based on Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition rates for High-Cube Transload and Short-Term Warehouse (Category 154). The total driveway trip generation and truck trip generation were determined from the ITE rates. A passenger car equivalent (PCE) factor of 3.0 was applied to the truck trips based on the expectation that the trucks would consist of four or more axles. Trip generation is summarized in Table 1 (attached) and shows that the Project would generate 168 PCE trips during the AM peak hour, 169 PCE trips during the PM peak hour, and 2,590 PCE trips daily. Please note that there are several ITE "warehouse" categories that apply to different types of operations. Other warehouse categories apply to general warehouse facilities, Amazon-type fulfillment centers for direct deliveries of smaller packages to ecommerce customers, or FedEx/UPS-type freight forwarding facilities that include truck maintenance, wash, and fueling activities; therefore, the High-Cube Transload and Short-Term Warehouse category, which applies to distribution centers for large deliveries to retail locations and other warehouses, is the most appropriate for the proposed Project.

Reference: Proposed Traffic Study Scope of Work for First Hathaway Logistics

4. Distribution: The Project distribution is based on the distribution for the Stagecoach Business Park from the previously approved scope. Separate general distribution patterns for passenger vehicles and trucks are identified and shown in Figures 1 and 2.

5. Analysis: The analysis would include the followings scenarios:

    a. Existing Conditions
    b. Existing Plus Ambient Growth (2% per year) – Year 2023
    c. Existing Plus Ambient Growth Plus Project
    d. Existing Plus Ambient Growth Plus Cumulative Projects
    e. Existing Plus Ambient Growth Plus Cumulative Projects Plus Project

    The majority of project trips are anticipated to be oriented toward the I-10 freeway; therefore, the study area would include intersections between the project site and the freeway. The study area would include the following study intersections:

    1. 8th St & Ramsey St (signal)
    2. Hargrave St & Nicolet St (AWSC)
    3. Hargrave St & Williams St (TWSC)
    4. Hargrave St & Ramsey St (signal)
    5. Hargrave St & I-10 WB (TWSC)
    6. Hargrave St & I-10 EB (TWSC)
    7. Hathaway St & Morongo Rd (AWSC)
    8. Hathaway St & George St (TWSC)
    9. Hathaway St & Nicolet St (TWSC)
    10. Hathaway St & Williams St (TWSC)
    11. Hathaway St & Ramsey St (TWSC)

6. Existing Conditions: Since traffic conditions under the recent COVID-19 restrictions may not represent typical traffic conditions, current peak hour traffic counts will not be collected at all of the study intersections. Existing peak hour counts at select study intersections were collected in July 2021 at the I-10 freeway ramps along Hargrave Street and at the study intersections along Ramsey Street at Hargrave Street and at Hathaway Street. These sample counts were compared with the counts collected in 2018.

    The 2021 counts were low compared with the 2018 counts that were increased by 6 percent (2 percent per year) to approximate “typical” 2021 conditions—specifically, an average of 26 percent low during the AM peak hour and 19 percent low during the PM peak hour; therefore, these new counts were increased to represent “typical” 2021 levels. The 2018 volumes at the remaining study intersections were factored to 2021 levels using a 2 percent per year growth factor. The factored counts will be used to represent Existing Conditions, and the volumes are summarized in Table 2 (attached).

7. Cumulative Projects: Cumulative projects were identified in the previous traffic study prepared in 2018 for the site. Please review the attached list of cumulative projects (Table 3) and provide any necessary changes regarding the current approved and pending projects in the study area.

8. Proposed Project Impacts: The acceptable level of service (LOS) criterion for the study intersections is “D”. Thresholds of impacts will be identified, and appropriate off-site improvements will be

Reference: Proposed Traffic Study Scope of Work for First Hathaway Logistics

identified. Improvements necessary to address cumulative deficiencies will also be identified, and the projects proportionate share shall be determined.

9. Freeway Ramp Queuing Analysis: An analysis of freeway ramp queueing will also be provided under the analysis scenarios.

10. Traffic Signal Warrant Analysis: Study intersections that are not currently signalized will be reviewed to determine if signal warrants are met for any of the study year scenarios.

