Appendix F

Transportation Impact Study

San Marin High School Stadium Improvements Project

Transportation Impact Study
Final Report

By

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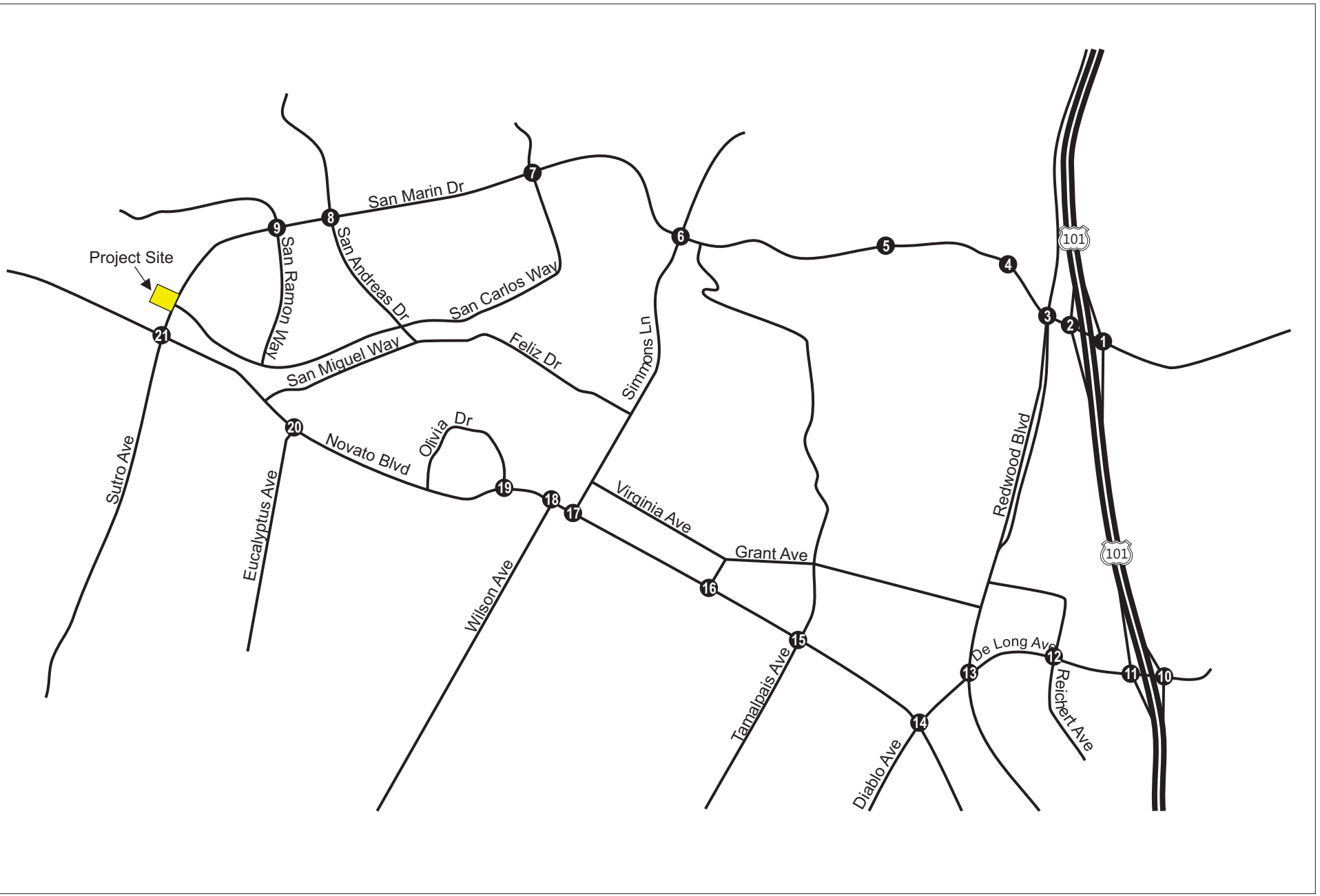
1 INTRODUCTION

The Novato Unified School District (NUSD) is proposing improvements to the stadium facility at San Marin High School in order to allow for nighttime games and events. This document will support the preparation of the traffic impact section of an Environmental Impact Report (EIR). This report presents the results of traffic operations analysis for identified study intersections, parking availability and evaluation of traffic and transportation issues related to the proposed project.

1.1 Project Description

The project consists of the addition of a public address system and field lighting to the stadium facility, allowing for evening games and events at San Marin High School in the Novato Unified School District. The project study area includes the area along San Marin Drive and Novato Boulevard between US 101 and San Marin High School, in the City of Novato. The project study area is shown in **Figure 1**.

A total of 21 study intersections were identified within the study area. These include signalized and four-way stop controlled intersections along San Marin Drive and Novato Boulevard where there is potential for an impact from increased traffic flow from the project.



LEGEND

00 - Study Intersection

DKS

Figure 1

San Marin High School Stadium Lighting
Study Area Map

P:\16\160994-000 NUSD Stadium Lights TIA\06 Graphics\Corel Files

1.2 Study Methodology

This study was prepared according to standard transportation impact analysis practices. While the addition of stadium lighting will allow for nighttime events to be held on any night, football games are expected to result in the highest amount of demand. As a result, traffic conditions were analyzed at the identified study intersections on Friday evenings, when football games would occur, during the period when spectators are expected to arrive (6:00 PM-8:00 PM) and the period when games are expected to end and let out (8:00 PM-10:00 PM). There are expected to be no more than ten football games per season (six regular season and four playoff) and the traffic impacts discussed here would occur no more than ten times per year. The impacts of the proposed project were estimated using current level-of-service methodologies set forth by the City of Novato.

This report also presents field observations to document intersection geometry, parking demand, and pedestrian, bicycle, and transit access relevant to the various sites. This report provides a general description of the transportation facilities in the project vicinity and summarizes transportation operations within the study area under the following scenarios:

- Existing Conditions
- Existing plus Project Conditions
- Cumulative (2040) Conditions
- Cumulative (2040) plus Project Conditions

Particular attention is given to impacts on automobile facilities.

Data provided in this report are based on recent site visits as well as recent correspondence and conversations with staff of the City of Novato and Novato Unified School District.

1.3 Directional Convention

For the purpose of this study, primary east-west directional travel is provided on Novato Boulevard, San Marin Drive, Diablo Avenue, De Long Avenue, and Atherton Avenue. North-south directional travel is provided by Reichert Avenue, Redwood Boulevard, 7th Street, Grant Avenue, Simmons Lane, Wilson Avenue, Raposa Vista, and Eucalyptus Avenue.

2 STANDARDS OF SIGNIFICANCE AND ANALYSIS METHODOLOGY

According to the *CEQA Guidelines*[1], the proposed project would result in a significant impact if it would:

1. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

2. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;

3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks;

4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

5. Result in inadequate emergency access;

6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise degrade the performance or safety of such facilities.

The proposed San Marin High School stadium improvements project will not affect air traffic, increase hazards due to design features, or affect emergency access. In addition, the proposed project will have a minimal, if any, impact on public transit use. The main effects of the project will be sporadic episodes of concentrated use of the transportation facilities surrounding the stadiums on event nights as spectators enter and leave. Therefore, the analysis of potential transportation impacts of the project is focused on the first two CEQUA criteria.

The City of Novato has set intersection level of service (LOS) as a measure of effectiveness in its planning guidelines. In addition to LOS impacts, the parking situation at the stadium site was examined as a potential impact to the functioning of the circulation system. Finally, potential impacts to pedestrian and bicycle transportation were assessed in a qualitative manner.

2.1 Intersection Level of Service

Level of Service (LOS) measures are a qualitative assessment of an intersection's performance during peak traffic periods. LOS is usually characterized by a letter grade--A through F-- relating to the average delay experienced at a signalized intersection or the worst approach delay at an unsignalized intersection. Each local jurisdiction sets a standard for intersection LOS, typically in the transportation element of its General Plan. For the purposes of this study, the relevant LOS standards and significance criteria were applied for the City of Novato where the study intersections are located. If a project will cause an intersection to fall below the LOS standard, then the project is considered to have a significant impact and mitigation may be required.

[1] Association of Environmental Professionals. *California Environmental Quality Act 2014 CEQA Statutes and Guidelines*.

LOS impacts must be compared to the relevant local standard to determine whether a significant impact is found. The City of Novato's General Plan includes the following policy and program regarding traffic operation:

> TR Policy 4 Level of Service Standards. Establish traffic Level of Service (LOS) standards for use in (1) evaluating the impacts of proposed development projects so the project can be redesigned or effective mitigation measures can be implemented, (2) making improvements to the roadway system, and (3) determining appropriate traffic impact fees.
>
> TR Program 4.1: Establish traffic Level of Service standards as follows:
>
> a. At intersections with signals or four-way stop signs: operation at LOS D
>
> b. At intersections with stop signs on side streets only: operation at LOS E
>
> Mitigation measures which reduce side street delay, such as traffic signals, all-way stops and/or center two-way left turn lanes need to be considered when LOS F conditions are projected for side street traffic. The volume of traffic also needs to be considered when evaluating the severity of side street traffic operations.

The study intersections in the project area consist of signalized and all-way stop controlled intersections. Therefore, any scenario which causes an intersection to fall below LOS D will be considered to have a significant impact for the purposes of this Transportation Impact Analysis. Potential impacts on signalized intersections with a baseline LOS already below the standard will be evaluated according to the additional average delay imposed by project traffic.

Intersections were analyzed for this study using LOS methodologies contained in the Highway Capacity Manual (HCM) 2000 edition published by the Transportation Research Board. The HCM 2000 standard thresholds and definitions for intersection LOS were used in this study and are described in **Table 1**.

Table 1. LOS Thresholds and Definitions

Level of Service	Average Control Delay (seconds/vehicle)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤ 10	≤ 10	Free flow/ Minimal Delay
B	> 10 and ≤ 20	> 10 and ≤ 15	Stable Operation/ Minimal Delay
C	> 20 and ≤ 35	> 15 and ≤ 25	Stable Operation/ Acceptable Delay
D	> 35 and ≤ 55	> 25 and ≤ 35	Approaching Unstable/ Tolerable Delay
E	> 55 and ≤ 80	> 35 and ≤ 50	Unstable Operation/ Substantial Delay
F	> 80	> 50	Forced Flow/ Excessive Delay

Source: 2000 Highway Capacity Manual, Transportation Research Board, 2000.
Notes: Worst Approach Delay (in seconds per vehicle) for unsignalized intersections

2.1.1 Level of Service Calculation

LOS was calculated for each project study intersection using Synchro software version 8.0. LOS calculations were prepared for the 6:00 PM to 8:00 PM as well as the 8:00 PM to 10:00 PM time periods for four traffic condition scenarios: Existing, Existing plus Project, Cumulative, and Cumulative plus Project.

Signal timing plans for each study intersection were obtained from the City of Novato or Caltrans as inputs to the calculations. Existing conditions were measured using the turning movement counts collected as part of this Transportation Impact Study. The Existing plus Project condition adds project-generated traffic to the Existing Conditions. The Cumulative Condition incorporates the forecasted traffic for a horizon year of 2040. Finally, the Cumulative plus Project Condition combines the forecasted traffic with project traffic.

Turning movement counts for each of the study intersections may be found in **Appendix A**. Detailed LOS calculation sheets for each intersection for all scenarios and both time periods may be found in **Appendix B**.

2.2 Parking

Where on-campus parking facilities may not be sufficient, parking demand for evening stadium events may need to be accommodated in the surrounding neighborhoods.

The guideline used in parking analysis was the industry standard concept of "practical capacity". The practical capacity of a parking supply is considered to be in the range of 85 to 90 percent of actual capacity in order to allow for parking turnover, or circulation required to locate an empty parking space. Parking utilization above the "practical capacity" will result in a user perception of difficulty in finding parking.

3 EXISTING CONDITIONS

3.1 Study Intersections

A total of 21 study intersections have been identified within the study area. Signalized and all-way stop controlled intersections along San Marin Drive and Novato Boulevard were selected as study intersections. The San Marin Drive and Novato Boulevard corridors provide access between US 101 and San Marin High School. The following intersections along the corridors have potential to be impacted by increased traffic flow from the project and were studied as part of this analysis:

1. NB US 101 Ramps & Atherton Avenue (Caltrans)
2. SB US 101 Ramps & Atherton Avenue (Caltrans)
3. Redwood Boulevard & San Marin Drive
4. E. Campus Drive & San Marin Drive
5. W. Campus Drive & San Marin Drive
6. Simmons Lane & San Marin Drive
7. San Carlos Way & San Marin Drive
8. San Andreas Drive & San Marin Drive
9. San Ramon Way & San Marin Drive
10. NB US 101 Ramps & De Long Avenue (Caltrans)
11. SB US 101 Ramps & De Long Avenue (Caltrans)
12. Reichert Avenue & De Long Avenue
13. Redwood Boulevard & Diablo Avenue
14. Novato Boulevard & Diablo Avenue
15. 7th Street & Novato Boulevard
16. Grant Avenue & Novato Boulevard
17. Simmons Lane & Novato Boulevard
18. Wilson Avenue & Novato Boulevard
19. Raposa Vista & Novato Boulevard
20. Eucalyptus Avenue & Novato Boulevard
21. San Marin Drive & Novato Boulevard

3.2 Roadway Network

This section describes the regional roadway network serving the project study area as well as the local access routes surrounding the school site.

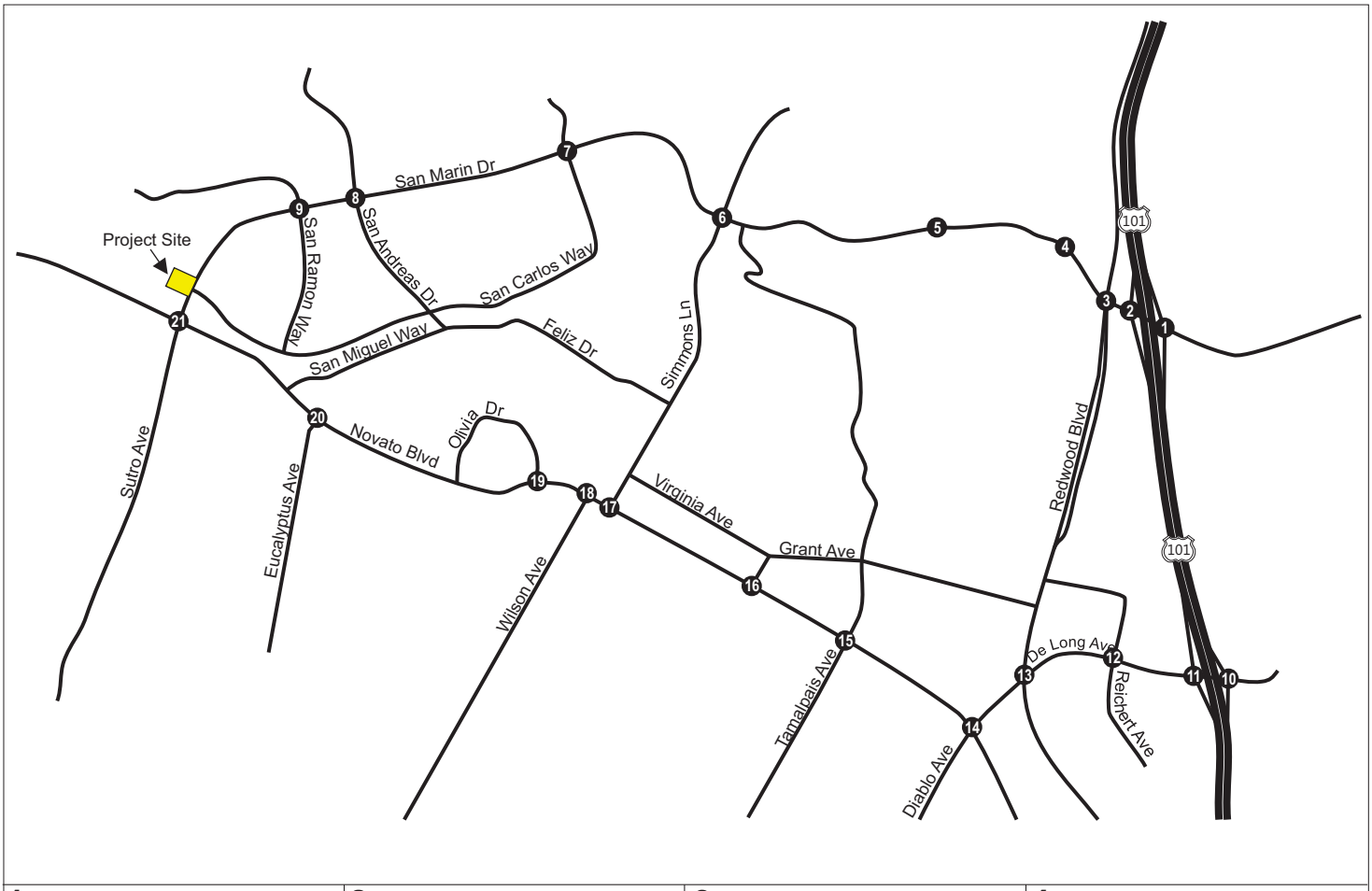
3.2.1 Regional Facilities

The project area is connected regionally by US Highway 101 (US 101). This facility falls under the jurisdiction of Caltrans for maintenance and operations. US 101 is a seven-lane freeway that runs north-south to the east of the study area and also provides access to and from the Bay Area and Sonoma County. US 101 runs at grade throughout the study area. Ramps or interchanges serving the study site include De Long Avenue, providing access to Novato Boulevard and Atherton Avenue, providing access to San Marin Drive.

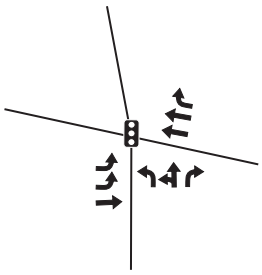
3.2.2 Facilities Serving San Marin High School

San Marin High School is located approximately two and a half miles west of US 101. Access from US 101 is mainly provided by Novato Boulevard in the south and San Marin Drive in the north. The school site location and local roadway network with intersection geometries are shown in **Figure 2**.

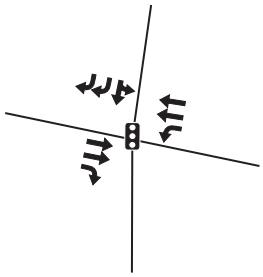
- **San Marin Drive** is a four lane roadway running east-west to the high school and located north of Novato Boulevard. San Marin Drive is connected to US-101 by Atherton Avenue and runs along the eastern side of the campus. The entrance to the school parking lot adjacent to the stadium is located on San Marin Drive just north of San Carlos Way. There is on-street parking along San Marin Drive, with time-of-day usage restrictions where it borders the campus.
- **Novato Boulevard** is a two and four lane roadway also running east-west to the high school. Novato Boulevard is connected to US-101 by De Long Avenue and Diablo Avenue. There is on-street parking along the majority of Novato Boulevard. Access to one of the main campus parking lots is on Novato Boulevard, near the intersection of San Marin Drive and Novato Boulevard.



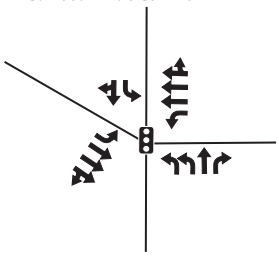
1. ***NB US 101 / Atherton Ave***



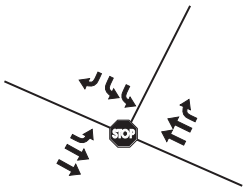
2. ***SB US 101 / Atherton Ave***



3. ***Redwood Blvd / San Marin Dr***



4. ***E Campus Dr / San Marin Dr***



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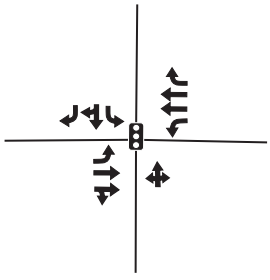
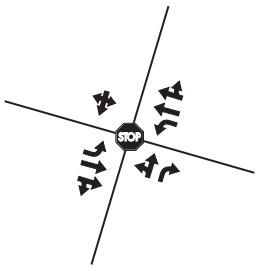
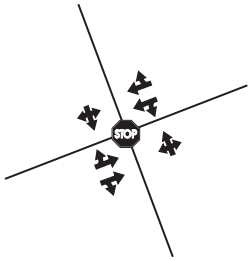


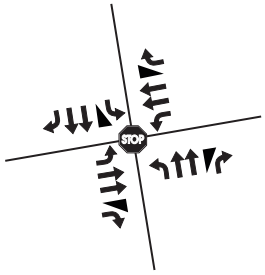
6. ***Simmons Ln / San Marin Dr***



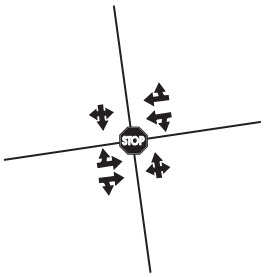
7. ***San Carlos Way / San Marin Dr***



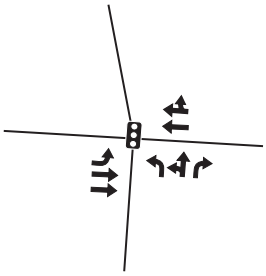
8. ***San Andreas Dr / San Marin Dr***



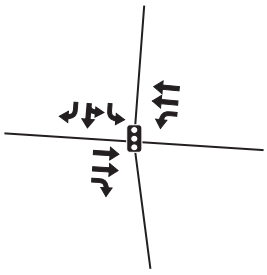
9. ***San Ramon Way / San Marin Dr***



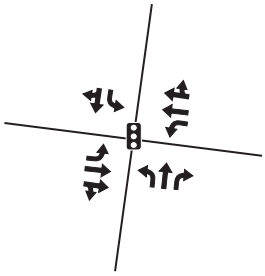
10. ***NB US 101 Ramp / De Long Ave***



11. ***SB US 101 Ramps & De Long Ave***



12. ***Reichert Ave / De Long Ave***



LEGEND

00 - Study Intersection

- Traffic Signal

STOP - Stop Control

NO SCALE

DKS

Figure 2

San Marin High School Stadium Lighting Study Area Map

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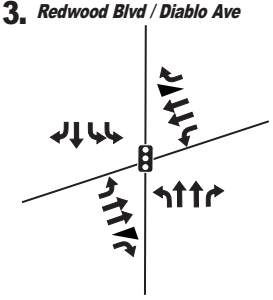
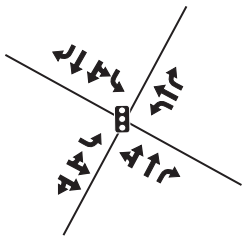
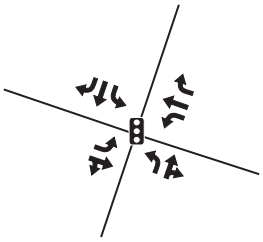
13. ***Redwood Blvd / Diablo Ave***