11. Vehicle Miles Traveled: The transportation analysis for the project's environmental document will need to address the recently revised changes to the CEQA Guidelines regarding the analysis of transportation impacts. Under the revised Guidelines, VMT is recognized as the most appropriate metric to evaluate a project's transportation impacts. The Governor's Office of Planning and Research (OPR) has provided a Technical Advisory (December 2018) that recommends specific VMT significance thresholds that may constitute a significant transportation impact and lead agencies have the discretion to set or apply their own thresholds of significance. The City of Banning Vehicle Miles Traveled Analysis Guidelines will be utilized as the basis for the analysis. Certain types of development, such as development within a low VMT generating area or development that generates very low volumes of traffic can generally be presumed to have less than significant impacts. The City's guidelines and WRCOG's VMT screening tool indicate that the project cannot be screened out from analysis, therefore a comprehensive VMT analysis will be prepared. VMT reducing mitigation measures will be identified if significant impacts are identified.

The traffic report will be prepared consistent with the City of Banning Traffic Impact Analysis Guidelines.

Stantec Consulting Services Inc.

Cathy Lawrence PE
Transportation Engineer

Phone: 949 923 6064
Cathy.Lawrence@stantec.com

Attachment:
Table 1 Project Trip Generation Summary
Table 2 Existing Peak Hour Intersection Volumes
Table 3 Cumulative Projects List
Figure 1 Auto Trip Distribution
Figure 2 Truck Trip Distribution
Proposed site plan
2018 Stagecoach Business Park Approved Scoping Memo & Traffic Study

c. Daryl Zerfass, Stantec

Reference: **Proposed Traffic Study Scope of Work for First Hathaway Logistics**

Table 1 Project Trip Generation Summary

Land Use	Amount	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Logistics Center								
Total Driveway Trips	1,407.23 TSF	84	28	112	42	99	141	1,970
Truck trips		14	14	28	7	7	14	310
Truck PCE trips (3.0 PCE)[2]		*42*	*42*	*84*	*21*	*21*	*42*	*930*
Auto Trips[3]		*70*	*14*	*84*	*35*	*92*	*127*	*1,660*
Total Auto + Truck PCE trips		**112**	**56**	**168**	**56**	**113**	**169**	**2,590**
Trip Rates								
High-Cube Warehouse[1]	TSF							
Total Vehicles		0.06	0.02	0.08	0.03	0.07	0.10	1.40
Trucks		0.01	0.01	0.02	0.005	0.005	0.01	0.22

Source:
[1] High-Cube Transload and Short-Term Storage Warehouse – ITE Trip Generation, 10th Edition Category 154
[2] Riverside County Transportation Analysis Guidelines, December 2020 – 4 or more axle trucks
[3] Total driveway trips less truck trips

ADT = Average daily traffic
TSF = 1,000 square feet
PCE = Passenger car equivalents