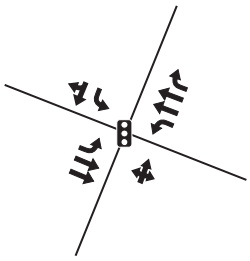
14. ***Novato Blvd / Diablo Ave***



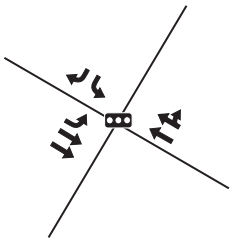
15. ***7th St / Novato Blvd***



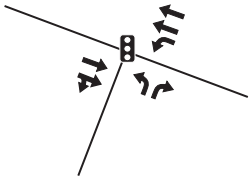
16. ***Grant Ave / Novato Blvd***



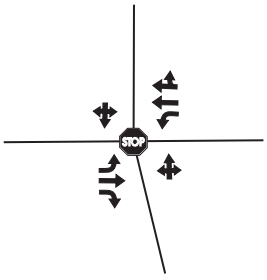
17. ***Simmons Ln / Novato Blvd***



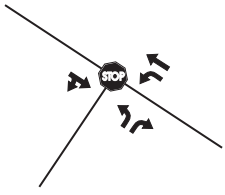
18. ***Wilson Ave / Novato Blvd***



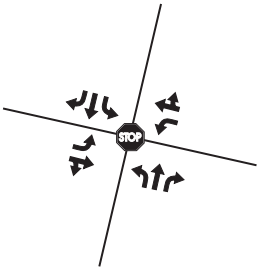
19. ***Raposa Vista / Novato Blvd***



20. ***Eucalyptus Ave / Novato Blvd***



21. ***San Marin Dr / Novato Blvd***



LEGEND

00 - Study Intersection

- Traffic Signal

STOP - Stop Control

NO SCALE

DKS

Figure 2

San Marin High School Stadium Lighting
Lane Configuration

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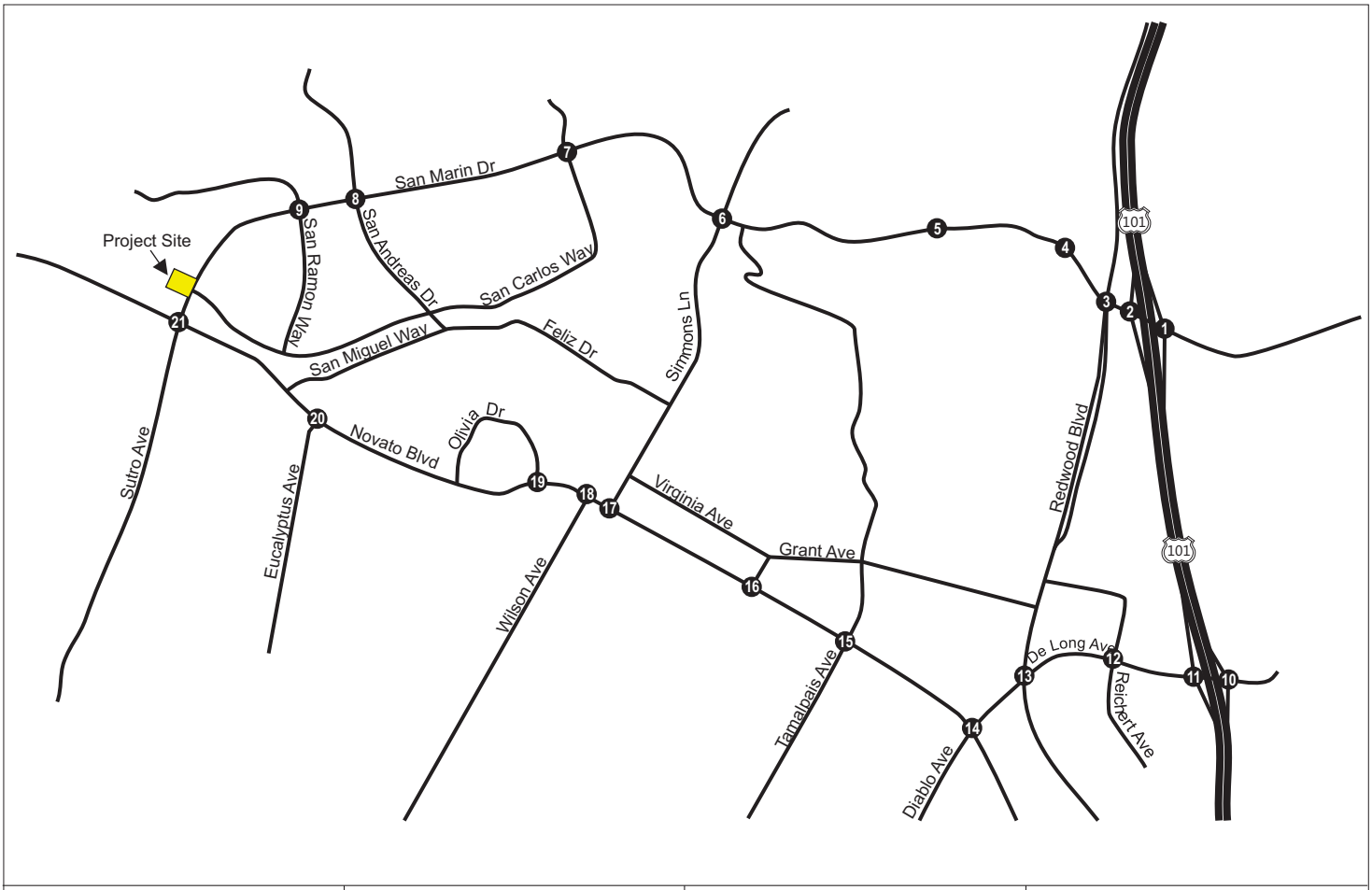
3.3 Intersection Operating Conditions

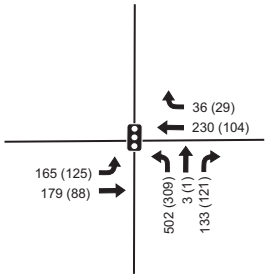
Study intersection vehicle counts were collected on Friday, June 24, 2016 for the periods of 6 PM to 8 PM and 8 PM to 10 PM. Detailed count information may be found in **Appendix A**. Existing Conditions traffic volumes are presented in **Figure 3.**

Intersection LOS was generally calculated with the Synchro software package using HCM 2000 methodology. However, four intersections were evaluated using HCM 2010 methods since HCM 2000 does not allow for more than two approach lanes on all-way stop-controlled intersections. For the intersection of San Andreas Drive and San Marin Drive, a conservative assumption was made to treat the approaches as three lanes since HCM 2010 methodology does not accommodate analysis of approaches with more than three lanes. The westbound approach of Simmons Lane & San Marin Drive was also treated as three lanes due to the same restriction. Detailed calculations are provided in **Appendix B**.

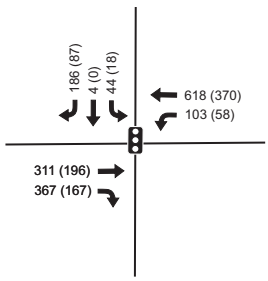
Intersection levels of service under Existing Conditions for the 6 to 8 PM and 8 to 10 PM time periods are shown in **Table 2** and **Table 3**. All intersections meet the LOS standard of D or better during both time periods under Existing Conditions.



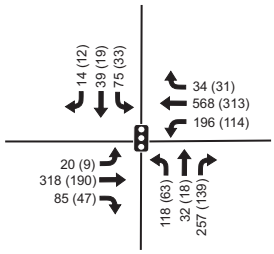
1. NB US 101 / Atherton Ave



2. SB US 101 / Atherton Ave



3. Redwood Blvd / San Marin Dr



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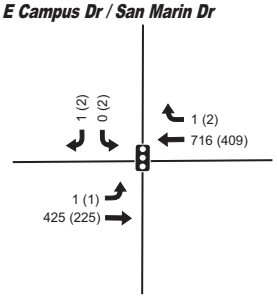

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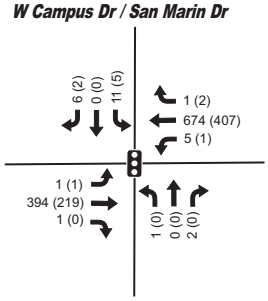
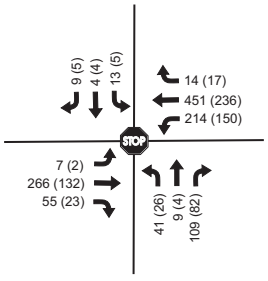
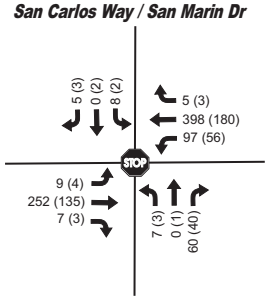


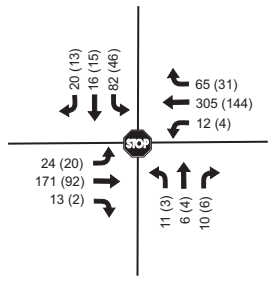
6. Simmons Ln / San Marin Dr



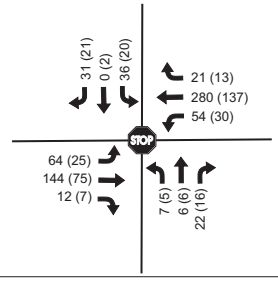
7. San Carlos Way / San Marin Dr



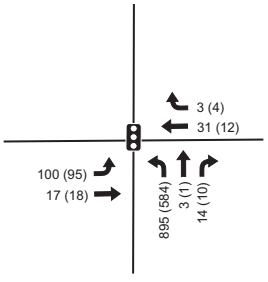
8. San Andreas Dr / San Marin Dr



9. San Ramon Way / San Marin Dr



10. NB US 101 Ramp / De Long Ave



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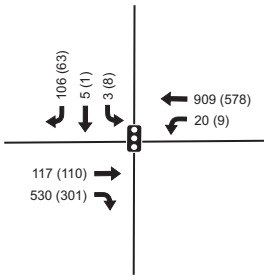
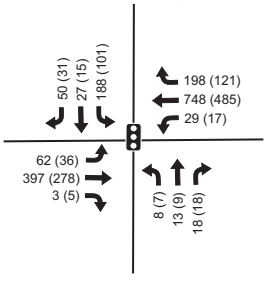


12. Reichert Ave / De Long Ave



LEGEND

00 - Study Intersection
- Traffic Signal
STOP - Stop Control
xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 3

San Marin High School Stadium Lighting
Existing Conditions Volumes

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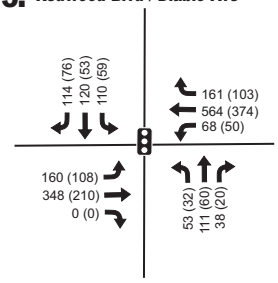
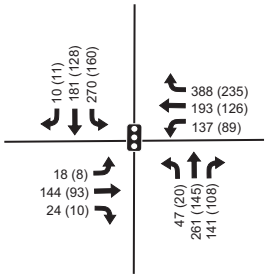
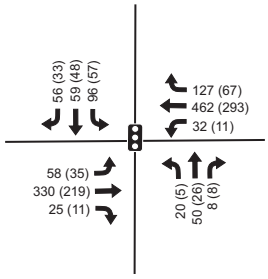
13. *Redwood Blvd / Diablo Ave*



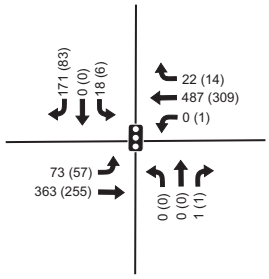
14. *Novato Blvd / Diablo Ave*



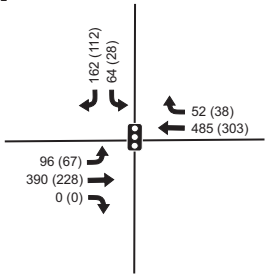
15. *7th St / Novato Blvd*



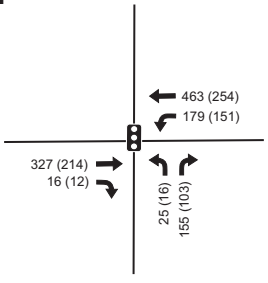
16. *Grant Ave / Novato Blvd*



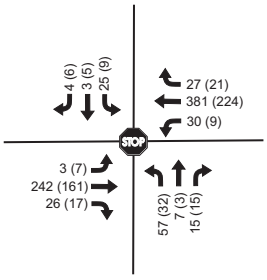
17. *Simmons Ln / Novato Blvd*



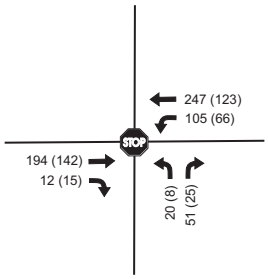
18. *Wilson Ave / Novato Blvd*



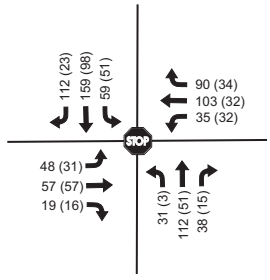
19. *Raposa Vista / Novato Blvd*



20. *Eucalyptus Ave / Novato Blvd*



21. *San Marin Dr / Novato Blvd*



LEGEND

00 - Study Intersection - Traffic Signal

STOP - Stop Control xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 3

San Marin High School Stadium Lighting
Existing Condition Volumes

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Table 2: Existing Intersection Level of Service 6 PM – 8PM

#	Intersections	Control [1]	Existing 6 - 8 PM	
			LOS [2]	Del/Veh[3]
1	NB US 101 Ramps & Atherton Avenue	Signalized	C	29.2
2	SB US 101 Ramps & Atherton Avenue	Signalized	B	10.6
3	Redwood Boulevard. & San Marin Drive	Signalized	B	15.1
4	E. Campus Drive & San Marin Drive	Signalized	A	7.1
5	W. Campus Drive & San Marin Drive	Signalized	A	4.5
6[4]	Simmons Lane & San Marin Drive	AWSC	B	13.9
7	San Carlos Way & San Marin Drive	AWSC	B	10.4
8[4]	San Andreas Drive & San Marin Drive	AWSC	B	12.6
9	San Ramon Way & San Marin Drive	AWSC	A	9.1
10	NB US 101 Ramps & De Long Avenue	Signalized	A	9.5
11	SB US 101 Ramps & De Long Avenue	Signalized	A	5.5
12	Reichert Avenue & De Long Avenue	Signalized	B	12.3
13	Redwood Boulevard & Diablo Avenue	Signalized	B	18.1
14	Novato Boulevard & Diablo Avenue	Signalized	B	19.6
15	7th Street & Novato Boulevard	Signalized	B	13.5
16	Grant Avenue & Novato Boulevard	Signalized	A	6.2
17	Simmons Lane & Novato Boulevard	Signalized	A	7.4
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.5
19[4]	Raposa Vista & Novato Boulevard	AWSC	B	10.7
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	9.6
21[4]	San Marin Drive & Novato Boulevard	AWSC	B	12.2

Notes:

(1) Intersection control: signalized or all-way stop control (AWSC)

(2) Level of Service as defined in Table 1

(3) Average delay per vehicle (seconds)

(4) HCM 2010

Table 3: Existing Intersection Level of Service 8 PM – 10 PM

#	Intersections	Control [1]	Existing 8 - 10 PM	
			LOS [2]	Del/Veh[3]
1	NB US 101 Ramps & Atherton Avenue	Signalized	B	18.4
2	SB US 101 Ramps & Atherton Avenue	Signalized	A	6.3
3	Redwood Boulevard. & San Marin Drive	Signalized	B	11.4
4	E. Campus Drive & San Marin Drive	Signalized	A	7.8
5	W. Campus Drive & San Marin Drive	Signalized	A	4.1
6	Simmons Lane & San Marin Drive	AWSC	A	9.7
7	San Carlos Way & San Marin Drive	AWSC	A	7.7
8	San Andreas Drive & San Marin Drive	AWSC	A	8.8
9	San Ramon Way & San Marin Drive	AWSC	A	7.5
10	NB US 101 Ramps & De Long Avenue	Signalized	A	8.7
11	SB US 101 Ramps & De Long Avenue	Signalized	A	4.9
12	Reichert Avenue & De Long Avenue	Signalized	A	7.6
13	Redwood Boulevard & Diablo Avenue	Signalized	B	14.9
14	Novato Boulevard & Diablo Avenue	Signalized	B	14.4
15	7th Street & Novato Boulevard	Signalized	B	10.8
16	Grant Avenue & Novato Boulevard	Signalized	A	6.0
17	Simmons Lane & Novato Boulevard	Signalized	A	7.3
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.1
19	Raposa Vista & Novato Boulevard	AWSC	A	9.0
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	8.1
21	San Marin Drive & Novato Boulevard	AWSC	A	8.8

Notes:

(1) Intersection control: signalized or all-way stop control (AWSC)

(2) Level of Service as defined in Table 1

(3) Average delay per vehicle (seconds)

3.4 Transit Network and Services

3.4.1 Regional Services

Existing transit service in the study area is shown in **Figure 4A** and **Figure 4B.** The study is area served by regional transit service with Golden Gate Transit bus routes. Route 54 is a commuter bus route and stops at San Marin High School. Route 54 runs southbound from Novato to San Francisco weekday mornings, with northbound service in the evenings. Golden Gate Transit Route 56 provides a similar service. However, due to the commute nature of these services, they are unlikely to serve much travel to and from a school site on game days

3.4.2 Marin Transit Bus Service

Marin Transit operates local, and school day services within the study area. Note that school routes are school day services that do not operate after mid-afternoon and would not provide access to evening games at the stadiums.

Marin Transit Route 154 is a circular route and stops are located on Novato Boulevard, San Marin Drive, and Redwood Boulevard. Route 154 is a school day route running westbound on weekday mornings to San Marin High School and eastbound on weekday afternoons. Stops for Marin Transit Route 151 are located on Novato Boulevard, Sunset Parkway, and Ignacio Boulevard. Route 151 is a school day route running southbound on weekday afternoons from San Marin High School to Hamilton.

Marin Transit Route 251 is a local shuttle and stops at San Marin High School. Route 251 runs southbound service to Hamilton and northbound service to San Marin. The route runs seven days a week and throughout the day. Monday through Friday has an earlier service period running northbound, and southbound service to San Marin High School ends earlier on Saturday and Sunday.

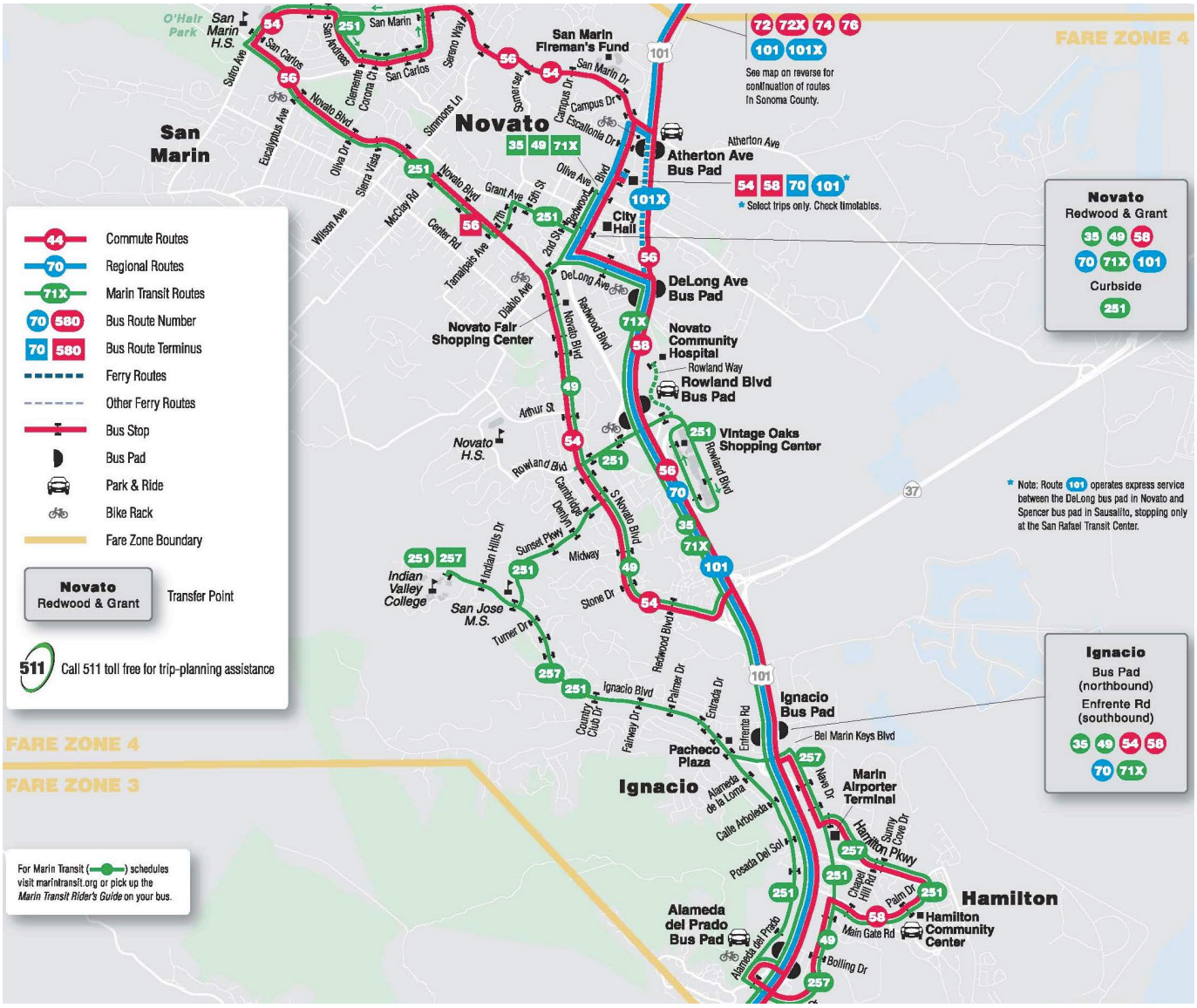

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Figure 4a

Study Area Transit Service

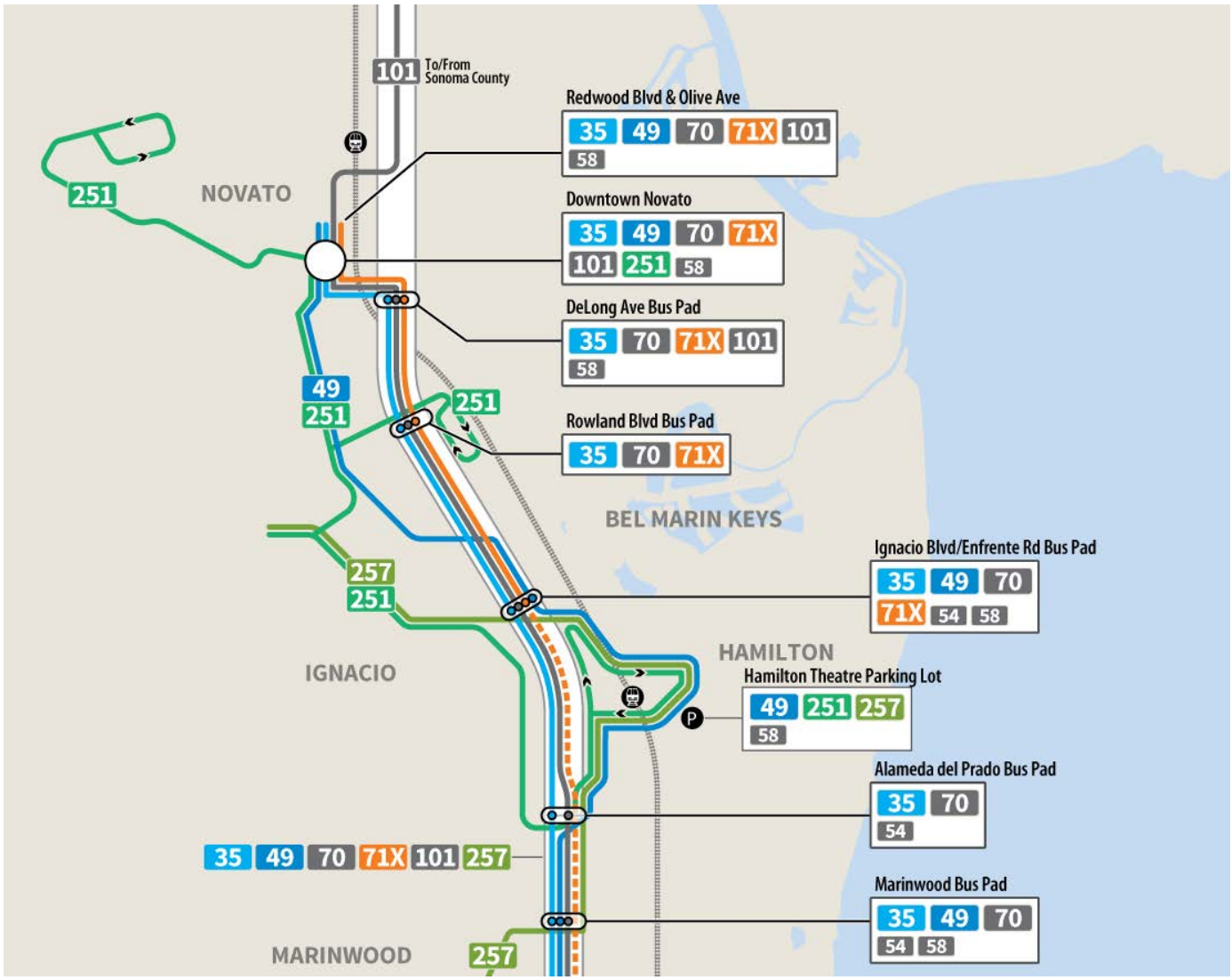

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Figure 4b

Study Area Transit Service

3.5 Pedestrian and Bicycle Access

3.5.1 Bicycle Access

Figure 5 shows the bicycle facilities in the study area. Class I and Class II bicycle facilities exist in the vicinity of the campus. Class II bicycle lanes exist along ~~both~~ San Marin Drive between US 101 and Simmons Lane, and and Novato Boulevard within the study area~~leading to the school site~~. In accordance with the City of Novato Bicycle/Pedestrian Plan, Class II bicycle lanes are facilities that provide a striped and stenciled lane for bicycle travel. Class I bikeways, also referred to as shared-use paths, serve the exclusive use of bicycles and pedestrians and are completely separated from the street. Novato Boulevard includes a Class I bikeway from Eucalyptus Avenue to its intersection with San Marin Drive at the campus.