Reference: **Proposed Traffic Study Scope of Work for First Hathaway Logistics**

Table 2 Existing Peak Hour Intersection Volumes

Intersection	SBL	SBT	SBR	WBL	WBT	WBR	NBL	NBT	NBR	EBL	EBT	EBR
AM Peak Hour												
1. 8th & Ramsey												
2018 volume	37	200	59	91	172	25	120	133	180	35	201	110
2021 adjusted volume[1]	39	212	63	96	182	27	127	141	191	37	213	117
2. Hargrave & Nicolet												
2018 volume	3	159	15	33	21	7	21	150	15	18	18	23
2021 adjusted volume[1]	3	169	16	35	22	7	22	159	16	19	19	24
3. Hargrave & Williams												
2018 volume	2	210	8	16	13	1	28	187	6	9	11	34
2021 adjusted volume[1]	2	223	8	17	14	1	30	198	6	10	12	36
4. Hargrave & Ramsey												
2018 volume	20	224	24	74	51	16	90	216	145	28	72	60
2021 adjusted volume[2]	27	271	50	143	84	31	82	169	122	36	43	55
5. Hargrave & I-10 WB												
2018 volume	0	181	210	42	0	42	61	431	0	0	0	0
2021 adjusted volume[2]	0	242	263	31	5	42	73	344	0	0	0	0
6. Hargrave & I-10 EB												
2018 volume	69	156	0	0	0	0	0	168	54	314	0	71
2021 adjusted volume[2]	158	115	0	0	0	0	0	136	43	281	4	46
7. Hathaway & Morongo												
2018 volume	9	23	0	50	0	1	0	17	91	0	0	0
2021 adjusted volume[1]	10	24	0	53	0	1	0	18	96	0	0	0
8. Hathaway & George												
2018 volume	0	66	12	0	0	0	14	99	0	11	0	13
2021 adjusted volume[1]	0	70	13	0	0	0	15	105	0	12	0	14
9. Hathaway & Nicolet												
2018 volume	0	77	4	0	0	0	4	104	0	6	0	5
2021 adjusted volume[1]	0	82	4	0	0	0	4	110	0	6	0	5
10. Hathaway & Williams												
2018 volume	0	77	7	0	0	0	8	105	0	6	0	7
2021 adjusted volume[1]	0	82	7	0	0	0	8	111	0	6	0	7
11. Hathaway & Ramsey												
2018 volume	46	0	40	0	86	29	0	0	0	68	34	0
2021 adjusted volume[2]	7	0	69	0	146	36	0	0	0	89	14	0
PM Peak Hour												
1. 8th & Ramsey												
2018 volume	28	199	70	164	256	37	158	199	120	88	262	176
2021 adjusted volume[1]	30	211	74	174	271	39	167	211	127	93	278	187
2. Hargrave & Nicolet												
2018 volume	7	128	8	19	11	6	29	179	17	9	16	12
2021 adjusted volume[1]	7	136	8	20	12	6	31	190	18	10	17	13
3. Hargrave & Williams												
2018 volume	3	160	7	9	13	6	24	189	9	6	17	42
2021 adjusted volume[1]	3	170	7	10	14	6	25	200	10	6	18	45

Reference: **Proposed Traffic Study Scope of Work for First Hathaway Logistics**

4. Hargrave & Ramsey												
2018 volume	15	197	25	157	90	39	65	146	92	38	88	104
2021 adjusted volume[2]	16	209	44	184	119	55	76	176	99	58	84	88
5. Hargrave & I-10 WB												
2018 volume	0	150	334	53	0	69	115	262	0	0	0	0
2021 adjusted volume[2]	0	215	293	43	3	56	78	315	0	0	0	0
6. Hargrave & I-10 EB												
2018 volume	74	114	0	0	0	0	0	209	59	204	0	55
2021 adjusted volume[2]	155	101	0	0	0	0	0	146	54	246	5	45
7. Hathaway & Morongo												
2018 volume	10	23	0	88	0	8	0	24	54	0	0	0
2021 adjusted volume[1]	11	24	0	93	0	8	0	25	57	0	0	0
8. Hathaway & George												
2018 volume	0	109	13	0	0	0	12	87	0	6	0	14
2021 adjusted volume[1]	0	116	14	0	0	0	13	92	0	6	0	15
9. Hathaway & Nicolet												
2018 volume	0	119	3	0	0	0	3	84	0	6	0	13
2021 adjusted volume[1]	0	126	3	0	0	0	3	89	0	6	0	14
10. Hathaway & Williams												
2018 volume	0	112	13	0	0	0	8	90	0	8	0	7
2021 adjusted volume[1]	0	119	14	0	0	0	8	95	0	8	0	7
11. Hathaway & Ramsey												
2018 volume	36	0	74	0	105	31	0	0	0	62	71	0
2021 adjusted volume[2]	6	0	88	0	174	51	0	0	0	83	13	0

Notes:
[1] 2% per year growth factor applied to 2018 volumes (6% total)
[2] 35% increase applied to 2021 AM peak hour count, 25% increase to 2021 PM peak hour count

SB = Southbound
WB = Westbound
NB = Northbound
EB = Eastbound

L = Left
T = Through
R = Right

Reference: **Proposed Traffic Study Scope of Work for First Hathaway Logistics**

Table 3 Cumulative Projects List

Project	Location	Description	Traffic Added to Study Intersections
1. Butterfield-Pardee Homes Specific Plan	NW of Highland Home & Wilson	4862 DU 36 acre Commercial	No
2. Loma Linda-Banning Bench Specific Plan	NE of Sunset & Wilson	944 DU 10 acre Commercial	No
3. Little Europe Specific Plan	SW of Sunset & Jacinto View	39.7 TSF Commercial 40 Room Hotel	No
4. Rancho San Gorgonio Specific Plan	SW of San Gorgonio & Westward	598 DU 500 Stu Elem School (Phase II - 2019)	Yes
5. Silverstone	NE of Highland Spring & Sun Lakes	47.1 acre Commercial	No
6. La Quinta Inn	NW of Hargrave & Ramsey	91 Room Hotel 4.0 TSF Fast Food	Yes
7. Work Lofts	SW of Hathaway & Lincoln	24 DU 9.9 TSF Office 26.95 TSF Warehouse	Yes
8. Anderson Equipment	NW of Hathaway & Charles	2.24 TSF Office 8 TSF Warehouse	Yes
9. Smart & Final	SE of Highland Spring & Ramsey	30 TSF Grocery	No
10. Fiesta Development	SW of Mountain & Evergreen	303 DU	No
11. Nordquist	NW of Mountain & Wilson	19 DU	No
12. St. Boniface	NW of Wyte & Gilman	65 DU	Yes
13. Gordon	SE of I-10 & Banning Airport	1,000 TSF Warehouse	Yes
14. Kohavi	SW of Hargrave & Nicolet	4 DU	Yes
15. Our Savior Lutheran	SW of 12th & Ramsey	5 TSF Day Care	Yes
16. Diversified Pacific	NW of Sunrise & Wilson	98 DU	No
17. Robertsons Ready Mix Quarry	1990 N Hargrave	23-acre expansion	Yes
18. Downing Construction Corp Office/Yard	Galleher Way e/o San Gorgonio	9.32 TSF Office	Yes
19. Lawrence Equipment Expansion	1879 Lincoln	146. 9 TSF Warehouse 73.4 TSF Industrial	Yes
20. Morongo Medical Clinic *	NW of Hathaway & Morongo	49 TSF Medical Clinic	Yes

* Located on Morongo Tribal Land – preliminary information only

NW = Northwest
NE = Northeast
SW = Southwest
SE = Southeast
DU = Dwelling units
TSF = 1,000 square feet
Stu = Students