3.5.2 Pedestrian Access

Pedestrian access to the stadium would be largely from San Marin Drive which is adjacent to the stadium. There are crosswalks at the intersection of San Marin Drive and San Carlos Way. Access into the stadium is limited to gateways as a fence surrounds the stadium. The fence provides two main entry points, with one from the main stadium parking lot along its eastern side and another at its southwestern corner.

Pedestrians may also reach the stadium from the south of campus from the parking lot located on Novato Boulevard and other parking areas within the campus. There are crosswalks at the intersection of San Marin Drive and Novato Boulevard, where the intersection meets the Class I bikeway.

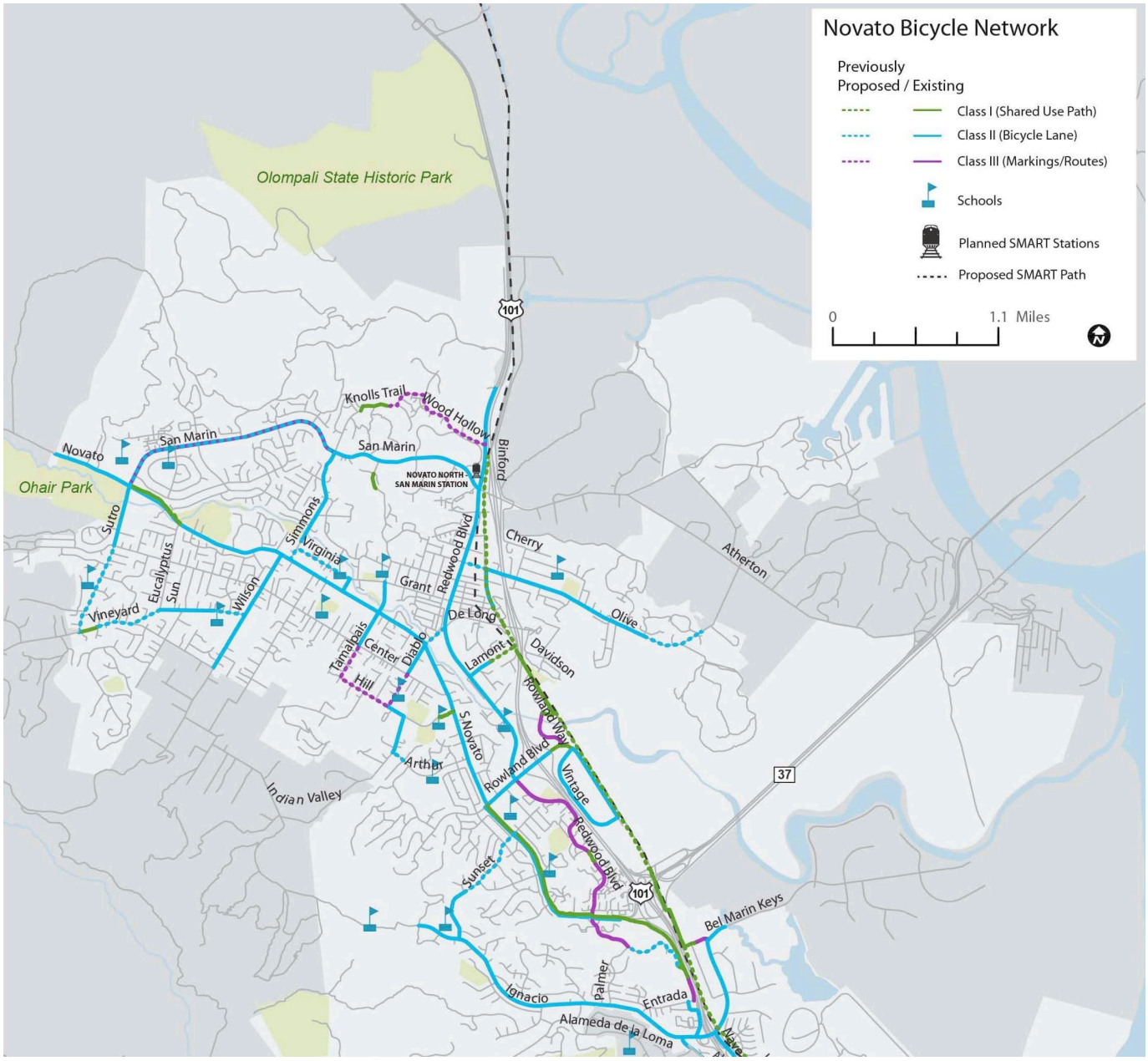

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Figure 5

Study Area Bicycle Network

3.6 Parking Conditions

Parking conditions were assessed by inventorying the existing on-site parking supply and conducting an occupancy survey of both on-site and street parking in the neighborhood surrounding the school stadium. The parking occupancy surveys were conducted during the hours of 8 PM to 9 PM during which the highest residential parking demand will overlap with the highest parking demand for evening stadium events. The parking survey included all street parking within a 500 foot walk of the stadium.

Table 4 shows a summary of the parking data that was collected for this study. As shown, the on-site and off-street parking at San Marin High School have occupancies that do not present a concern.

Table 4: Existing Conditions Parking Analysis

Parking Facility	Capacity	Existing Evening (8 PM – 9 PM)	
		Occupancy	Utilization
On-Site Parking	262	3	1%
Nearby Street Parking	361	29	8%
Total	**623**	**32**	**5%**

There are a total of 262 on-site parking spaces and 361 nearby street parking spaces at San Marin High School. On-street parking on San Marin Drive is restricted to loading zone parking and 2-hour parking between the stadium and Novato Boulevard during certain times of the day. Parking on nearby San Carlos Way is limited to 4 hours between 9 AM and 6 PM. However, these restrictions do not apply during evening time events and these segments were counted in the parking supply. From 8 PM to 9 PM on a typical weekday 5 percent of parking is utilized. **Figure 6** shows a map of San Marin High School and related parking.

LEGEND

NO SCALE

DKS

Figure 6

Parking Survey

4 PROJECT-GENERATED TRAFFIC

4.1 Trip Generation

4.1.1 Methodology and Assumptions

Information on trip generation rates for high school sports stadiums is not readily available. The Institute of Transportation Engineers (ITE) Trip Generation Manual, an industry standard reference for trip generation, does not contain trip generation rates for a comparable land use. The trip generation characteristics for such high school facilities are likely to be fairly specific to each community, reflecting the level of interest in high school sports, demographics, and the transportation network among other factors. Therefore, a locally appropriate trip generation rate per stadium seat was calculated for this study, as described below.

Table 5 lists the assumptions underlying the calculation of trip generation rates for this study. These assumptions reflect a regularly occurring event with the high attendance levels such as a Friday night football game. There are expected to be no more than ten football games per season (six regular season and four playoff) and the traffic impacts discussed here would occur no more than ten times per year.

Based on input from NUSD, the San Marin High School bleachers are assumed to be 60 percent occupied. Also based on NUSD input, the percent split between home school and visitor attendees is 70/30 and vehicle occupancy for visitors is higher than for home school attendees. The result of the difference in vehicle occupancy results in an 80/20 percent split for vehicle trips between home and visitors. Finally, it is assumed that about ten percent of attendees from the home school are dropped off, generating both a trip in and out of the parking lot. All visiting school-generated vehicle trips are assumed to park and stay. Note that the trip generation rate does not separately account for additional trips by staff and athletes, which would not be included in the trip generation rate per seat. The majority of home team athletes and staff are assumed to arrive before the study period and the visiting school team athletes and staff are assumed to arrive on a relatively small number of buses. Further explanation of the trip generation methodology is provided in **Appendix C**.

Table 5: Derivation of Vehicle Trip Generation Rate

Factor	Value
Home/visitor split	70/30
Auto mode share	0.97
Average vehicle occupancy (home)	3
Average vehicle occupancy (visitor)	5
Percent drop off	0.1
Percent stay and park	0.9
Trips in	0.28
Trips out	0.02
Total vehicle trips per occupied stadium seat	**0.31**

4.1.2 Project Trips

Table 6 shows the number of vehicle trips expected to be generated by the project for each school during the pre-game peak hour between 6:00 PM and 8:00 PM for a football game or event starting at 7:00 PM. These estimates use the trip generation rates shown in **Table 5**. Post-game trip generation would then have the same number of trips but reverse the directionality.

Table 6: Trip Generation Estimates

2015-2016 Enrollment*	Bleacher Capacity	Percent Occupied	Peak Hour Trips		
			In	Out	Total
1076	2400	60%	410	33	442

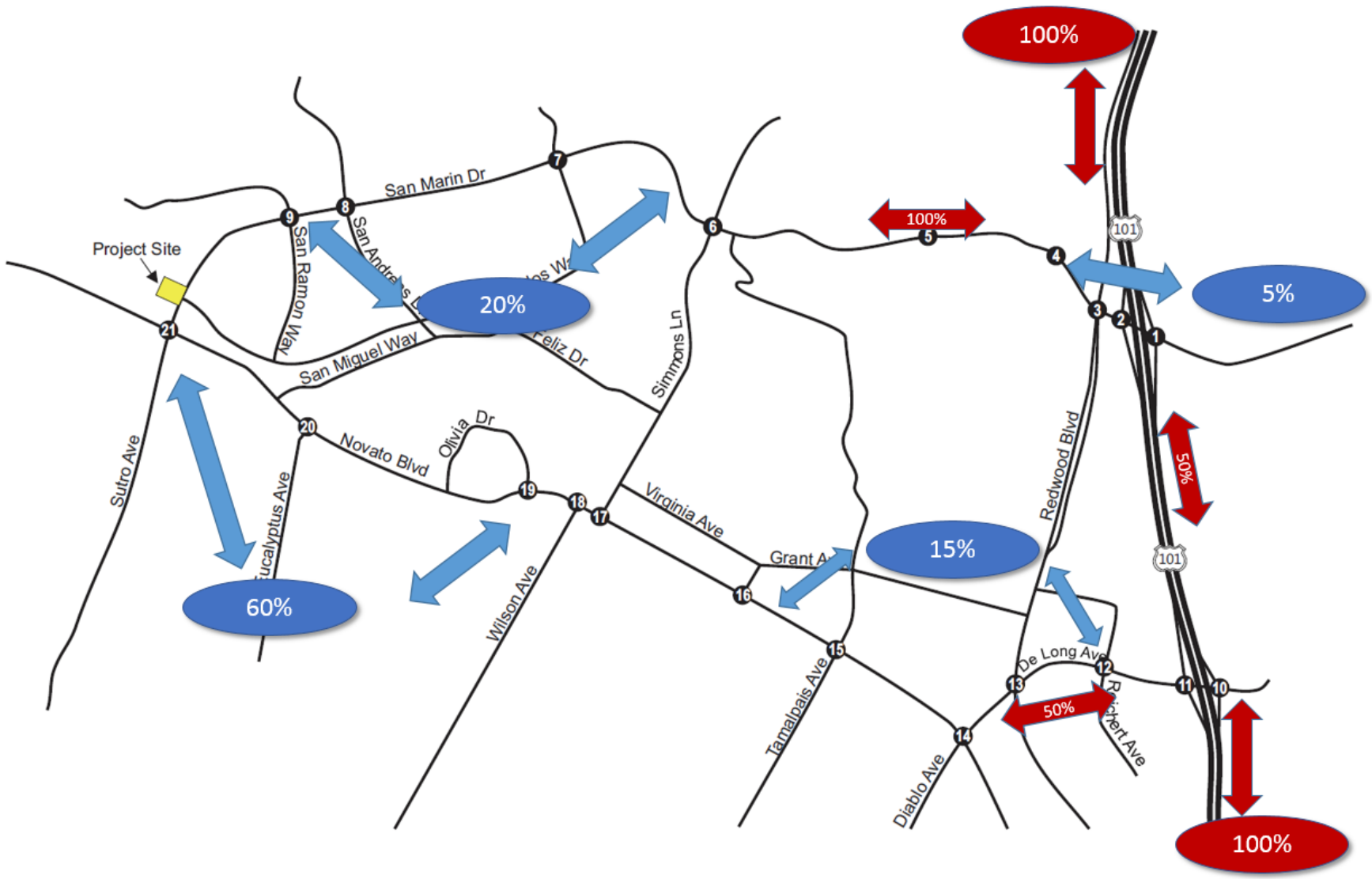
*Source: California Department of Education Educational Demographics Unit

4.2 Trip Distribution

Trips generated by the project were distributed among study intersections taking into consideration the school attendance area, the proportion of visitor trips to home school trips, the location and observed utilization of parking facilities, and the likely direction of approach of trips for visitors and attendees from the home school. **Figure 7** illustrates the assumed distribution of trips for the San Marin High School study area.

Total trips were distributed in a two-step process. First, the 70 percent of total Project trips assumed to be from the home school were distributed among study area intersections as follows: 60 percent were assumed to come from south of Novato Boulevard, 20 percent from north of Novato Boulevard west of Simmons Lane, 15 percent from north of Novato Boulevard east of Simmons Lane, and 5 percent from east of US 101. The 30 percent of trips assumed to be from visiting teams were distributed using a worst case scenario of all trips either coming from the south or the north. Visiting team trips coming from north of Novato were assumed to all exit US 101 at Atherton Avenue, continuing on San Marin Drive. Visitor trips from south of Novato were split evenly between the De Long Avenue and Atherton Avenue exits.

The resulting project turning movements for each study area intersection were then added to the Existing and Cumulative Conditions traffic volumes. **Figure 8** shows the Project turning movement volumes for the study area.



LEGEND

- xx% — Home team origin
- xx% — Visitor team origin
- Home team route
- xx% — Worst case visitor team route

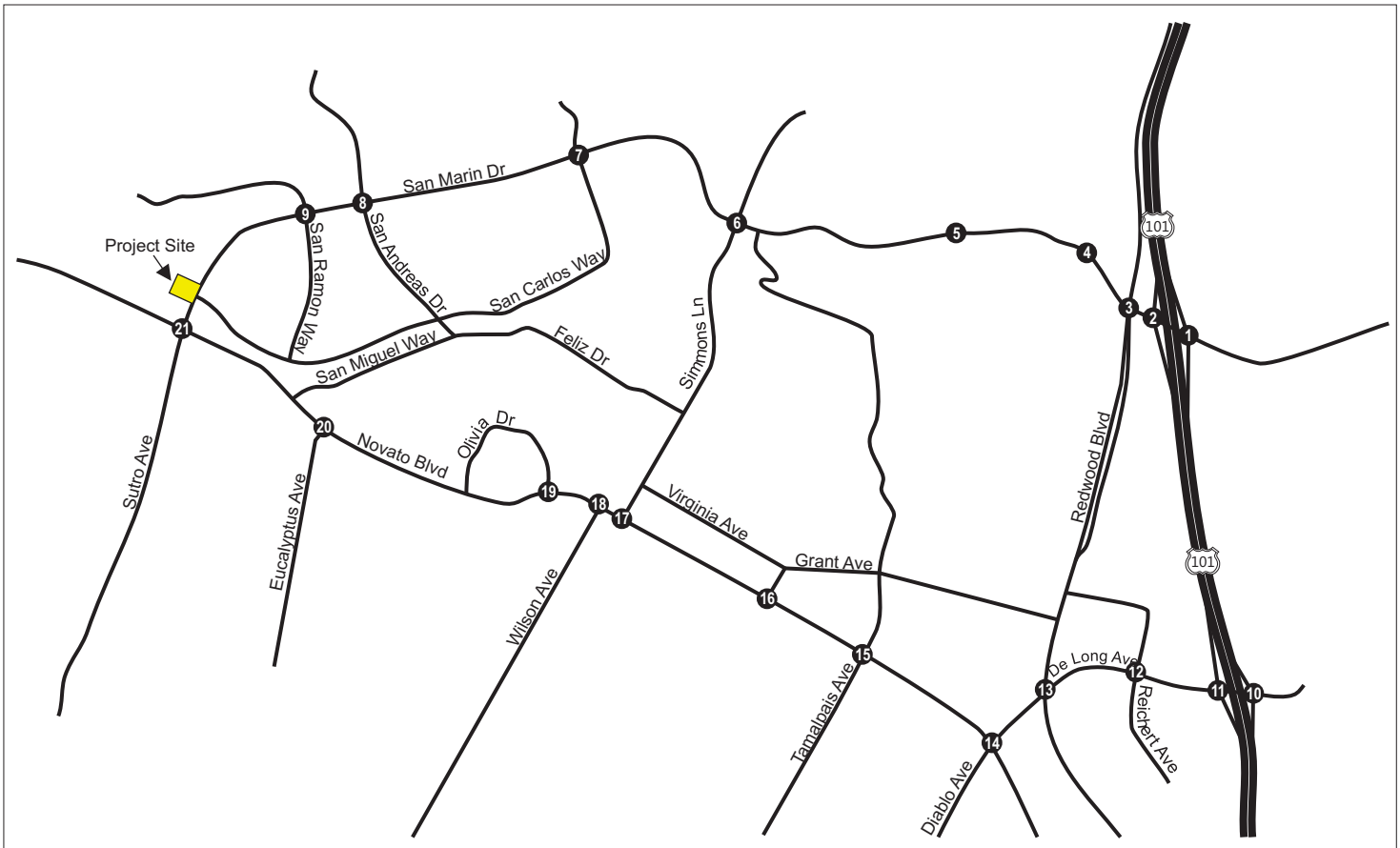
NO SCALE

DKS

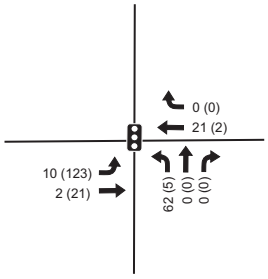
Figure 7

San Marin High School Stadium Lighting Project Trip Distribution

P:\16\16094-000 NUSD Stadium Lights TIA\06 Graphics\Corel Files



1. NB US 101 / Atherton Ave



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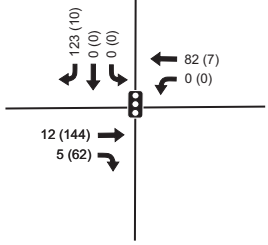
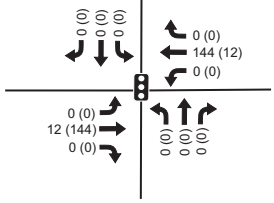
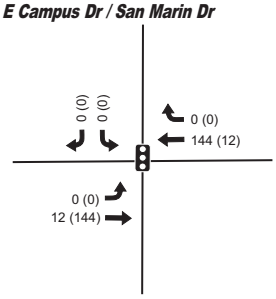


3. Redwood Blvd / San Marin Dr



4. E Campus Dr / San Marin Dr



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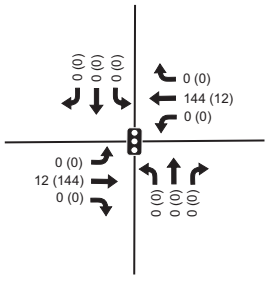

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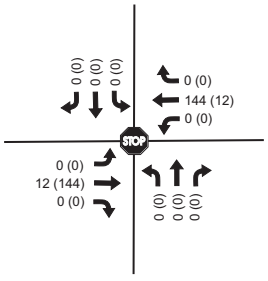

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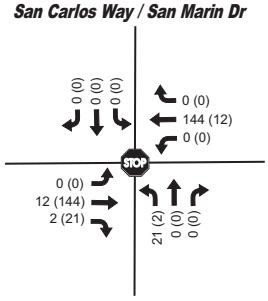

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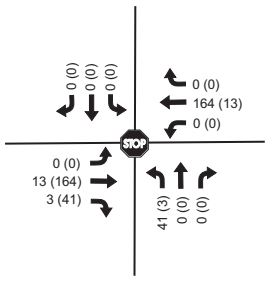

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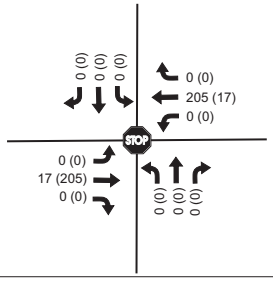
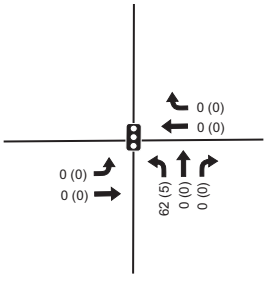
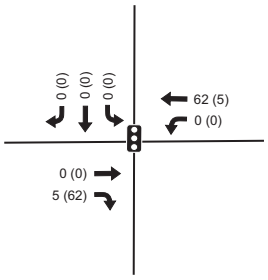


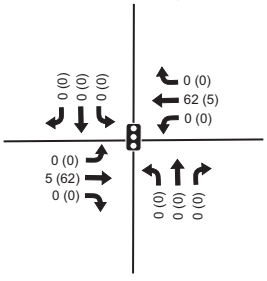
10. NB US 101 Ramp / De Long Ave



11. SB US 101 Ramps & De Long Ave



12. Reichert Ave / De Long Ave



LEGEND

00 - Study Intersection - Traffic Signal

STOP - Stop Control xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

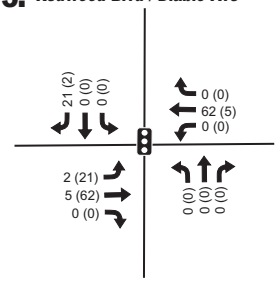
DKS

Figure 8

San Marin High School Stadium Lighting Project Generated Turning Movements

P:\P\15\15209-000 SMUHSD Stadium Lighting EIR\06 Graphics\Corel

13. ***Redwood Blvd / Diablo Ave***



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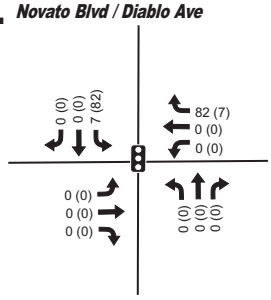
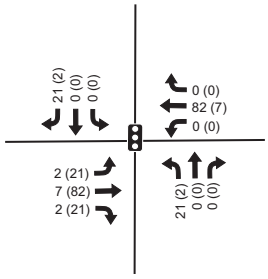
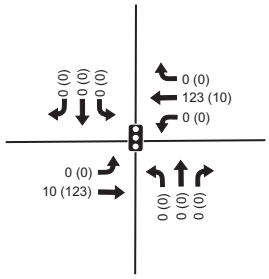


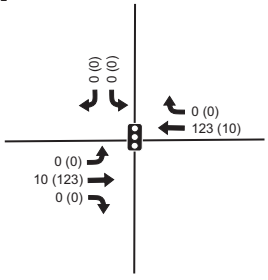
15. ***7th St / Novato Blvd***



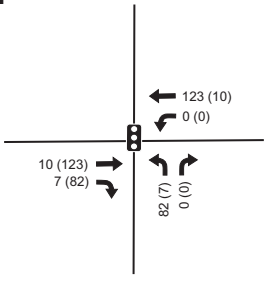
16. ***Grant Ave / Novato Blvd***



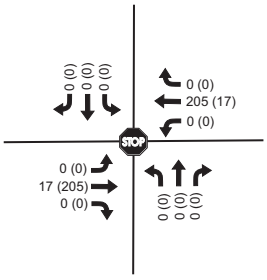
17. ***Simmons Ln / Novato Blvd***



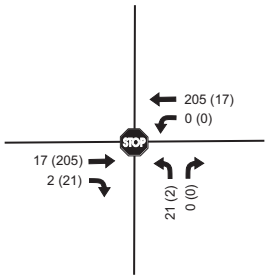
18. ***Wilson Ave / Novato Blvd***



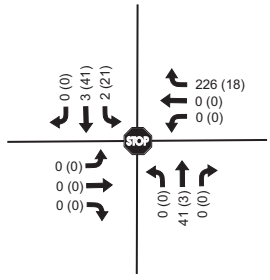
19. ***Raposa Vista / Novato Blvd***



20. ***Eucalyptus Ave / Novato Blvd***



21. ***San Marin Dr / Novato Blvd***



LEGEND

00 - Study Intersection

- Traffic Signal

STOP - Stop Control

xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 8

San Marin High School Stadium Lighting Project Generated Turning Movements

P:\16\16094-000 NUSD Stadium Lights TIA\06 Graphics\Corel Files

4.3 Parking Conditions

As described under existing conditions, there are 262 on-site spaces at the school and 361 on-street parking spaces in the adjacent neighborhood with existing low utilization. The additional parking deman is calculated from trip generation as the number of inbound trips less the number of outbound trips. As shown in **Table 7**, the expected additional parking demand generated is well within the practical capacity of the on-site and adjacent street parking supply.

Table 7: Existing plus Project Conditions Parking Analysis

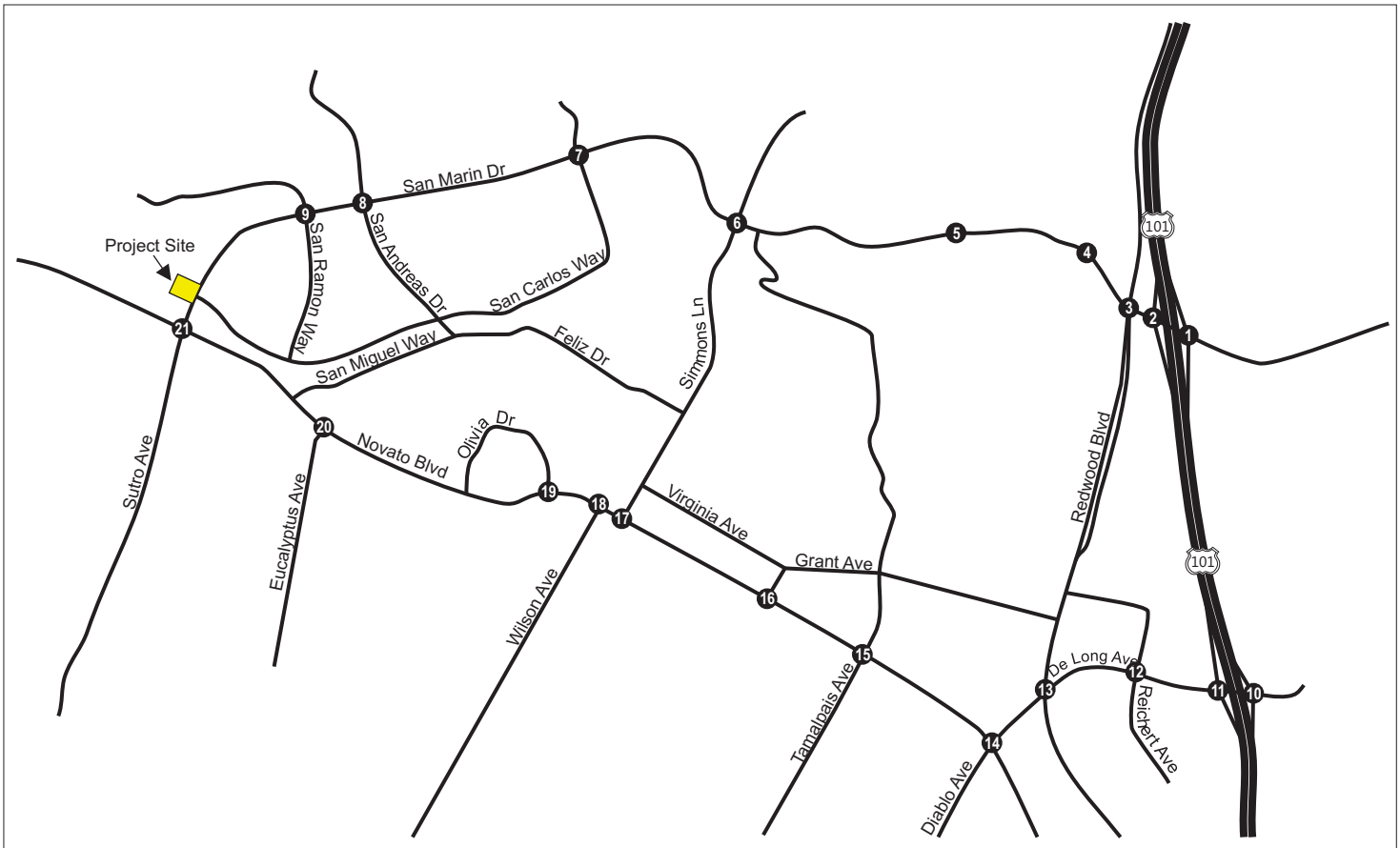
Parking Facility	Capacity	Existing Evening (8:00PM – 9:00 PM)		Project Condition		
		Occupancy	Utilization	Available Spaces	Additional Parking Demand	Expected Utilization
On-Site Parking	262	3	1%	259	377	64%
Nearby Street Parking	361	29	8%	332		
Total	**623**	**32**	**5%**	**591**		

5 EXISTING PLUS PROJECT CONDITIONS

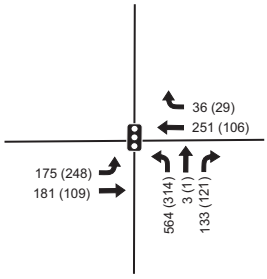
Under this scenario traffic from the Project is added to the Existing Conditions. Level of service calculations were performed for the 21 study intersections for the 6 to 8 PM and 8 to 10 PM time periods. The Project-generated trips were calculated as described in Section 4.1, Trip Generation, and added to Existing Conditions traffic volumes to produce the Existing plus Project traffic volumes for each study intersection. These combined Existing plus Project turning movement volumes are illustrated in**Figure 9**. Detailed LOS calculations for the Existing plus Project condition for both time periods may be found in **Appendix B**.

5.1 Potential Project Impacts and Recommended Mitigation Measures

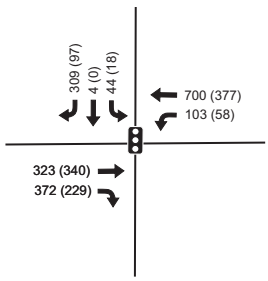
The significance criteria for intersection impacts were presented in Section 2. As shown in **Table 8**, none of the study intersections would fall below the LOS standard D with the addition of Project traffic during the 6 to 8 PM time period. Likewise, none of the study intersections would fall below LOS D during the 8 to 10 PM time period, as shown in **Table 9**. As no significant impacts were found under the Existing plus Project condition, no mitigation measures are necessary.



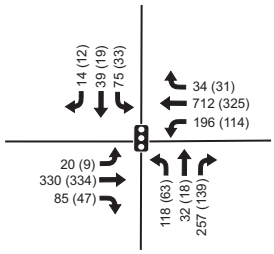
1. NB US 101 / Atherton Ave



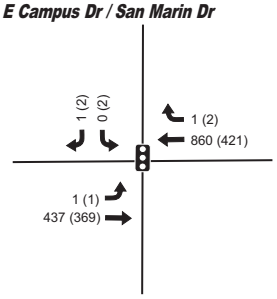
2. SB US 101 / Atherton Ave



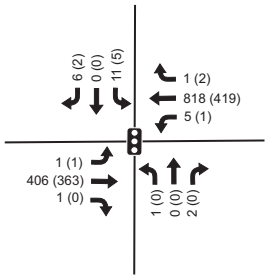
3. Redwood Blvd / San Marin Dr



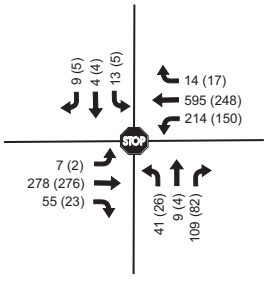
4. E Campus Dr / San Marin Dr



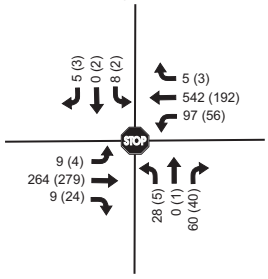
5. W Campus Dr / San Marin Dr



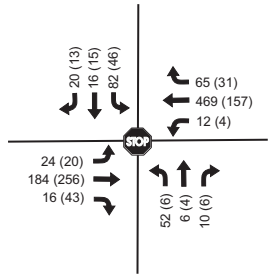
6. Simmons Ln / San Marin Dr



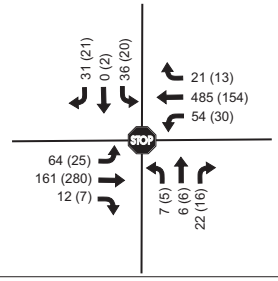
7. San Carlos Way / San Marin Dr



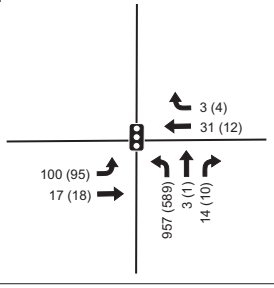
8. San Andreas Dr / San Marin Dr



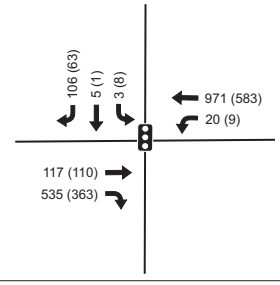
9. San Ramon Way / San Marin Dr



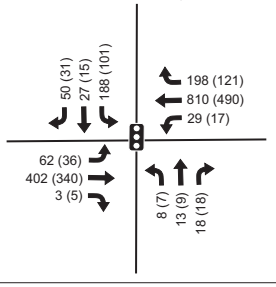
10. NB US 101 Ramp / De Long Ave



11. SB US 101 Ramps & De Long Ave



12. Reichert Ave / De Long Ave



LEGEND

00 - Study Intersection
- Traffic Signal
STOP - Stop Control
xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

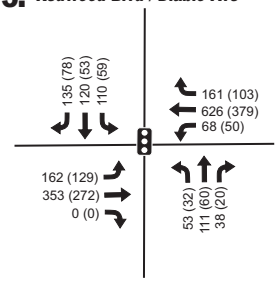
DKS

Figure 9

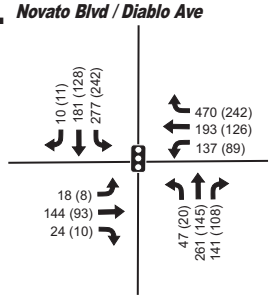
San Marin High School Stadium Lighting
Existing Plus Project Turning Movements

P:\P\15\15209-000 SMUHSD Stadium Lighting EIR\06 Graphics\Corel

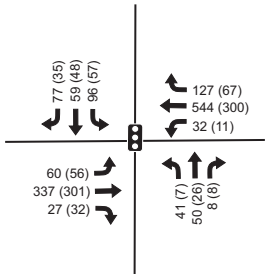
13. ***Redwood Blvd / Diablo Ave***



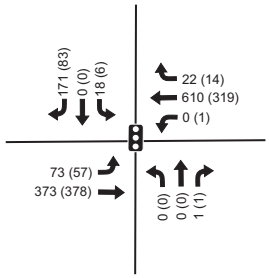
14. ***Novato Blvd / Diablo Ave***



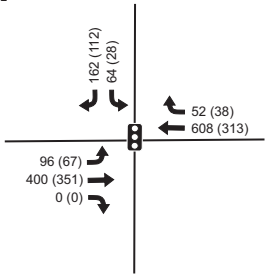
15. ***7th St / Novato Blvd***



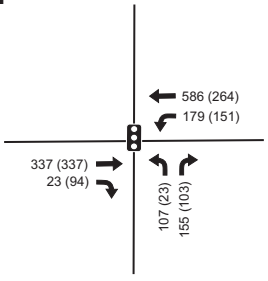
16. ***Grant Ave / Novato Blvd***



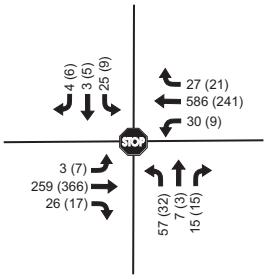
17. ***Simmons Ln / Novato Blvd***



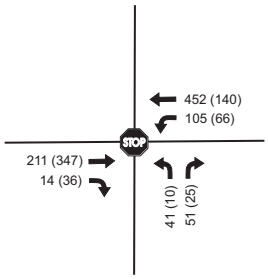
18. ***Wilson Ave / Novato Blvd***



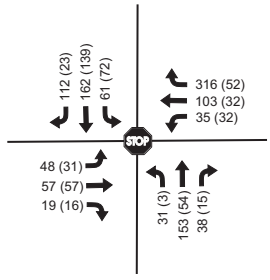
19. ***Raposa Vista / Novato Blvd***



20. ***Eucalyptus Ave / Novato Blvd***



21. ***San Marin Dr / Novato Blvd***



LEGEND

00 - Study Intersection - Traffic Signal

STOP - Stop Control xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 9

San Marin High School Stadium Lighting
Existing Plus Project Turning Movements

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Table 8: Existing Plus Project Conditions Intersection LOS 6 to 8 PM

#	Intersections	Control[1]	6 to 8 PM			
			Existing		Existing Plus Project	
			LOS[2]	Del/Veh (3)	LOS (2)	Del/Veh (3)
1	NB US 101 Ramps & Atherton Avenue	Signalized	C	29.2	C	33.2
2	SB US 101 Ramps & Atherton Avenue	Signalized	B	10.6	B	10.8
3	Redwood Boulevard & San Marin Drive	Signalized	B	15.1	B	14.6
4	E. Campus Drive & San Marin Drive	Signalized	A	7.1	A	7.7
5	W. Campus Drive & San Marin Drive	Signalized	A	4.5	A	4.7
6[4]	Simmons Lane & San Marin Drive	AWSC	B	13.9	C	17.6
7	San Carlos Way & San Marin Drive	AWSC	B	10.4	B	12.9
8[4]	San Andreas Drive & San Marin Drive	AWSC	B	12.6	D	27.2
9	San Ramon Way & San Marin Drive	AWSC	A	9.1	B	11.1
10	NB US 101 Ramps & De Long Avenue	Signalized	A	9.5	A	9.6
11	SB US 101 Ramps & De Long Avenue	Signalized	A	5.5	A	5.5
12	Reichert Avenue & De Long Avenue	Signalized	B	12.3	B	12.6
13	Redwood Boulevard & Diablo Avenue	Signalized	B	18.1	B	18.5
14	Novato Boulevard & Diablo Avenue	Signalized	B	19.6	C	20.1
15	7th Street & Novato Boulevard	Signalized	B	13.5	B	13.8
16	Grant Avenue & Novato Boulevard	Signalized	A	6.2	A	6.9
17	Simmons Lane & Novato Boulevard	Signalized	A	7.4	A	8.2
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.5	A	8.2
19[4]	Raposa Vista & Novato Boulevard	AWSC	B	10.7	B	13.3
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	9.6	C	15.1
21[4]	San Marin Drive & Novato Boulevard	AWSC	B	12.2	D~~B~~	31.9~~13.3~~

Notes:

(1) Intersection control: signalized or all way stop controlled (AWSC)

(2) Level of Service as defined in Table Average delay per vehicle (seconds)

(3) Average delay per vehicle (seconds)

(4) HCM 2010 applied

Table 9: Existing Plus Project Conditions Intersection LOS 8 to 10 PM

#	Intersections	Control[1]	8 to 10 PM			
			Existing		Existing Plus Project	
			LOS[2]	Del/Veh (4)	LOS (2)	Del/Veh (4)
1	NB US 101 Ramps & Atherton Avenue	Signalized	B	18.4	D	46.8
2	SB US 101 Ramps & Atherton Avenue	Signalized	A	6.3	A	7.2
3	Redwood Boulevard. & San Marin Drive	Signalized	B	11.4	B	11.1
4	E. Campus Drive & San Marin Drive	Signalized	A	7.8	A	8.8
5	W. Campus Drive & San Marin Drive	Signalized	A	4.1	A	4.6
6[4]	Simmons Lane & San Marin Drive	AWSC	A	9.7	B	10.8
7	San Carlos Way & San Marin Drive	AWSC	A	7.7	A	8.2
8[4]	San Andreas Drive & San Marin Drive	AWSC	A	8.8	B	10.5
9	San Ramon Way & San Marin Drive	AWSC	A	7.5	A	8.4
10	NB US 101 Ramps & De Long Avenue	Signalized	A	8.7	A	8.7
11	SB US 101 Ramps & De Long Avenue	Signalized	A	4.9	A	5
12	Reichert Avenue & De Long Avenue	Signalized	A	7.6	A	7.5
13	Redwood Boulevard & Diablo Avenue	Signalized	B	14.9	B	14.9
14	Novato Boulevard & Diablo Avenue	Signalized	B	14.4	B	14.8
15	7th Street & Novato Boulevard	Signalized	B	10.8	B	11.5
16	Grant Avenue & Novato Boulevard	Signalized	A	6.0	A	5.8
17	Simmons Lane & Novato Boulevard	Signalized	A	7.3	A	6.5
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.1	A	8.0
19[4]	Raposa Vista & Novato Boulevard	AWSC	A	9.0	B	12.0
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	8.1	B	11.3
21[4]	San Marin Drive & Novato Boulevard	AWSC	A	8.8	A	9.2

Notes:

(1) Intersection control: signalized or all way stop controlled (AWSC)

(2) Level of Service as defined in Table Average delay per vehicle (seconds)

(3) Average delay per vehicle (seconds)

(4) HCM 2010 applied

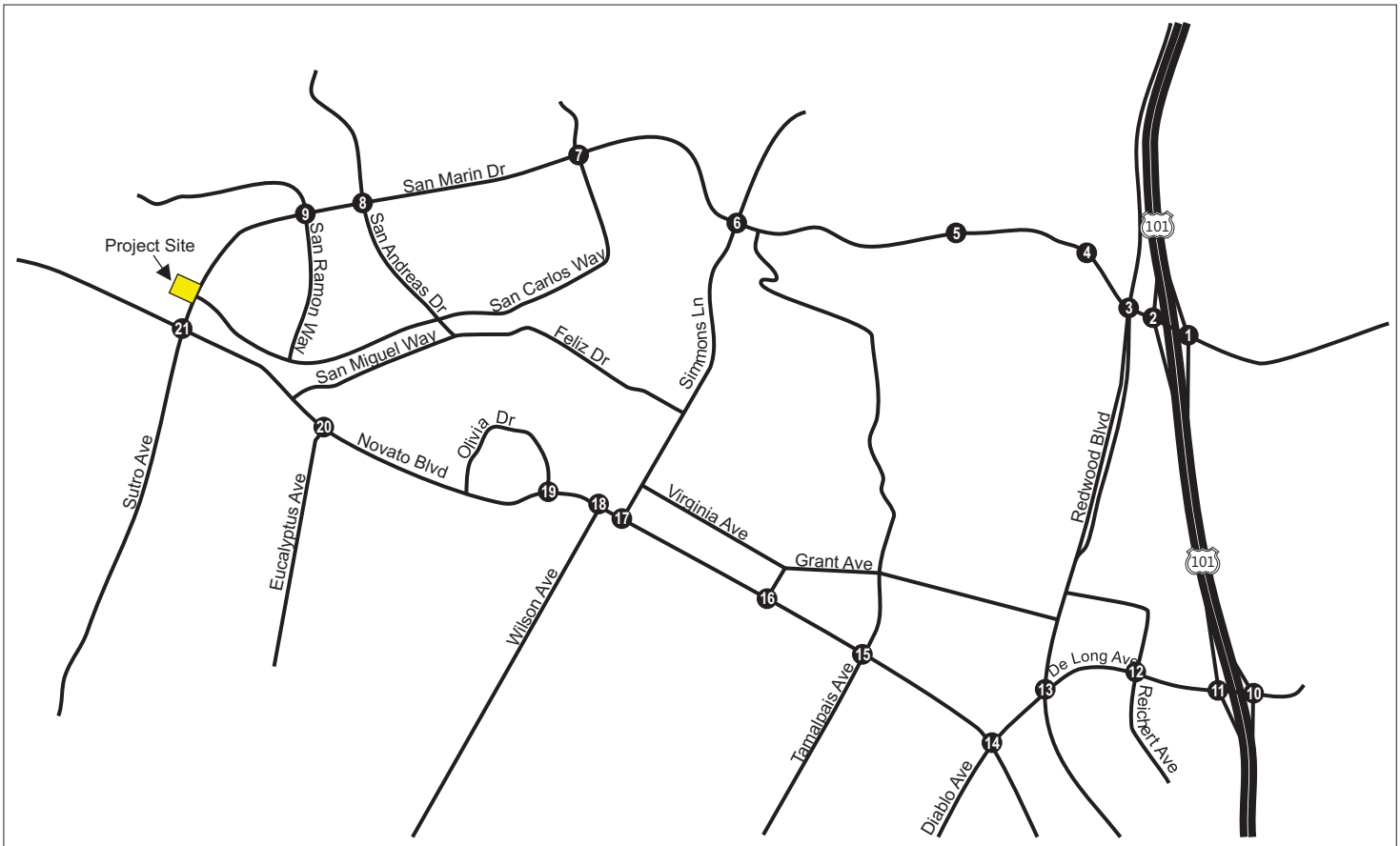
6 CUMULATIVE (2040) CONDITIONS

6.1 Forecast Methodology

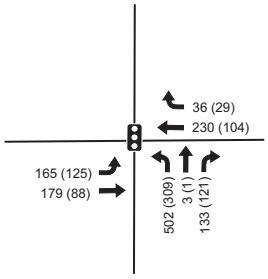
Cumulative or future year traffic conditions were estimated using outputs from the Napa Solano Activity Based travel demand model. Peak hour traffic volumes on roadways within the study area were compared for the model's base and 2040 forecast years to derive traffic growth factors which were then applied to study intersection approach volumes in the San Marin Drive and Novato Boulevard corridors. Forecasted intersection approach volumes were balanced out using the iterative Furness method to produce future year intersection turning movements. The forecasted Cumulative Conditions turning movement volumes are shown in **Figure 10.**

6.2 Intersection Operations

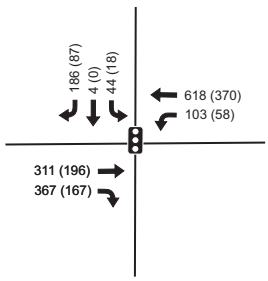
This scenario incorporates traffic projections for the year 2040 as described above. Intersection geometrics and signal timing are assumed to remain the same as for Existing Conditions. **Table 10** and **Table 11** summarize the intersection operating conditions during the background 6 to 8 PM and 8 to 10 PM periods respectively. As shown, none of the intersections are forecasted to operate at worse than LOS C during the 6 to 8 PM time period. During the 8 to 10 PM time period, all intersections are forecasted to operate at LOS B or better.