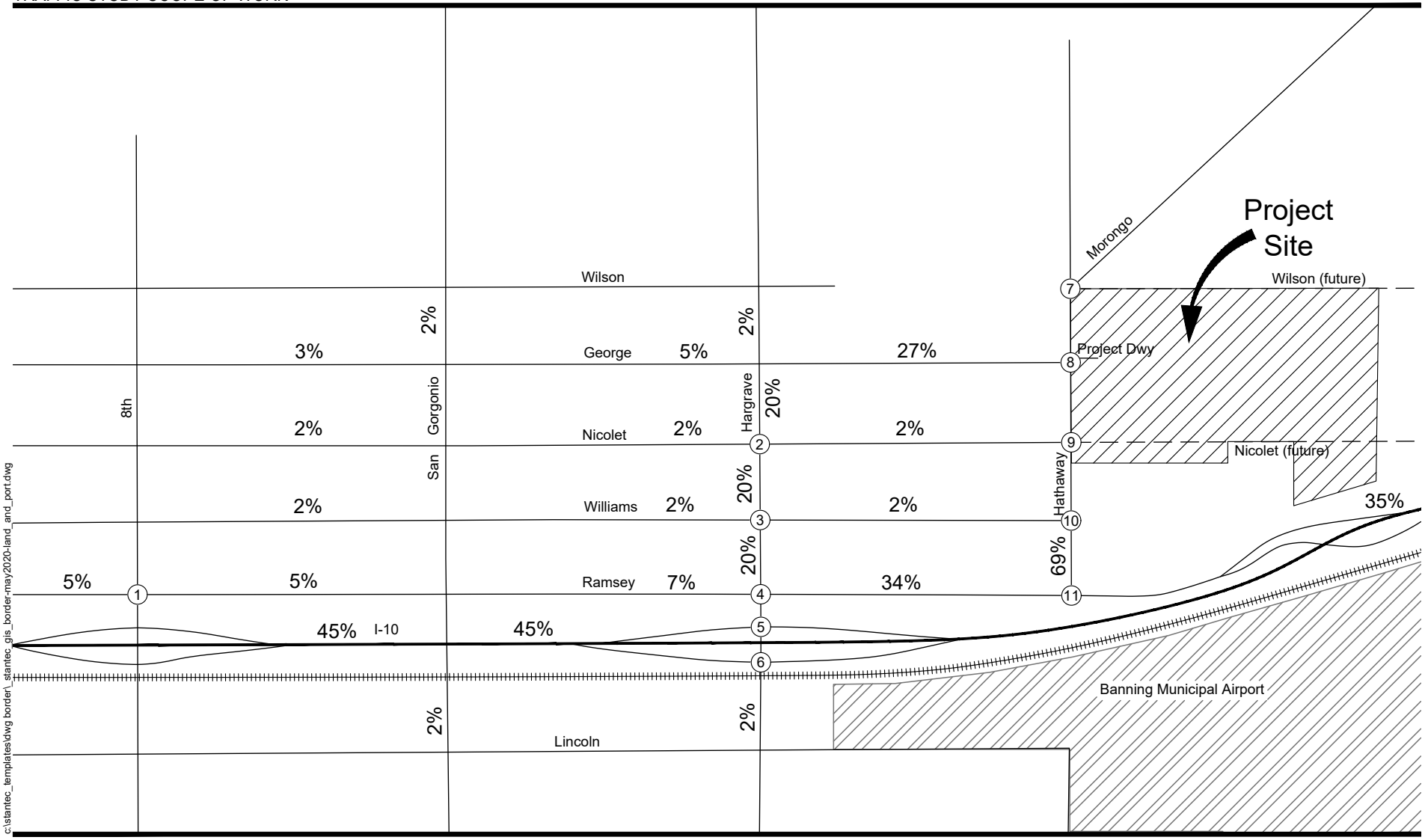

Figure 1
Auto Trip Distribution

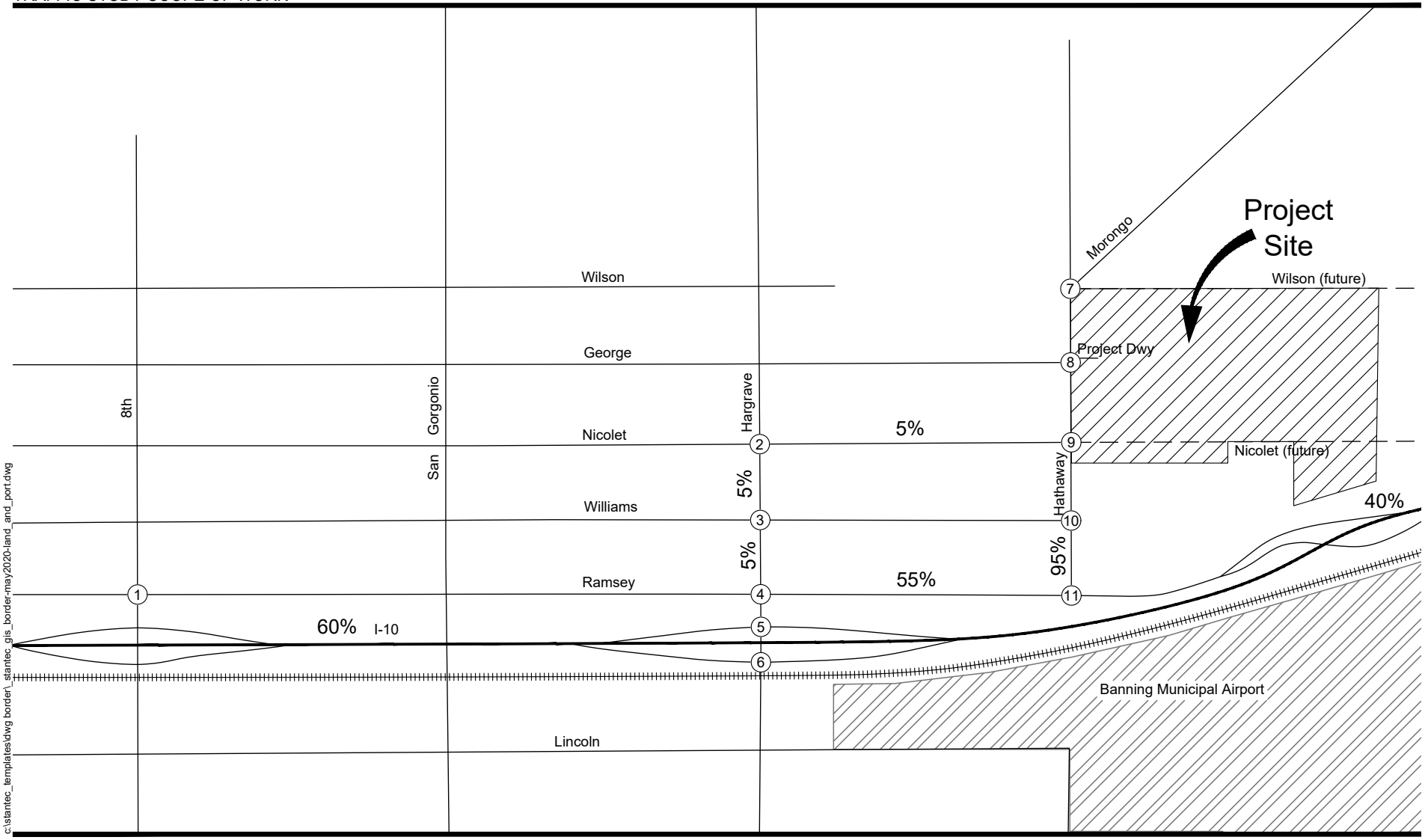