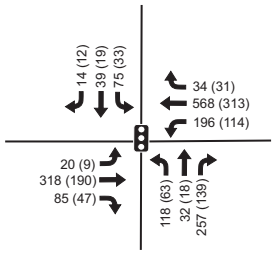
1. NB US 101 / Atherton Ave



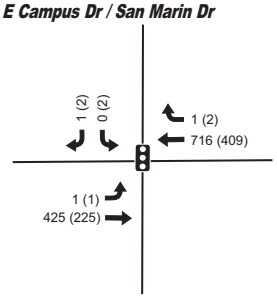
2. SB US 101 / Atherton Ave



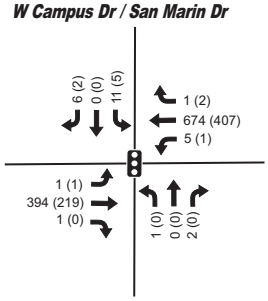
3. Redwood Blvd / San Marin Dr



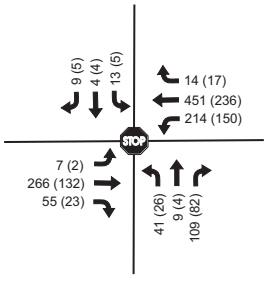
4. E Campus Dr / San Marin Dr



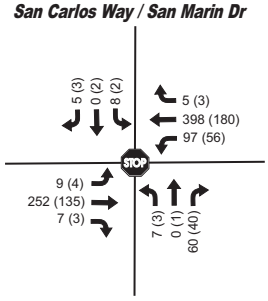
5. W Campus Dr / San Marin Dr



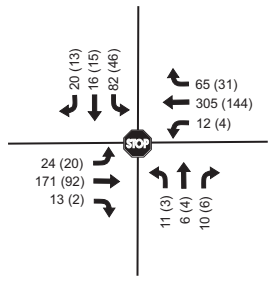
6. Simmons Ln / San Marin Dr



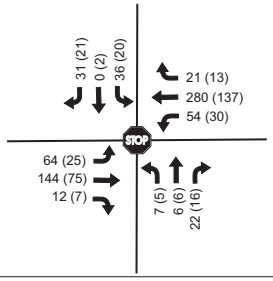
7. San Carlos Way / San Marin Dr



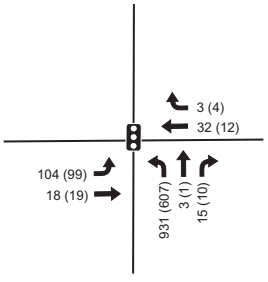
8. San Andreas Dr / San Marin Dr



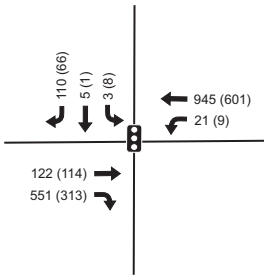
9. San Ramon Way / San Marin Dr



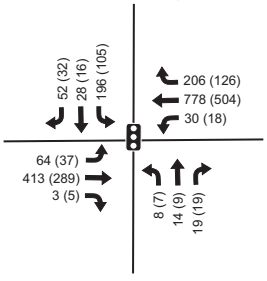
10. NB US 101 Ramp / De Long Ave



11. SB US 101 Ramps & De Long Ave



12. Reichert Ave / De Long Ave



LEGEND

00 - Study Intersection
- Traffic Signal
STOP - Stop Control
xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 10

San Marin High School Stadium Lighting
Future (2040) Volumes

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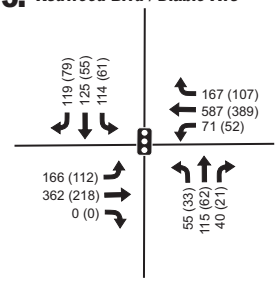
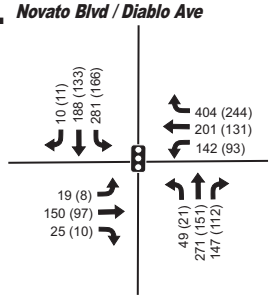
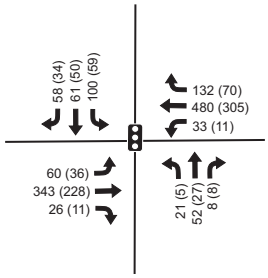
13. ***Redwood Blvd / Diablo Ave***



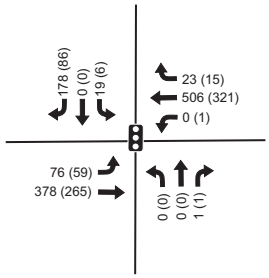
14. ***Novato Blvd / Diablo Ave***



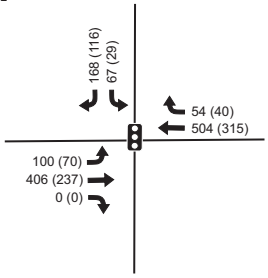
15. ***7th St / Novato Blvd***



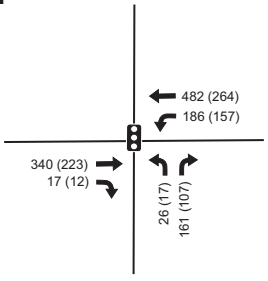
16. ***Grant Ave / Novato Blvd***



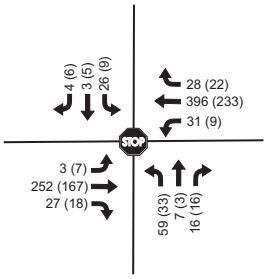
17. ***Simmons Ln / Novato Blvd***



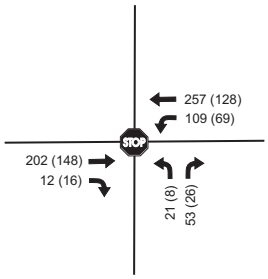
18. ***Wilson Ave / Novato Blvd***



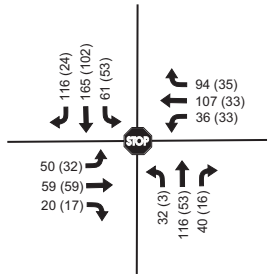
19. ***Raposa Vista / Novato Blvd***



20. ***Eucalyptus Ave / Novato Blvd***



21. ***San Marin Dr / Novato Blvd***



LEGEND

00 - Study Intersection - Traffic Signal

STOP - Stop Control xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 10

San Marin High School Stadium Lighting
Future (2040) Volumes

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Table 10: Cumulative Conditions Intersection Level of Service 6 PM – 8PM

#	Intersections	Control [1]	Existing 6 - 8 PM	
			LOS [2]	Del/Veh[3]
1	NB US 101 Ramps & Atherton Avenue	Signalized	C	29.2
2	SB US 101 Ramps & Atherton Avenue	Signalized	B	10.6
3	Redwood Boulevard. & San Marin Drive	Signalized	B	15.1
4	E. Campus Drive & San Marin Drive	Signalized	A	7.1
5	W. Campus Drive & San Marin Drive	Signalized	A	4.5
6[4]	Simmons Lane & San Marin Drive	AWSC	B	13.9
7	San Carlos Way & San Marin Drive	AWSC	B	10.4
8[4]	San Andreas Drive & San Marin Drive	AWSC	B	12.6
9	San Ramon Way & San Marin Drive	AWSC	A	9.1
10	NB US 101 Ramps & De Long Avenue	Signalized	A	9.7
11	SB US 101 Ramps & De Long Avenue	Signalized	A	5.6
12	Reichert Avenue & De Long Avenue	Signalized	B	12.8
13	Redwood Boulevard & Diablo Avenue	Signalized	B	18.4
14	Novato Boulevard & Diablo Avenue	Signalized	C	20.4
15	7th Street & Novato Boulevard	Signalized	B	13.7
16	Grant Avenue & Novato Boulevard	Signalized	A	6.6
17	Simmons Lane & Novato Boulevard	Signalized	A	7.5
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.7
19[4]	Raposa Vista & Novato Boulevard	AWSC	B	11.0
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	9.8
21[4]	San Marin Drive & Novato Boulevard	AWSC	B	12.6

Notes:

(1) Intersection control: signalized or all way stop controlled (AWSC)

(2) Level of Service as defined in Table Average delay per vehicle (seconds)

(3) Average delay (seconds)

(4) HCM 2010 methodology

Table 11: CumulativeFuture Conditions Intersection LOSLevel of Service 8 -PM – 10 PM

#	Intersections	Control [1]	Existing 8 - 10 PM	
			LOS [2]	Del/Veh[3]
1	NB US 101 Ramps & Atherton Avenue	Signalized	B	18.4
2	SB US 101 Ramps & Atherton Avenue	Signalized	A	6.3
3	Redwood Boulevard. & San Marin Drive	Signalized	B	11.4
4	E. Campus Drive & San Marin Drive	Signalized	A	7.8
5	W. Campus Drive & San Marin Drive	Signalized	A	4.1
6[4]	Simmons Lane & San Marin Drive	AWSC	A	9.7
7	San Carlos Way & San Marin Drive	AWSC	A	7.7
8[4]	San Andreas Drive & San Marin Drive	AWSC	A	8.8
9	San Ramon Way & San Marin Drive	AWSC	A	7.5
10	NB US 101 Ramps & De Long Avenue	Signalized	A	8.8
11	SB US 101 Ramps & De Long Avenue	Signalized	A	5.0
12	Reichert Avenue & De Long Avenue	Signalized	A	7.7
13	Redwood Boulevard & Diablo Avenue	Signalized	B	15.0
14	Novato Boulevard & Diablo Avenue	Signalized	B	14.6
15	7th Street & Novato Boulevard	Signalized	B	11.0
16	Grant Avenue & Novato Boulevard	Signalized	A	6.1
17	Simmons Lane & Novato Boulevard	Signalized	A	7.3
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.2
19[4]	Raposa Vista & Novato Boulevard	AWSC	A	9.1
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	8.2
21[4]	San Marin Drive & Novato Boulevard	AWSC	A	8.9

Notes:

(1) Intersection control: signalized or all way stop controlled (AWSC)

(2) Level of Service as defined in Table Average delay per vehicle (seconds)

(3) Average delay (seconds)

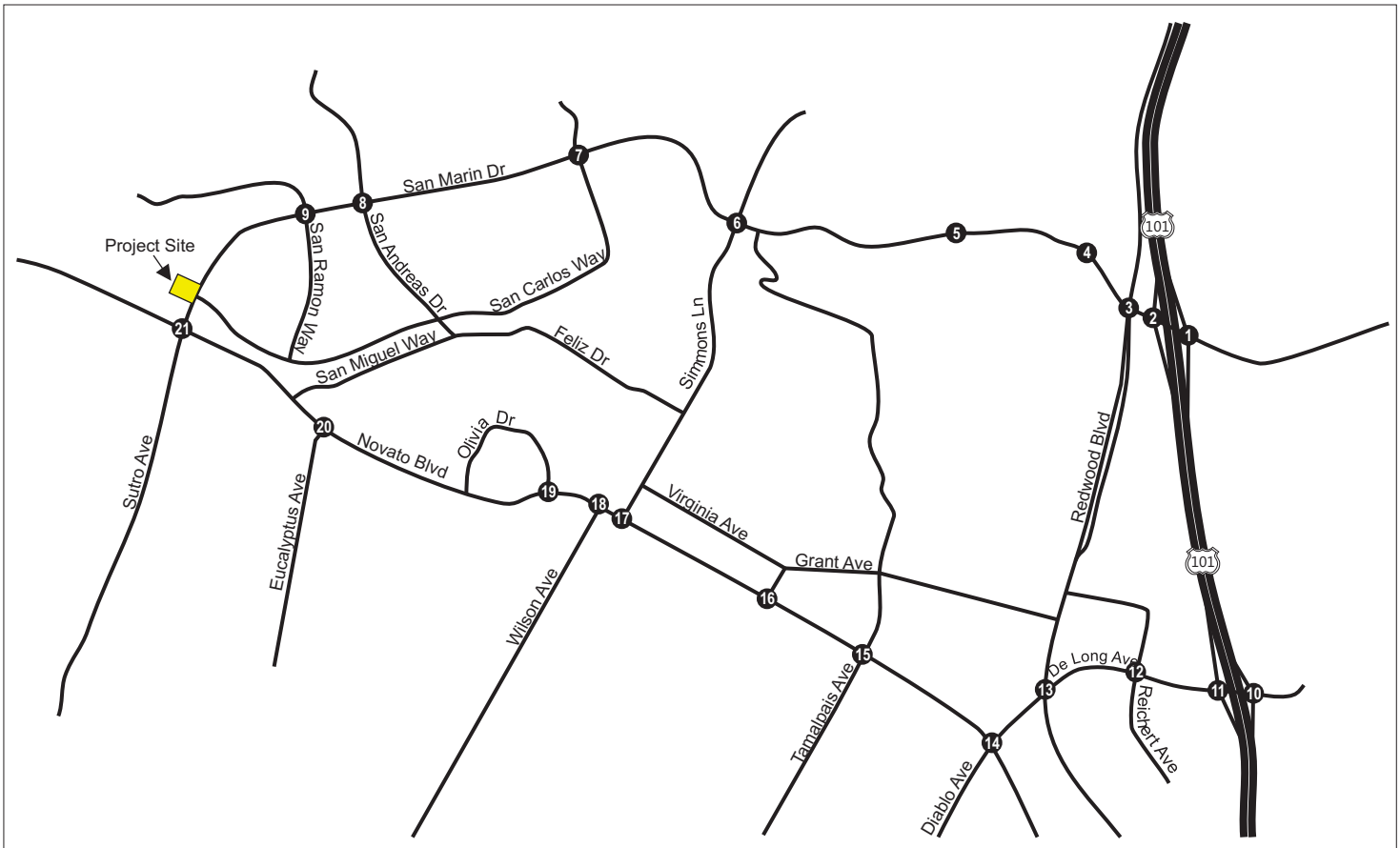
(4) HCM 2010 methodology

7 CUMULATIVE PLUS PROJECT CONDITIONS

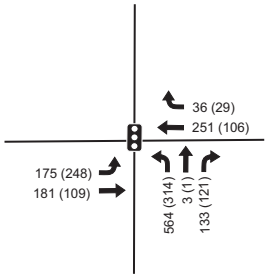
This scenario is based on the Cumulative Condition, but with the addition of traffic from the stadium lighting project. The Cumulative plus Project Conditions game time intersection turning movement volumes are illustrated in **Figure 11**.

7.1 Potential Project Impacts and Recommended Mitigations

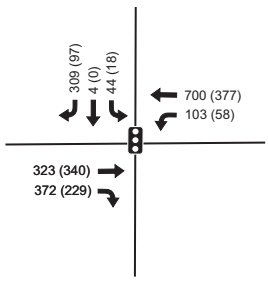
The significance criteria for intersection impacts were presented in Section 2. As shown **Table 12**, none of the study intersections would fall below the LOS standard D with the addition of Project to future forecasted traffic during the 6 to 8 PM time period. Likewise, none of the study intersections would fall below LOS D during the 8 to 10 PM time period under Cumulative plus Project Conditions, as shown in **Table 13**. As no significant impacts were found under Cumulative plus Project Conditions, no mitigation measures are necessary.



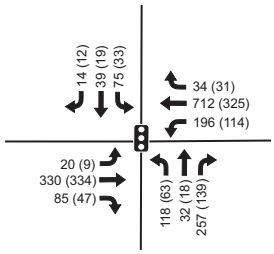
1. NB US 101 / Atherton Ave



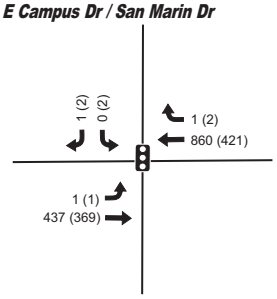
2. SB US 101 / Atherton Ave



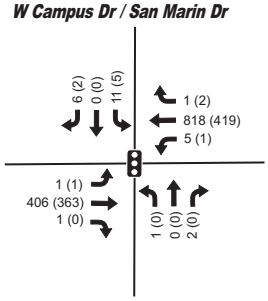
3. Redwood Blvd / San Marin Dr



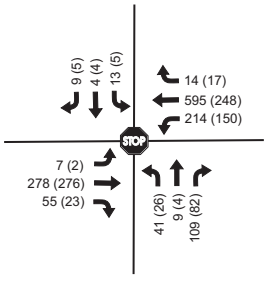
4. E Campus Dr / San Marin Dr



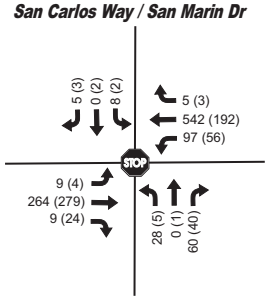
5. W Campus Dr / San Marin Dr



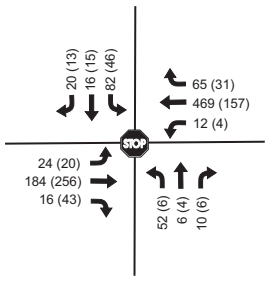
6. Simmons Ln / San Marin Dr



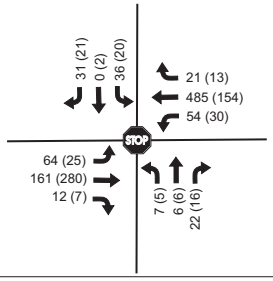
7. San Carlos Way / San Marin Dr



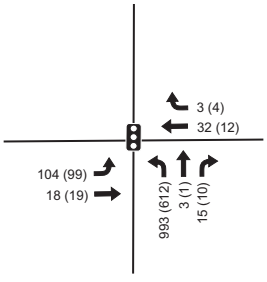
8. San Andreas Dr / San Marin Dr



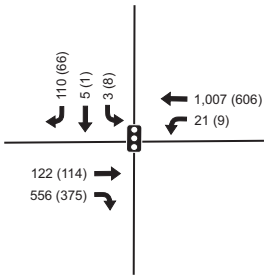
9. San Ramon Way / San Marin Dr



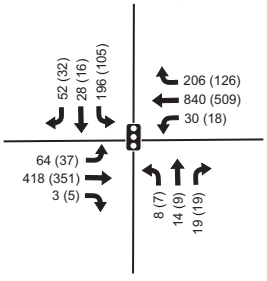
10. NB US 101 Ramp / De Long Ave



11. SB US 101 Ramps & De Long Ave



12. Reichert Ave / De Long Ave



LEGEND

00 - Study Intersection - Traffic Signal

STOP - Stop Control xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 11

San Marin High School Stadium Lighting
Future (2040) Plus Project Volumes

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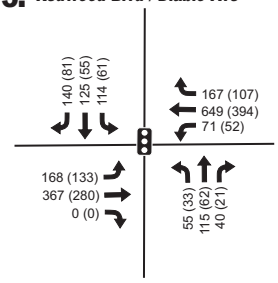
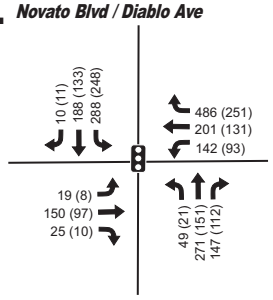
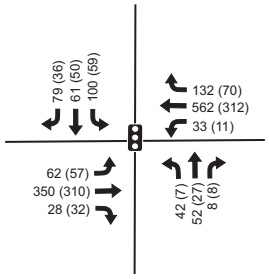
13. *Redwood Blvd / Diablo Ave*



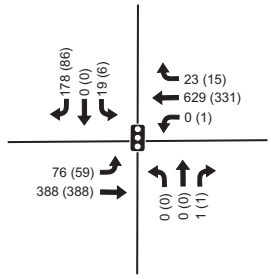
14. *Novato Blvd / Diablo Ave*



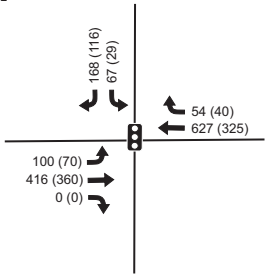
15. *7th St / Novato Blvd*



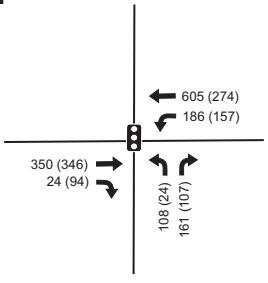
16. *Grant Ave / Novato Blvd*



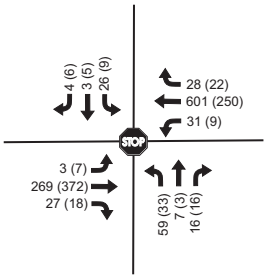
17. *Simmons Ln / Novato Blvd*



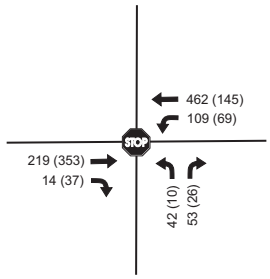
18. *Wilson Ave / Novato Blvd*



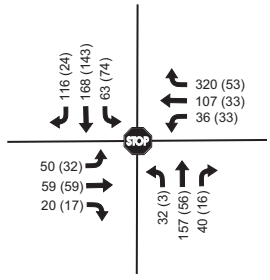
19. *Raposa Vista / Novato Blvd*



20. *Eucalyptus Ave / Novato Blvd*



21. *San Marin Dr / Novato Blvd*



LEGEND

00 - Study Intersection - Traffic Signal

STOP - Stop Control xx (xx) - Pre-game (Post-game) Peak Hour Volumes

NO SCALE

DKS

Figure 11

San Marin High School Stadium Lighting
Future (2040) Plus Project Volumes

P:\16\16094-000 NUSD Stadium Lights TIA\06 Graphics\Corel Files

Table 12: Comparison of Cumulative and Cumulative Plus Project Conditions 6 to 8PM

#	Intersections	Control[1]	6 to 8 PM			
			Future		Future Plus Project	
			LOS[2]	Del/Veh [3]	LOS [2]	Del/Veh [3]
1	NB US 101 Ramps & Atherton Avenue	Signalized	C	29.2	C	33.2
2	SB US 101 Ramps & Atherton Avenue	Signalized	B	10.6	B	10.8
3	Redwood Boulevard. & San Marin Drive	Signalized	B	15.1	B	14.6
4	E. Campus Drive & San Marin Drive	Signalized	A	7.1	A	7.7
5	W. Campus Drive & San Marin Drive	Signalized	A	4.5	A	4.7
6[4]	Simmons Lane & San Marin Drive	AWSC	B	13.9	C	17.6
7	San Carlos Way & San Marin Drive	AWSC	B	10.4	B	12.9
8[4]	San Andreas Drive & San Marin Drive	AWSC	B	12.6	**D**	27.2
9	San Ramon Way & San Marin Drive	AWSC	A	9.1	B	11.1
10	NB US 101 Ramps & De Long Avenue	Signalized	A	9.7	A	9.6
11	SB US 101 Ramps & De Long Avenue	Signalized	A	5.6	A	5.5
12	Reichert Avenue & De Long Avenue	Signalized	B	12.8	B	13.7
13	Redwood Boulevard & Diablo Avenue	Signalized	B	18.4	B	19.9
14	Novato Boulevard & Diablo Avenue	Signalized	C	20.4	C	20.8
15	7th Street & Novato Boulevard	Signalized	B	13.7	B	13.9
16	Grant Avenue & Novato Boulevard	Signalized	A	6.6	A	7.7
17	Simmons Lane & Novato Boulevard	Signalized	A	7.5	A	8.4
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.7	A	8.3
19[4]	Raposa Vista & Novato Boulevard	AWSC	B	11.0	B	13.8
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	9.8	C	15.1
21[4]	San Marin Drive & Novato Boulevard	AWSC	B	12.6	**D**	34.0

Notes:

(1) Intersection control: signalized or all way stop controlled (AWSC)

(2) Level of Service as defined in Table Average delay per vehicle (seconds)

(3) Average delay per vehicle (seconds)

(4) HCM 2010 applied

Table 13: Comparison of Cumulative and Cumulative Plus Project Conditions 8 to 10PM

#	Intersections	Control[1]	8 to 10 PM			
			Future		Future Plus Project	
			LOS[2]	Del/Veh [3]	LOS [2]	Del/Veh [3]
1	NB US 101 Ramps & Atherton Avenue	Signalized	B	18.4	**D**	46.8
2	SB US 101 Ramps & Atherton Avenue	Signalized	A	6.3	A	7.2
3	Redwood Boulevard. & San Marin Drive	Signalized	B	11.4	B	11.1
4	E. Campus Drive & San Marin Drive	Signalized	A	7.8	A	8.8
5	W. Campus Drive & San Marin Drive	Signalized	A	4.1	A	4.6
6[4]	Simmons Lane & San Marin Drive	AWSC	A	9.7	B	10.8
7	San Carlos Way & San Marin Drive	AWSC	A	7.7	A	8.2
8[4]	San Andreas Drive & San Marin Drive	AWSC	A	8.8	B	10.5
9	San Ramon Way & San Marin Drive	AWSC	A	7.5	A	8.4
10	NB US 101 Ramps & De Long Avenue	Signalized	A	8.8	A	8.8
11	SB US 101 Ramps & De Long Avenue	Signalized	A	5.0	A	5.0
12	Reichert Avenue & De Long Avenue	Signalized	A	7.7	A	7.7
13	Redwood Boulevard & Diablo Avenue	Signalized	B	15.0	B	15.0
14	Novato Boulevard & Diablo Avenue	Signalized	B	14.6	B	15.1
15	7th Street & Novato Boulevard	Signalized	B	11.0	B	11.7
16	Grant Avenue & Novato Boulevard	Signalized	A	6.1	A	5.9
17	Simmons Lane & Novato Boulevard	Signalized	A	7.3	A	6.6
18	Wilson Avenue & Novato Boulevard	Signalized	A	7.2	A	8.1
19[4]	Raposa Vista & Novato Boulevard	AWSC	A	9.1	B	12.2
20	Eucalyptus Avenue & Novato Boulevard	AWSC	A	8.2	B	11.4
21[4]	San Marin Drive & Novato Boulevard	AWSC	A	8.9	A	9.4

Notes:

(1) Intersection control: signalized or all way stop controlled (AWSC)

(2) Level of Service as defined in Table Average delay per vehicle (seconds)

(3) Average delay per vehicle (seconds)

(4) HCM 2010 applied

8 SUMMARY AND CONCLUSIONS

8.1 Impacts to Intersection Operations

No significant impacts to intersection operations were found under the Existing Plus Project or Cumulative Plus Project Conditions.

8.2 Other Impacts and Considerations

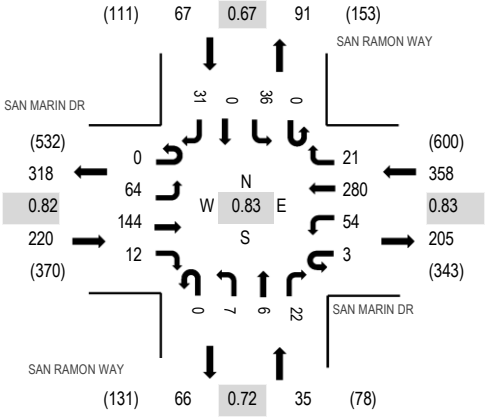
Other transportation related impacts to the study area were found to be minimal. The parking demand generated by nighttime football games can be accommodated with available on-site and nearby on-street parking spaces. Bicycle and pedestrian access routes to the stadiums will remain the same as prior to installation of the stadium lighting and should be only minimally affected under Existing plus Project and Cumulative plus Project conditions. Transportation impacts may be reduced by encouraging visitors to share rides, and encouraging home game attendees to walk or bicycle to events as much as possible.

Appendix A
Turning Movement Counts

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

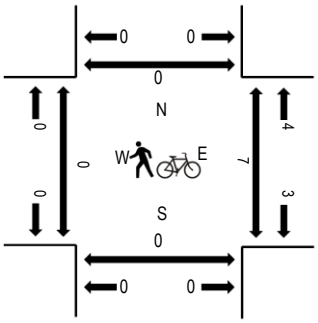
Location: 1 SAN RAMON WAY & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SAN RAMON WAY Northbound				SAN RAMON WAY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	20	43	4	1	8	87	12	0	0	2	9	0	12	0	7	205	680	0	2	0	0
6:15 PM	0	15	29	3	1	21	74	3	0	3	1	2	0	15	0	10	177	624	0	3	0	0
6:30 PM	0	12	40	3	0	15	71	5	0	2	2	8	0	2	0	7	167	565	0	2	0	0
6:45 PM	0	17	32	2	1	10	48	1	0	2	1	3	0	7	0	7	131	512	0	0	0	0
7:00 PM	2	7	26	4	0	16	58	3	0	1	4	10	0	6	2	10	149	479	0	0	1	1
7:15 PM	1	14	23	1	1	14	43	2	0	1	3	6	0	4	1	4	118	439	0	1	0	2
7:30 PM	1	9	26	3	0	10	43	4	0	2	2	7	0	3	3	1	114	416	0	0	0	0
7:45 PM	0	11	20	2	0	5	40	3	0	2	0	5	0	1	4	5	98	373	1	1	1	0

Peak Rolling Hour Flow Rates

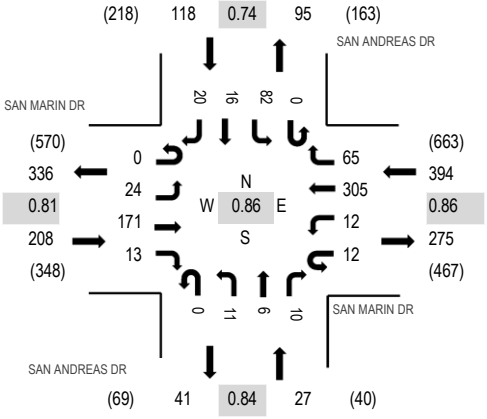
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	64	138	12	3	54	274	21	0	6	6	22	0	36	0	31	667
Mediums	0	0	6	0	0	0	6	0	0	1	0	0	0	0	0	0	13
Total	0	64	144	12	3	54	280	21	0	7	6	22	0	36	0	31	680

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

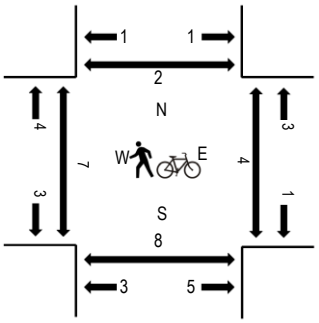
Location: 2 SAN ANDREAS DR & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SAN ANDREAS DR Northbound				SAN ANDREAS DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	8	49	7	2	2	90	20	0	2	2	3	0	22	6	5	218	747	0	0	1	2
6:15 PM	0	2	47	1	3	4	81	10	0	2	1	4	0	21	3	5	184	695	2	1	2	0
6:30 PM	0	6	42	1	3	4	77	20	0	4	2	2	0	25	1	3	190	637	1	1	3	0
6:45 PM	0	8	33	4	4	2	57	15	0	3	1	1	0	14	6	7	155	576	1	1	2	0
7:00 PM	1	8	32	2	3	1	58	13	0	2	2	1	0	27	4	12	166	522	4	1	1	0
7:15 PM	0	4	34	1	0	3	54	16	0	1	1	1	0	7	3	1	126	465	0	0	0	0
7:30 PM	0	3	29	2	2	1	53	10	0	1	1	1	0	19	2	5	129	438	0	0	0	0
7:45 PM	0	2	21	1	1	5	43	6	0	0	2	0	0	14	3	3	101	395	0	0	0	1

Peak Rolling Hour Flow Rates

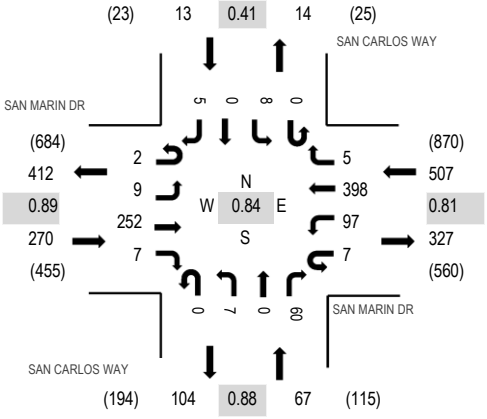
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	24	168	11	12	12	302	65	0	8	6	10	0	82	15	20	735
Mediums	0	0	3	2	0	0	3	0	0	3	0	0	0	0	1	0	12
Total	0	24	171	13	12	12	305	65	0	11	6	10	0	82	16	20	747

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

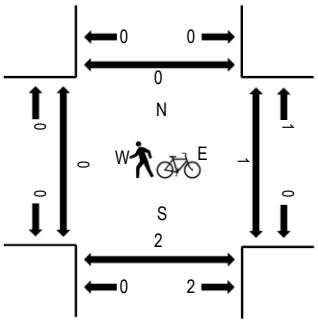
Location: 3 SAN CARLOS WAY & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SAN CARLOS WAY Northbound				SAN CARLOS WAY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	1	2	66	3	1	31	121	3	0	3	0	15	0	5	0	3	254	857	0	0	0	0
6:15 PM	0	0	72	0	0	22	99	0	0	2	0	14	0	1	0	1	211	788	0	1	1	0
6:30 PM	0	5	68	3	4	29	102	0	0	2	0	17	0	1	0	1	232	728	0	0	0	0
6:45 PM	1	2	46	1	2	15	76	2	0	0	0	14	0	1	0	0	160	647	0	0	0	0
7:00 PM	0	3	60	2	1	25	78	2	0	2	0	8	0	3	1	0	185	606	1	0	0	0
7:15 PM	0	0	42	0	2	23	67	1	0	1	0	14	0	0	0	1	151	545	0	0	0	0
7:30 PM	0	2	49	0	2	18	62	1	0	1	0	12	0	1	0	3	151	503	2	0	0	0
7:45 PM	0	0	26	1	4	20	56	1	0	0	1	9	0	0	0	1	119	461	0	0	1	0

Peak Rolling Hour Flow Rates

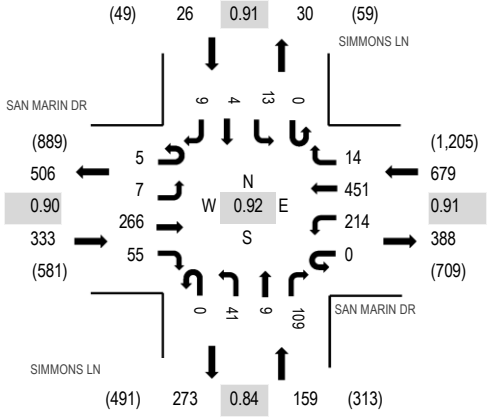
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	2	9	249	7	7	93	393	5	0	6	0	57	0	8	0	5	841
Mediums	0	0	3	0	0	4	5	0	0	1	0	3	0	0	0	0	16
Total	2	9	252	7	7	97	398	5	0	7	0	60	0	8	0	5	857

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

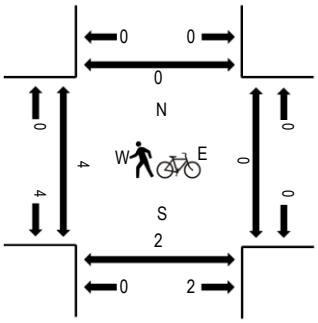
Location: 4 SIMMONS LN & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SIMMONS LN Northbound				SIMMONS LN Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	3	4	66	17	0	56	127	4	0	9	4	25	0	5	3	3	326	1,197	0	0	0	0
6:15 PM	2	0	72	13	0	60	119	7	0	12	1	23	0	2	1	3	315	1,141	2	0	1	0
6:30 PM	0	1	76	15	0	49	124	1	0	9	3	38	0	4	0	1	321	1,076	2	0	0	0
6:45 PM	0	2	52	10	0	49	81	2	0	11	1	23	0	2	0	2	235	984	0	0	1	0
7:00 PM	0	3	58	12	0	47	89	5	0	19	3	29	0	5	0	0	270	951	1	0	1	0
7:15 PM	1	0	58	8	1	50	93	4	0	11	1	20	0	3	0	0	250	866	0	0	0	2
7:30 PM	1	2	55	6	0	39	75	6	0	10	1	27	0	5	0	2	229	792	0	0	0	0
7:45 PM	0	1	36	7	0	46	69	2	0	10	1	22	0	2	3	3	202	743	0	0	1	0

Peak Rolling Hour Flow Rates

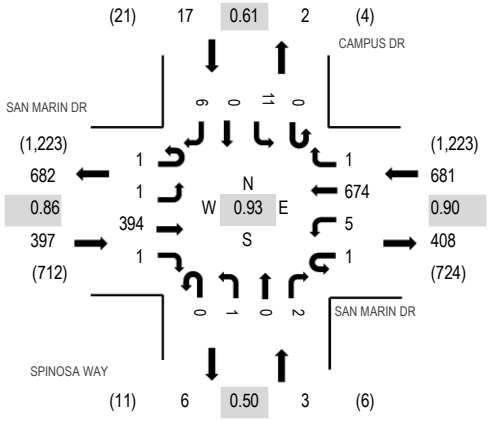
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	5	7	260	55	0	213	446	14	0	40	9	106	0	13	4	9	1,181
Mediums	0	0	6	0	0	1	5	0	0	1	0	3	0	0	0	0	16
Total	5	7	266	55	0	214	451	14	0	41	9	109	0	13	4	9	1,197

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

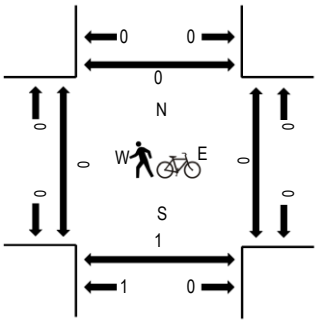
Location: 5 SPINOSA WAY & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:30 PM - 06:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SPINOSA WAY Northbound				CAMPUS DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	0	98	0	0	0	190	0	0	0	0	0	0	3	0	2	293	1,098	0	0	0	0
6:15 PM	1	0	98	0	0	1	183	0	0	0	0	0	0	5	0	2	290	1,041	0	0	1	0
6:30 PM	0	1	113	1	1	2	171	0	0	1	0	1	0	1	0	2	294	985	0	0	0	0
6:45 PM	0	0	85	0	0	2	130	1	0	0	0	1	0	2	0	0	221	898	0	0	0	0
7:00 PM	0	0	91	0	0	1	144	0	0	0	0	0	0	0	0	0	236	864	0	0	2	0
7:15 PM	0	0	78	0	0	1	152	0	0	1	0	0	0	1	0	1	234	784	0	0	0	0
7:30 PM	0	0	87	0	1	1	116	1	0	0	0	1	0	0	0	0	207	714	0	0	0	0
7:45 PM	0	1	56	2	0	0	125	0	0	0	0	1	0	0	0	2	187	664	0	0	0	0

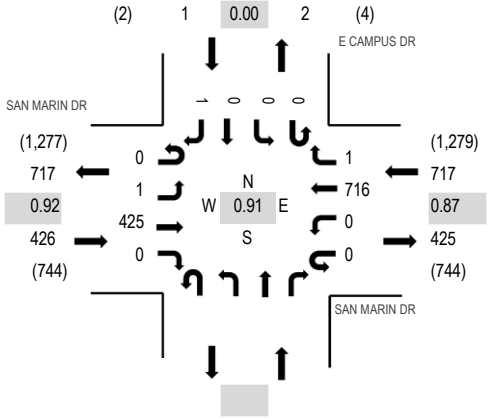
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	1	1	388	0	1	5	666	1	0	1	0	2	0	11	0	6	1,083
Mediums	0	0	6	1	0	0	8	0	0	0	0	0	0	0	0	0	15
Total	1	1	394	1	1	5	674	1	0	1	0	2	0	11	0	6	1,098

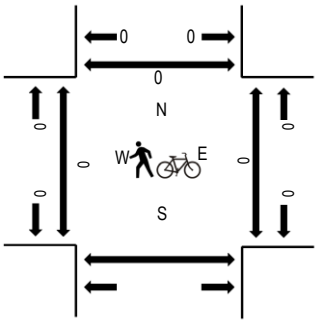
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 6 E CAMPUS DR & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				Northbound				E CAMPUS DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	0	109	0	0	0	205	0					0	0	0	1	315	1,144	0	0		0
6:15 PM	0	0	110	0	0	0	190	0					0	0	0	0	300	1,069	0	0		0
6:30 PM	0	1	115	0	0	0	184	1					0	0	0	0	301	1,006	0	0		0
6:45 PM	0	0	91	0	0	0	137	0					0	0	0	0	228	918	0	0		0
7:00 PM	0	0	94	0	0	0	146	0					0	0	0	0	240	881	0	0		0
7:15 PM	0	0	78	0	0	0	157	1					0	1	0	0	237	799	0	0		0
7:30 PM	0	1	88	0	1	0	123	0					0	0	0	0	213	724	0	0		0
7:45 PM	0	0	57	0	0	0	134	0					0	0	0	0	191	678	0	0		0

Peak Rolling Hour Flow Rates

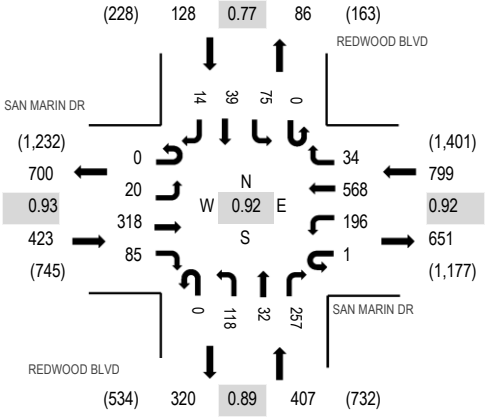
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	0	1	417	0	0	0	706	1					0	0	0	1	1,126
Mediums	0	0	8	0	0	0	10	0					0	0	0	0	18
Total	0	1	425	0	0	0	716	1					0	0	0	1	1,144

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

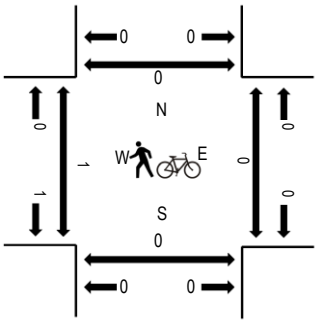
Location: 7 REDWOOD BLVD & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:15 PM - 06:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				REDWOOD BLVD Northbound				REDWOOD BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	3	82	22	0	45	166	7	0	24	6	60	0	15	10	2	442	1,757	0	0	0	0
6:15 PM	0	9	79	26	1	57	145	12	0	39	4	63	0	23	15	5	478	1,694	0	0	0	0
6:30 PM	0	5	87	17	0	49	144	8	0	34	13	68	0	17	6	4	452	1,566	0	0	0	0
6:45 PM	0	3	70	20	0	45	113	7	0	21	9	66	0	20	8	3	385	1,447	0	0	0	0
7:00 PM	0	3	63	26	0	35	113	14	0	22	5	66	0	19	10	3	379	1,349	1	0	0	0
7:15 PM	0	1	71	13	0	33	127	12	0	22	9	45	0	11	6	0	350	1,214	0	0	0	0
7:30 PM	0	3	71	12	0	34	103	7	0	17	10	51	0	18	5	2	333	1,118	0	0	0	0
7:45 PM	0	1	44	14	0	23	95	6	0	26	6	46	0	21	3	2	287	1,040	0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Lights	0	19	317	80	1	189	563	29	0	117	30	251	0	74	39	12	1,721
Mediums	0	1	1	5	0	5	5	5	0	1	2	6	0	1	0	2	34
Total	0	20	318	85	1	196	568	34	0	118	32	257	0	75	39	14	1,757