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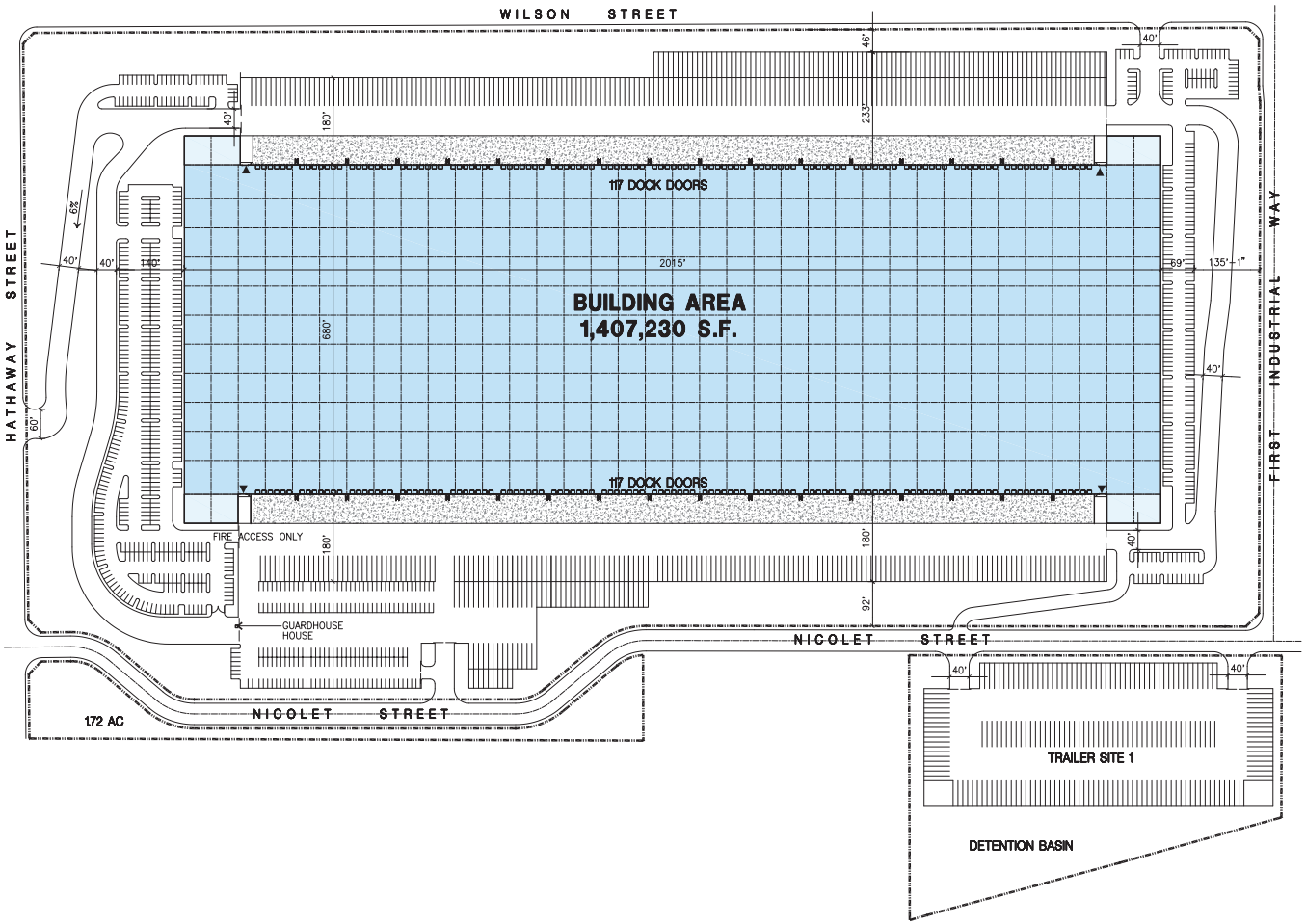
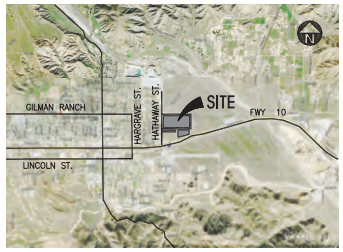
Figure 2
Truck Trip Distribution