All Traffic Data Services Inc.
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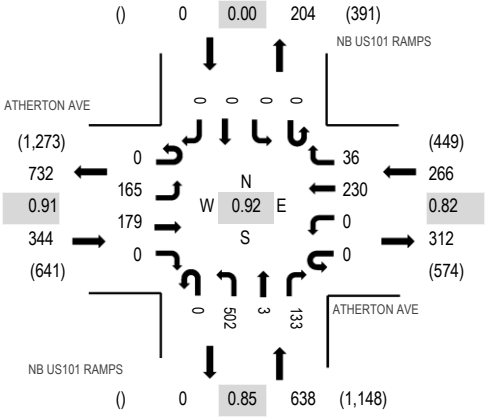
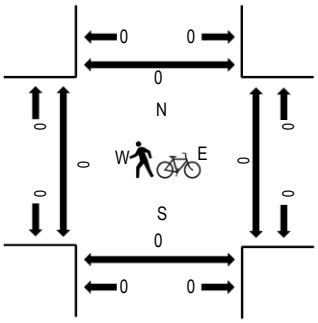
Location: 8 NB US101 RAMPS & ATHERTON AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:15 PM - 06:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	ATHERTON AVE Eastbound				ATHERTON AVE Westbound				NB US101 RAMPS Northbound				NB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	31	49	0	0	0	71	10	0	136	2	36	0	0	0	0	335	1,248	0	0	0	0
6:15 PM	0	47	48	0	0	0	48	9	0	149	0	39	0	0	0	0	340	1,161	0	0	0	0
6:30 PM	0	41	41	0	0	0	56	12	0	125	0	29	0	0	0	0	304	1,104	0	0	0	0
6:45 PM	0	46	41	0	0	0	55	5	0	92	1	29	0	0	0	0	269	1,049	0	0	0	0
7:00 PM	0	42	32	0	0	0	41	8	0	97	0	28	0	0	0	0	248	990	0	0	1	0
7:15 PM	0	28	49	0	0	0	52	10	0	110	0	34	0	0	0	0	283	937	0	0	0	0
7:30 PM	0	54	28	0	0	0	28	5	0	97	0	37	0	0	0	0	249	853	0	0	0	0
7:45 PM	0	31	33	0	0	0	30	9	0	86	0	21	0	0	0	0	210	796	0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
Lights	0	160	178	0	0	0	226	34	0	491	3	131	0	0	0	0	1,223
Mediums	0	5	1	0	0	0	4	1	0	10	0	2	0	0	0	0	23
Total	0	165	179	0	0	0	230	36	0	502	3	133	0	0	0	0	1,248

All Traffic Data Services Inc.
(303) 216-2439
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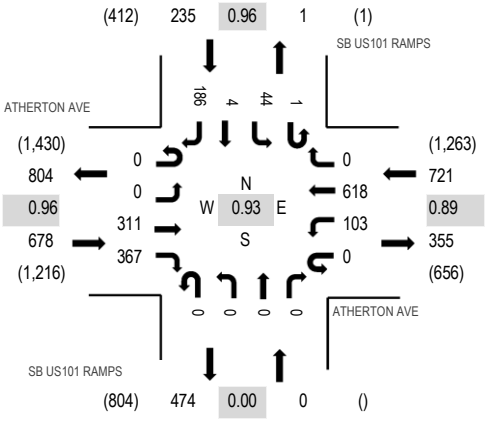
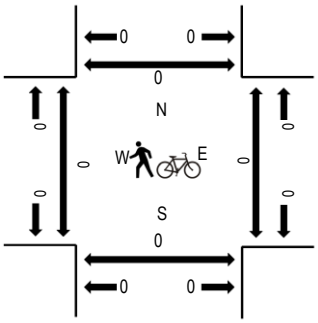
Location: 9 SB US101 RAMPS & ATHERTON AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:15 PM - 06:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	ATHERTON AVE Eastbound				ATHERTON AVE Westbound				SB US101 RAMPS Northbound				SB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	0	73	89	0	23	174	0	0	0	0	0	1	10	0	49	419	1,634	0	0	0	0
6:15 PM	0	0	84	92	0	31	171	0	0	0	0	0	0	14	0	47	439	1,543	0	0	0	0
6:30 PM	0	0	76	97	0	25	151	0	0	0	0	0	0	10	3	47	409	1,444	0	0	0	0
6:45 PM	0	0	78	89	0	24	122	0	0	0	0	0	0	10	1	43	367	1,345	0	0	0	0
7:00 PM	0	0	64	81	0	22	114	0	0	0	0	0	0	5	0	42	328	1,257	0	0	1	0
7:15 PM	0	0	66	56	0	18	153	0	0	0	0	0	0	9	0	38	340	1,153	0	0	0	0
7:30 PM	0	0	81	71	0	14	106	0	0	0	0	0	0	7	0	31	310	1,045	0	0	0	0
7:45 PM	0	0	61	58	0	10	105	0	0	0	0	0	0	8	0	37	279	957	0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	0	307	365	0	103	603	0	0	0	0	0	1	43	3	182	1,607
Mediums	0	0	4	2	0	0	14	0	0	0	0	0	0	1	1	4	26
Total	0	0	311	367	0	103	618	0	0	0	0	0	1	44	4	186	1,634

All Traffic Data Services Inc.

(303) 216-2439
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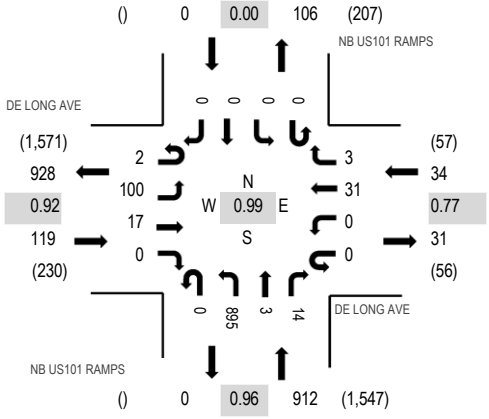
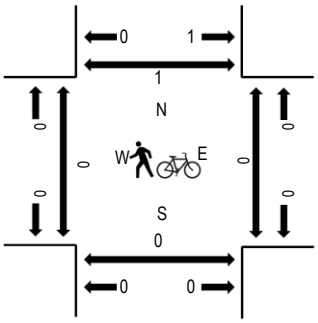
Location: 10 NB US101 RAMPS & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DE LONG AVE Eastbound				DE LONG AVE Westbound				NB US101 RAMPS Northbound				NB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	22	3	0	0	0	7	0	0	231	0	7	0	0	0	0	270	1,065	0	0	0	0
6:15 PM	0	18	7	0	0	0	7	0	0	233	1	3	0	0	0	0	269	1,001	0	0	0	0
6:30 PM	0	31	4	0	0	0	10	2	0	213	2	1	0	0	0	0	263	943	0	0	0	0
6:45 PM	2	29	3	0	0	0	7	1	0	218	0	3	0	0	0	0	263	859	0	0	0	0
7:00 PM	0	30	1	0	0	0	7	3	0	164	0	1	0	0	0	0	206	769	0	0	0	0
7:15 PM	1	25	3	0	1	0	4	1	0	173	0	3	0	0	0	0	211	758	0	0	0	0
7:30 PM	0	24	7	0	0	0	3	0	0	142	0	3	0	0	0	0	179	727	0	0	1	0
7:45 PM	0	17	3	0	0	0	3	1	0	146	0	3	0	0	0	0	173	728	0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Lights	2	98	17	0	0	0	31	3	0	885	2	14	0	0	0	0	1,052
Mediums	0	1	0	0	0	0	0	0	0	9	1	0	0	0	0	0	11
Total	2	100	17	0	0	0	31	3	0	895	3	14	0	0	0	0	1,065

All Traffic Data Services Inc.
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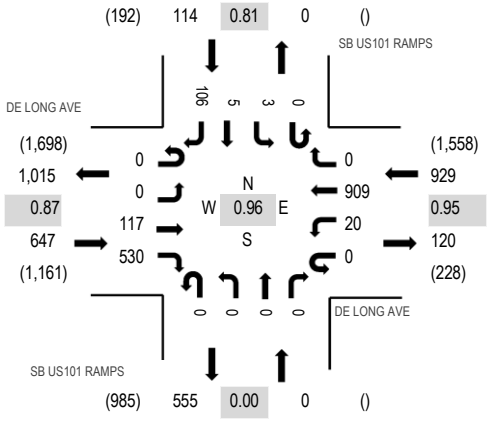
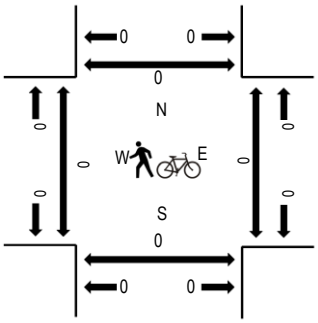
Location: 11 SB US101 RAMPS & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DE LONG AVE Eastbound				DE LONG AVE Westbound				SB US101 RAMPS Northbound				SB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	0	24	162	0	6	219	0	0	0	0	0	0	0	0	28	439	1,690	0	0	0	0
6:15 PM	0	0	26	132	0	2	243	0	0	0	0	0	0	1	1	22	427	1,555	0	0	0	0
6:30 PM	0	0	34	121	0	4	211	0	0	0	0	0	0	1	1	33	405	1,455	0	0	0	0
6:45 PM	0	0	33	115	0	8	236	0	0	0	0	0	0	1	3	23	419	1,378	0	0	0	0
7:00 PM	0	0	25	110	0	6	144	0	0	0	0	0	0	0	2	17	304	1,221	0	0	0	0
7:15 PM	0	0	32	102	0	4	171	0	0	0	0	0	0	0	1	17	327	1,206	0	0	0	0
7:30 PM	0	0	31	115	0	2	156	0	0	0	0	0	0	1	1	22	328	1,149	0	0	0	0
7:45 PM	0	0	17	82	0	4	142	0	0	0	0	0	0	2	1	14	262	1,093	0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	3
Lights	0	0	115	520	0	19	899	0	0	0	0	0	0	3	4	104	1,664
Mediums	0	0	1	9	0	1	10	0	0	0	0	0	0	0	1	1	23
Total	0	0	117	530	0	20	909	0	0	0	0	0	0	3	5	106	1,690

All Traffic Data Services Inc.
(303) 216-2439
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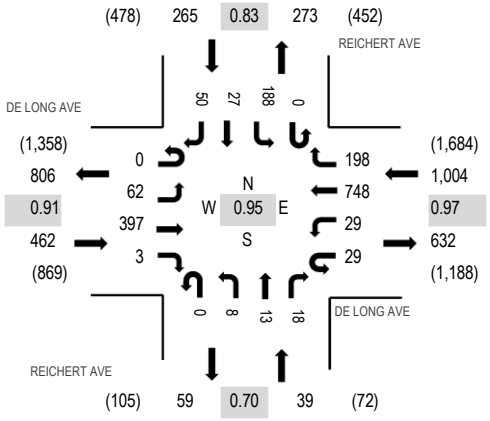
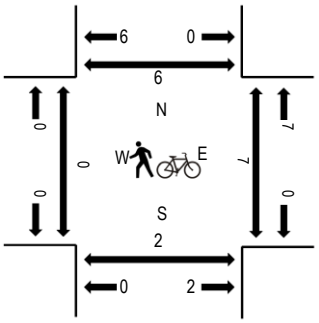
Location: 12 REICHERT AVE & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DE LONG AVE Eastbound				DE LONG AVE Westbound				REICHERT AVE Northbound				REICHERT AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	13	112	2	4	6	184	52	0	3	7	4	0	60	7	13	467	1,770	0	5	1	2
6:15 PM	0	16	104	0	5	10	190	49	0	0	3	8	0	51	9	14	459	1,655	0	0	0	1
6:30 PM	0	13	95	1	12	7	185	40	0	3	1	3	0	38	6	12	416	1,530	0	0	0	3
6:45 PM	0	20	86	0	8	6	189	57	0	2	2	3	0	39	5	11	428	1,464	0	2	1	0
7:00 PM	0	15	90	4	4	6	128	33	0	0	1	6	0	49	5	11	352	1,333	0	3	0	0
7:15 PM	0	10	81	2	6	6	141	28	0	0	4	2	0	40	3	11	334	1,294	1	3	0	0
7:30 PM	0	9	98	1	7	5	129	27	0	1	0	12	0	45	5	11	350	1,243	2	0	0	0
7:45 PM	0	9	86	2	3	3	115	39	0	0	4	3	0	24	4	5	297	1,186	0	0	1	2

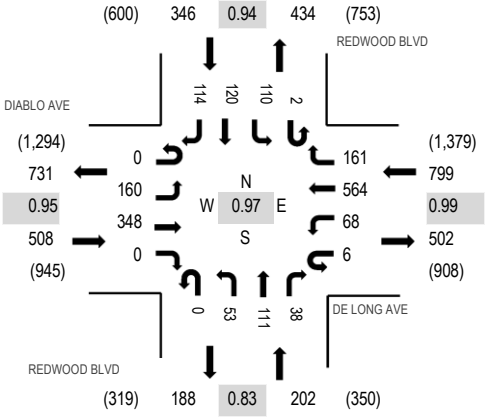
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5
Lights	0	62	388	3	29	29	734	196	0	8	13	18	0	188	27	50	1,745
Mediums	0	0	7	0	0	0	11	2	0	0	0	0	0	0	0	0	20
Total	0	62	397	3	29	29	748	198	0	8	13	18	0	188	27	50	1,770

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

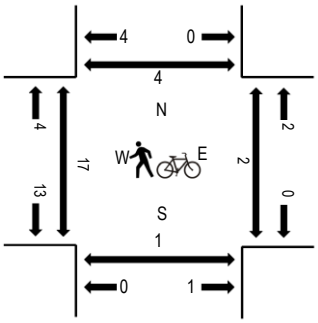
Location: 13 REDWOOD BLVD & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:15 PM - 06:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DIABLO AVE Eastbound				DE LONG AVE Westbound				REDWOOD BLVD Northbound				REDWOOD BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	36	88	0	2	13	148	37	0	17	31	9	0	35	20	37	473	1,855	2	0	0	0
6:15 PM	0	43	90	0	1	14	144	41	0	11	35	15	0	22	33	28	477	1,753	6	1	0	0
6:30 PM	0	49	84	0	1	28	131	41	0	10	22	4	0	27	37	22	456	1,651	4	0	0	2
6:45 PM	0	32	86	0	2	13	141	42	0	15	23	10	2	26	30	27	449	1,549	4	1	1	2
7:00 PM	0	49	73	0	1	6	101	25	0	21	17	8	0	24	17	29	371	1,419	3	0	0	0
7:15 PM	1	38	60	0	5	20	122	21	0	13	17	10	0	18	24	26	375	1,349	1	0	0	0
7:30 PM	0	29	73	0	0	10	108	32	0	11	15	6	0	27	32	11	354	1,270	1	0	0	0
7:45 PM	2	30	82	0	1	9	90	29	0	10	16	4	1	14	13	18	319	1,190	4	1	1	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	3
Lights	0	155	342	0	6	68	561	154	0	53	111	38	2	105	119	111	1,825
Mediums	0	5	5	0	0	0	2	7	0	0	0	0	0	4	1	3	27
Total	0	160	348	0	6	68	564	161	0	53	111	38	2	110	120	114	1,855

All Traffic Data Services Inc.
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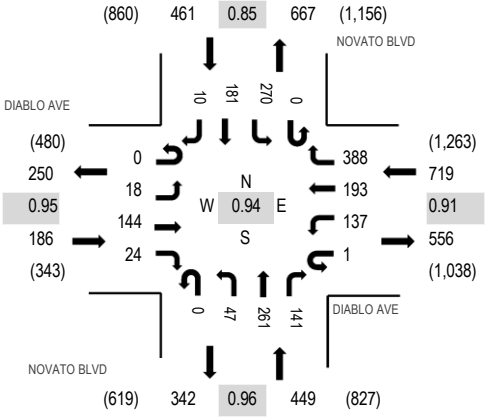
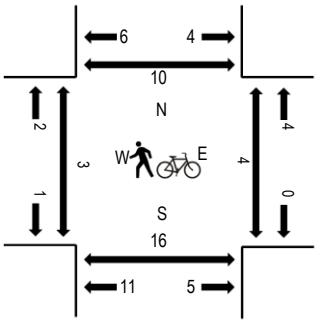
Location: 14 NOVATO BLVD & DIABLO AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DIABLO AVE Eastbound				DIABLO AVE Westbound				NOVATO BLVD Northbound				NOVATO BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	4	30	5	0	34	60	103	0	13	73	24	0	75	55	5	481	1,815	0	0	6	0
6:15 PM	0	6	35	9	1	41	54	90	0	12	60	34	0	75	45	0	462	1,723	0	0	6	4
6:30 PM	0	4	41	6	0	29	35	84	0	10	64	41	0	61	40	3	418	1,645	0	0	1	1
6:45 PM	0	4	38	4	0	33	44	111	0	12	64	42	0	59	41	2	454	1,611	3	2	3	2
7:00 PM	0	5	32	9	0	29	39	65	0	13	62	39	0	52	40	4	389	1,478	0	0	1	1
7:15 PM	0	4	19	5	0	27	60	79	0	8	55	38	0	46	40	3	384	1,419	1	0	8	1
7:30 PM	0	6	32	5	0	14	49	72	0	9	40	37	0	71	45	4	384	1,305	2	0	1	6
7:45 PM	0	6	31	3	0	23	31	56	0	7	39	31	0	54	37	3	321	1,166	2	0	2	4

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Lights	0	18	144	24	1	134	193	384	0	47	256	137	0	266	181	10	1,795
Mediums	0	0	0	0	0	2	0	4	0	0	5	4	0	3	0	0	18
Total	0	18	144	24	1	137	193	388	0	47	261	141	0	270	181	10	1,815

All Traffic Data Services Inc.

(303) 216-2439
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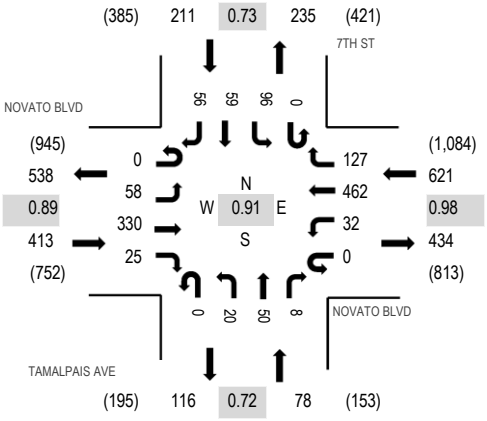
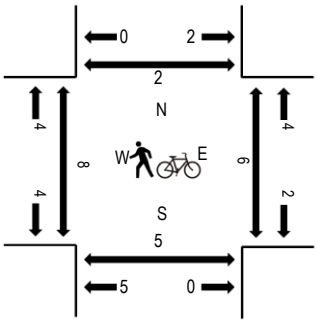
Location: 15 TAMALPAIS AVE & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				TAMALPAIS AVE Northbound				7TH ST Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	14	90	4	0	11	112	34	0	6	17	4	0	39	21	12	364	1,323	2	0	0	2
6:15 PM	0	18	89	9	0	7	117	30	0	2	9	0	0	19	14	18	332	1,226	1	0	0	0
6:30 PM	0	9	78	6	0	6	114	31	0	6	12	1	0	19	14	14	310	1,153	0	3	0	0
6:45 PM	0	17	73	6	0	8	119	32	0	6	12	3	0	19	10	12	317	1,137	4	1	4	0
7:00 PM	0	20	60	3	0	1	93	22	0	3	14	1	0	30	12	8	267	1,051	0	0	0	2
7:15 PM	0	8	69	2	0	4	97	28	0	5	6	1	0	23	6	10	259	1,046	1	0	2	1
7:30 PM	0	13	77	5	0	6	98	23	0	7	12	7	0	24	14	8	294	955	1	4	0	0
7:45 PM	0	11	65	6	0	5	72	14	0	1	15	3	0	19	15	5	231	834	0	2	0	0

Peak Rolling Hour Flow Rates

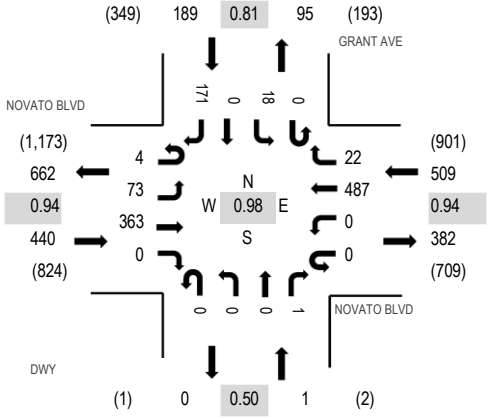
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	56	327	25	0	32	454	127	0	20	50	8	0	96	59	55	1,309
Mediums	0	2	3	0	0	0	8	0	0	0	0	0	0	0	0	1	14
Total	0	58	330	25	0	32	462	127	0	20	50	8	0	96	59	56	1,323

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

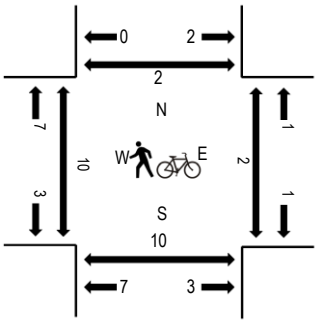
Location: 16 DWY & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				DWY Northbound				GRANT AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	16	101	0	0	0	119	6	0	0	0	0	0	4	0	44	290	1,139	1	1	4	2
6:15 PM	2	13	97	0	0	0	128	8	0	0	0	0	0	6	0	36	290	1,108	2	1	1	0
6:30 PM	0	15	80	0	0	0	113	3	0	0	0	1	0	4	0	54	270	1,039	1	0	2	0
6:45 PM	2	29	85	0	0	0	127	5	0	0	0	0	0	4	0	37	289	1,017	6	0	2	0
7:00 PM	0	27	84	0	0	0	100	10	0	0	0	0	0	6	0	32	259	937	3	0	0	3
7:15 PM	1	20	64	0	0	1	92	4	0	0	0	1	0	2	0	36	221	909	0	0	3	0
7:30 PM	2	15	82	0	0	0	102	7	0	0	0	0	0	7	0	33	248	840	1	1	1	0
7:45 PM	1	14	74	0	0	0	75	1	0	0	0	0	0	7	0	37	209	760	2	0	3	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	4	73	357	0	0	0	479	22	0	0	0	1	0	18	0	171	1,125
Mediums	0	0	6	0	0	0	8	0	0	0	0	0	0	0	0	0	14
Total	4	73	363	0	0	0	487	22	0	0	0	1	0	18	0	171	1,139