CAUTION: IF THIS SHEET IS NOT 30"X42", IT IS A REDUCED PRINT



Aerial Map



Legend

- POTENTIAL OFFICE
- WAREHOUSE
- ▼ DRIVE THRU DOOR

Tabulation

	BUILDING	TRAILER SITE 1	TOTAL	
SITE AREA				
In s.f.	3,268,653	338,441	3,607,094	s.f.
In acres	75.04	7.77	82.81	ac
BUILDING AREA				
Footprint	1,387,230		1,387,230	s.f.
Office 1st Floor	10,000		10,000	s.f.
Office 2nd Floor	10,000		10,000	s.f.
Warehouse	1,387,230		1,387,230	s.f.
TOTAL	1,407,230		1,407,230	s.f.
COVERAGE	43.1%		39.0%	
AUTO PARKING REQUIRED				
Office: 1 / 300 s.f.	67		67	stalls
Whse: 1-20K @ min. 2 stalls + 1 / 1,000 s.f.	22		22	stalls
Whse: above 20K @ 1 / 2,000 s.f.	684		684	stalls
TOTAL	772		772	stalls
AUTO PARKING PROVIDED				
Standard (9' x 19')	834		834	stalls
Note: Trailer stalls can be converted to auto stalls				
TRAILER PARKING REQUIRED				
1 per 4 dock doors	61		61	doors
TRAILER PARKING PROVIDED				
Trailer (10' x 53')	503	195	698	stalls
ZONING ORDINANCE FOR CITY				
Zoning Designation - Business Park				
MAXIMUM BUILDING HEIGHT ALLOWED				
Height - 50', Additional height may be permitted with approval of a Condition Use Permit.				
MAXIMUM BUILDING COVERAGE				
FAR - 60				
SETBACKS				
Front - 10'				
Side - 0', steet side 10'				
Rear - 0'				

Note: This is a conceptual plan. It is based on preliminary information which is not fully verified and may be incomplete. It is meant as a comparative aid in examining alternate development strategies and any quantities indicated are subject to revision as more reliable information becomes available.

north

1" = 100'
0 100 200 300

Conceptual Site Plan

First Hathaway Logistics

Banning, CA

HPA architecture
18831 Bardeen Ave. - Ste. #100
Irvine, CA 92612
(949) 863-1770
www.hparchs.com

FIRST INDUSTRIAL REALTY TRUST

September 9, 2021 / Job #21136
Scheme 7
E.14