All Traffic Data Services Inc.
(303) 216-2439
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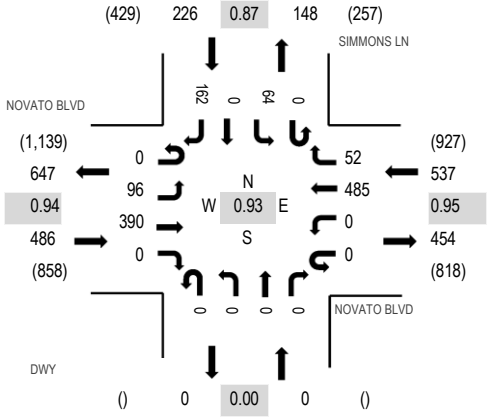
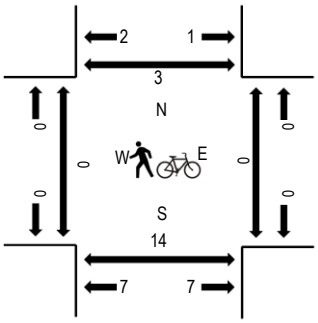
Location: 17 DWY & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				DWY Northbound				SIMMONS LN Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	24	104	0	0	0	130	11	0	0	0	0	0	21	0	44	334	1,249	0	0	2	0
6:15 PM	0	24	88	0	0	0	127	6	0	0	0	0	0	14	0	49	308	1,186	0	0	0	0
6:30 PM	0	21	96	0	0	0	123	17	0	0	0	0	0	12	0	32	301	1,117	0	0	5	0
6:45 PM	0	27	102	0	0	0	105	18	0	0	0	0	0	17	0	37	306	1,056	0	0	6	1
7:00 PM	0	21	83	0	0	0	91	15	0	0	0	0	0	15	0	46	271	965	0	0	1	0
7:15 PM	0	21	67	0	0	0	96	6	0	0	0	0	0	14	0	35	239	903	1	0	0	0
7:30 PM	0	20	78	0	0	0	88	8	0	0	0	0	0	16	0	30	240	843	0	0	3	0
7:45 PM	0	10	72	0	0	0	78	8	0	0	0	0	0	19	0	28	215	792	0	0	4	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	95	384	0	0	0	478	52	0	0	0	0	0	64	0	161	1,234
Mediums	0	1	5	0	0	0	7	0	0	0	0	0	0	0	0	1	14
Total	0	96	390	0	0	0	485	52	0	0	0	0	0	64	0	162	1,249

All Traffic Data Services Inc.
(303) 216-2439
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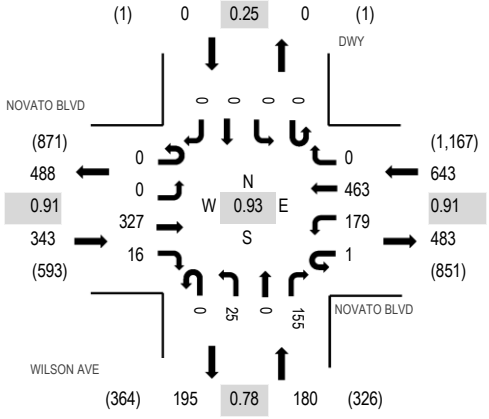
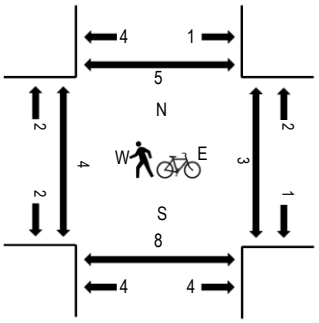
Location: 18 WILSON AVE & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				WILSON AVE Northbound				DWY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	0	78	2	0	38	139	0	0	10	0	48	0	0	0	0	315	1,166	2	0	0	2
6:15 PM	0	0	77	7	0	53	124	0	0	5	0	31	0	0	0	0	297	1,107	0	3	0	3
6:30 PM	0	0	83	2	0	48	101	0	0	7	0	37	0	0	0	0	278	1,047	2	0	4	0
6:45 PM	0	0	89	5	1	40	99	0	0	3	0	39	0	0	0	0	276	997	0	0	4	0
7:00 PM	0	0	68	2	1	44	98	0	0	4	0	38	0	1	0	0	256	921	0	1	0	1
7:15 PM	0	0	49	4	1	32	108	1	0	6	0	36	0	0	0	0	237	878	0	0	0	0
7:30 PM	0	0	67	2	1	42	83	0	0	4	0	29	0	0	0	0	228	816	0	0	1	0
7:45 PM	0	0	51	7	0	36	77	0	0	3	0	26	0	0	0	0	200	762	0	0	0	0

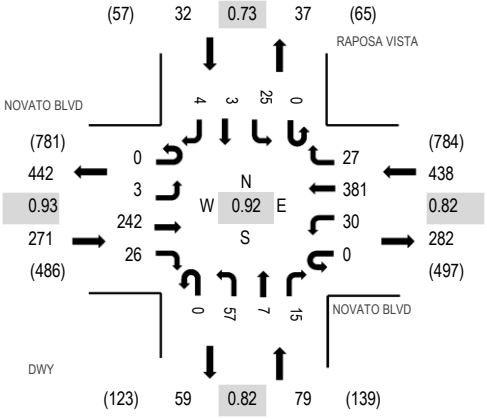
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	319	16	1	176	458	0	0	25	0	155	0	0	0	0	1,150
Mediums	0	0	7	0	0	3	5	0	0	0	0	0	0	0	0	0	15
Total	0	0	327	16	1	179	463	0	0	25	0	155	0	0	0	0	1,166

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

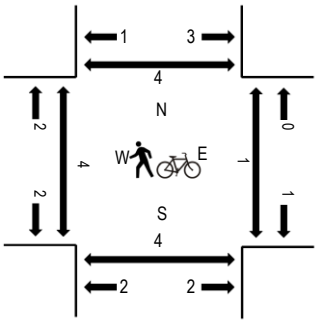
Location: 19 DWY & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				DWY Northbound				RAPOSA VISTA Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	1	55	7	0	12	113	8	0	17	3	4	0	3	1	0	224	820	0	0	0	0
6:15 PM	0	1	66	7	0	2	101	12	0	12	2	4	0	9	2	0	218	775	1	0	0	1
6:30 PM	0	1	55	8	0	9	83	3	0	16	2	3	0	6	0	2	188	728	0	0	0	0
6:45 PM	0	0	66	4	0	7	84	4	0	12	0	4	0	7	0	2	190	683	3	0	2	3
7:00 PM	0	1	53	12	0	12	83	2	0	7	0	6	0	3	0	0	179	646	0	2	0	2
7:15 PM	0	2	36	6	0	3	85	9	0	16	0	5	0	7	0	2	171	612	1	0	0	1
7:30 PM	0	1	42	9	0	4	65	2	0	9	0	4	0	6	1	0	143	566	0	0	1	1
7:45 PM	0	2	46	5	0	11	64	6	0	6	3	4	0	3	1	2	153	532	2	1	0	0

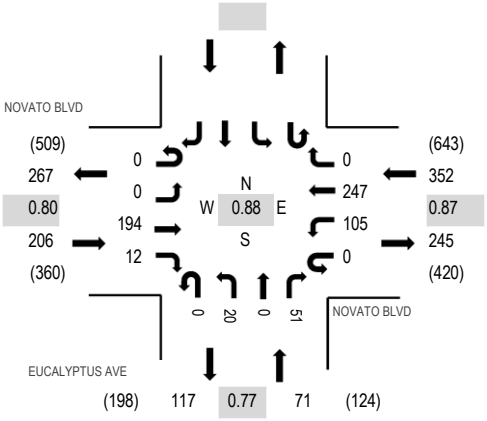
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	3	235	26	0	30	375	27	0	57	7	15	0	25	3	4	807
Mediums	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	12
Total	0	3	242	26	0	30	381	27	0	57	7	15	0	25	3	4	820

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

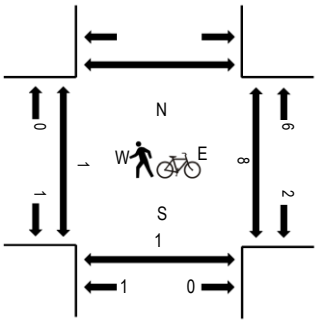
Location: 20 EUCALYPTUS AVE & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				EUCALYPTUS AVE Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:00 PM	0	0	60	2	0	33	68	0	0	5	0	11					179	629	0	1	0	
6:15 PM	0	0	37	3	0	24	70	0	0	7	0	16					157	591	1	2	1	
6:30 PM	0	0	39	1	0	25	56	0	0	6	0	6					133	570	0	4	0	
6:45 PM	0	0	58	6	0	23	53	0	0	2	0	18					160	554	0	0	0	
7:00 PM	0	0	47	1	0	14	66	0	0	8	0	5					141	498	0	0	2	
7:15 PM	0	0	30	4	0	19	66	0	0	6	0	11					136	464	0	1	0	
7:30 PM	0	0	31	2	0	20	48	0	0	5	0	11					117	423	0	0	0	
7:45 PM	0	0	37	2	0	19	39	0	0	4	0	3					104	391	0	0	0	

Peak Rolling Hour Flow Rates

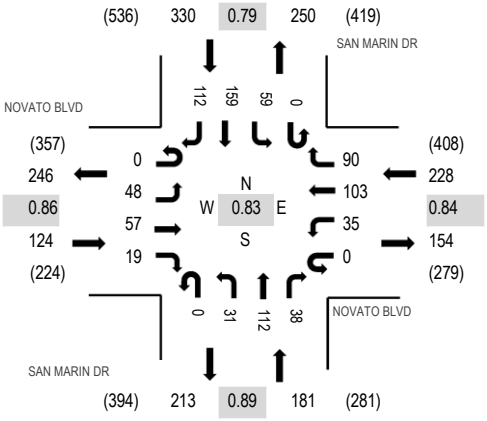
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0					0
Lights	0	0	189	12	0	105	241	0	0	20	0	51					618
Mediums	0	0	5	0	0	0	6	0	0	0	0	0					11
Total	0	0	194	12	0	105	247	0	0	20	0	51					629

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

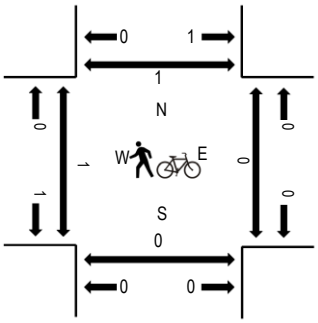
Location: 21 SAN MARIN DR & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 06:00 PM - 07:00 PM
Peak 15-Minutes: 06:00 PM - 06:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				SAN MARIN DR Northbound				SAN MARIN DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 PM	0	16	13	7	0	10	29	29	0	8	32	11	0	16	49	40	260	863	0	0	0	0
6:15 PM	0	10	13	5	0	8	28	16	0	8	32	7	0	15	41	32	215	784	0	0	0	1
6:30 PM	0	14	16	2	0	9	24	19	0	10	25	4	0	12	45	24	204	713	0	0	0	0
6:45 PM	0	8	15	5	0	8	22	26	0	5	23	16	0	16	24	16	184	652	1	0	0	0
7:00 PM	0	5	15	1	0	13	23	19	0	4	23	9	0	17	38	14	181	586	0	0	0	0
7:15 PM	0	10	16	2	1	12	20	20	0	4	13	3	0	5	35	3	144	527	0	0	0	0
7:30 PM	0	9	13	4	0	15	11	15	0	4	17	7	0	7	29	12	143	494	0	0	0	0
7:45 PM	0	12	10	3	0	9	7	15	0	0	11	5	0	17	20	9	118	451	0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	48	56	19	0	35	103	84	0	31	112	38	0	55	159	110	850
Mediums	0	0	1	0	0	0	0	6	0	0	0	0	0	4	0	2	13
Total	0	48	57	19	0	35	103	90	0	31	112	38	0	59	159	112	863

All Traffic Data Services Inc.

(303) 216-2439
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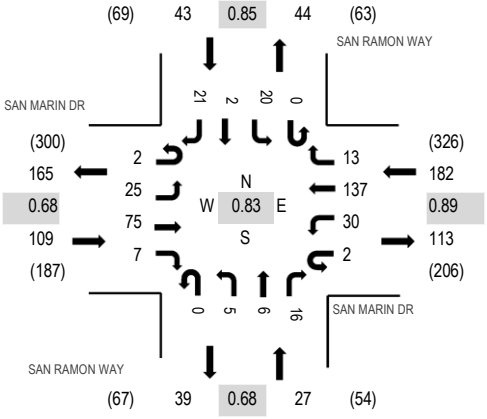
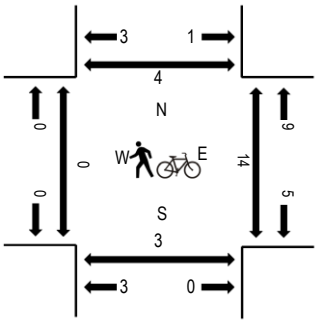
Location: 1 SAN RAMON WAY & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SAN RAMON WAY Northbound				SAN RAMON WAY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	10	27	3	1	11	31	4	0	3	3	4	0	4	1	7	109	361	0	2	0	2
8:15 PM	0	4	19	1	0	8	41	2	0	2	3	3	0	7	0	5	95	325	0	7	3	0
8:30 PM	0	3	17	1	1	3	31	2	0	0	0	2	0	5	1	5	71	303	0	1	0	1
8:45 PM	2	8	12	2	0	8	34	5	0	0	0	7	0	4	0	4	86	301	0	4	0	1
9:00 PM	1	0	14	1	0	3	30	4	0	2	1	4	0	7	0	6	73	275	0	0	0	0
9:15 PM	1	3	22	3	0	8	22	1	0	3	1	7	0	2	0	0	73		0	1	0	4
9:30 PM	1	2	13	1	0	6	34	3	0	3	0	2	0	2	1	1	69		0	0	0	0
9:45 PM	0	3	12	1	0	4	28	1	0	1	0	3	0	5	0	2	60		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	2	25	74	7	2	30	137	13	0	5	6	16	0	20	2	21	360
Mediums	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	2	25	75	7	2	30	137	13	0	5	6	16	0	20	2	21	361

All Traffic Data Services Inc.
(303) 216-2439
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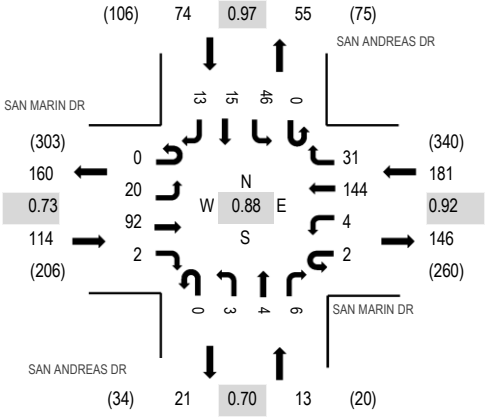
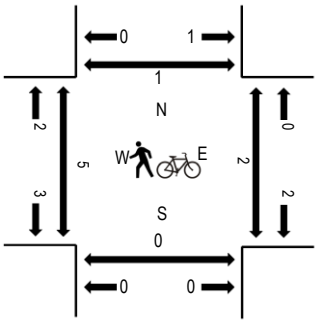
Location: 2 SAN ANDREAS DR & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SAN ANDREAS DR Northbound				SAN ANDREAS DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	8	30	1	0	2	37	10	0	0	2	1	0	9	7	2	109	382	1	0	0	0
8:15 PM	0	3	25	0	2	1	38	7	0	1	1	2	0	11	4	4	99	354	2	1	0	0
8:30 PM	0	3	22	1	0	0	32	9	0	0	1	0	0	13	2	3	86	328	2	0	0	0
8:45 PM	0	6	15	0	0	1	37	5	0	2	0	3	0	13	2	4	88	312	0	1	0	1
9:00 PM	0	2	24	0	0	1	32	3	0	0	2	2	0	11	2	2	81	290	0	0	0	0
9:15 PM	0	1	30	0	2	0	28	4	0	1	0	0	0	4	1	2	73		0	0	0	3
9:30 PM	0	1	17	0	0	2	40	2	0	0	0	2	0	4	0	2	70		0	0	0	0
9:45 PM	0	1	16	0	1	7	33	4	0	0	0	0	0	1	0	3	66		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	20	91	1	2	4	143	31	0	3	4	6	0	46	15	13	379
Mediums	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	3
Total	0	20	92	2	2	4	144	31	0	3	4	6	0	46	15	13	382

All Traffic Data Services Inc.
(303) 216-2439
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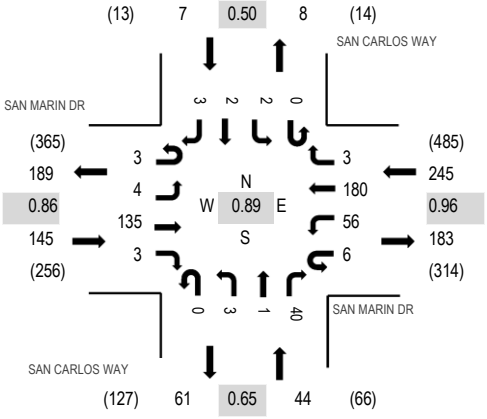
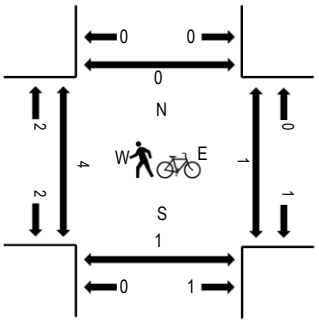
Location: 3 SAN CARLOS WAY & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SAN CARLOS WAY Northbound				SAN CARLOS WAY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	1	1	40	0	0	18	46	0	0	1	1	15	0	1	0	0	124	441	4	0	0	0
8:15 PM	1	0	32	1	3	14	45	1	0	0	0	10	0	0	0	2	109	413	0	1	1	0
8:30 PM	1	1	34	1	2	14	45	0	0	1	0	9	0	0	1	0	109	405	0	0	0	0
8:45 PM	0	2	29	1	1	10	44	2	0	1	0	6	0	1	1	1	99	389	0	0	0	0
9:00 PM	0	3	28	2	1	16	40	2	0	1	0	3	0	0	0	0	96	379	0	0	0	0
9:15 PM	0	1	34	1	0	17	41	0	0	0	0	6	0	1	0	0	101		0	1	0	1
9:30 PM	0	0	22	0	0	15	47	0	0	0	0	5	0	1	0	3	93		0	0	0	0
9:45 PM	0	0	20	0	4	15	42	0	0	1	0	6	0	0	0	1	89		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	3	4	134	3	6	56	180	3	0	2	1	40	0	2	2	3	439
Mediums	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
Total	3	4	135	3	6	56	180	3	0	3	1	40	0	2	2	3	441

All Traffic Data Services Inc.

(303) 216-2439
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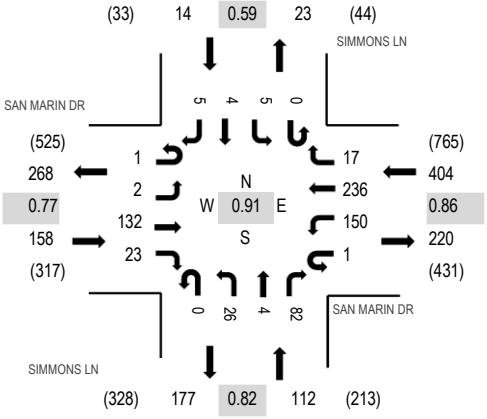
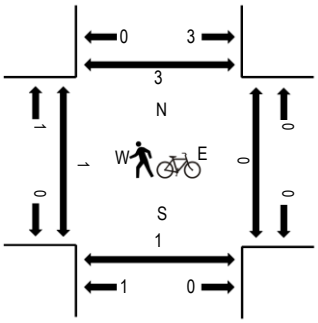
Location: 4 SIMMONS LN & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:15 PM - 09:15 PM
Peak 15-Minutes: 09:00 PM - 09:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SIMMONS LN Northbound				SIMMONS LN Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	2	46	11	0	29	56	3	0	10	2	18	0	3	4	1	185	685	0	0	0	0
8:15 PM	0	0	34	6	0	41	61	4	0	4	1	19	0	4	1	1	176	688	0	0	0	0
8:30 PM	1	0	41	7	0	33	59	2	0	8	2	24	0	0	2	1	180	660	1	0	0	3
8:45 PM	0	2	27	5	0	30	55	2	0	4	0	17	0	1	0	1	144	631	0	0	0	0
9:00 PM	0	0	30	5	1	46	61	9	0	10	1	22	0	0	1	2	188	643	0	0	1	0
9:15 PM	0	1	37	5	0	27	48	1	0	7	0	16	0	5	0	1	148		0	0	0	0
9:30 PM	0	0	25	2	0	34	57	2	0	6	4	17	0	2	1	1	151		0	0	0	0
9:45 PM	1	1	27	1	0	36	64	4	0	5	1	15	0	0	1	0	156		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	1	2	131	23	1	150	235	17	0	26	4	82	0	5	4	5	686
Mediums	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	2	132	23	1	150	236	17	0	26	4	82	0	5	4	5	688

All Traffic Data Services Inc.
(303) 216-2439
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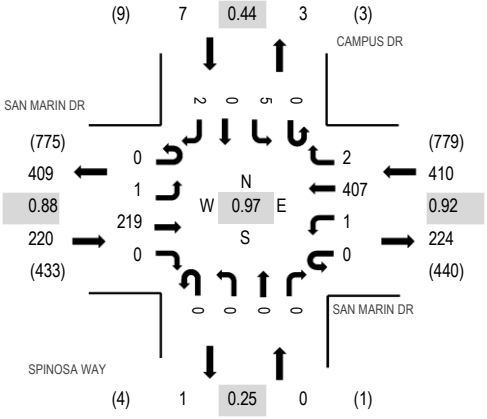
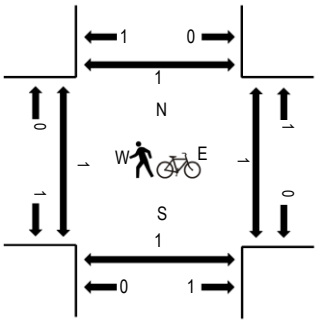
Location: 5 SPINOSA WAY & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:15 PM - 09:15 PM
Peak 15-Minutes: 08:15 PM - 08:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				SPINOSA WAY Northbound				CAMPUS DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	0	67	0	0	0	88	0	0	0	0	0	0	1	0	0	156	629	0	0	0	0
8:15 PM	0	0	58	0	0	0	106	0	0	0	0	0	0	0	0	0	164	637	0	1	0	1
8:30 PM	0	0	63	0	0	0	92	1	0	0	0	0	0	0	0	1	157	613	1	0	0	0
8:45 PM	0	0	49	0	0	1	97	1	0	0	0	0	0	3	0	1	152	599	0	0	0	0
9:00 PM	0	1	49	0	0	0	112	0	0	0	0	0	0	2	0	0	164	593	0	0	0	0
9:15 PM	0	0	60	0	0	2	78	0	0	0	0	0	0	0	0	0	140		0	0	0	0
9:30 PM	0	0	44	0	0	0	97	0	0	0	0	1	0	1	0	0	143		0	0	0	0
9:45 PM	0	0	42	0	0	1	103	0	0	0	0	0	0	0	0	0	146		0	0	1	0

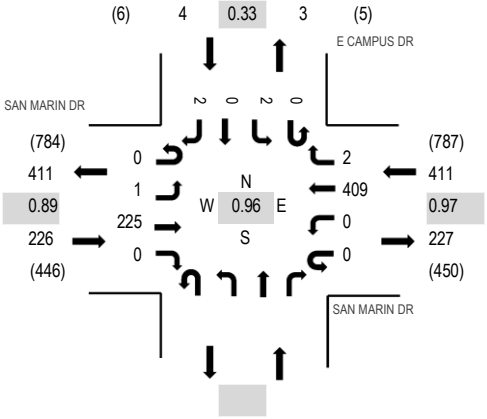
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	1	218	0	0	1	406	2	0	0	0	0	0	5	0	2	635
Mediums	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	219	0	0	1	407	2	0	0	0	0	0	5	0	2	637

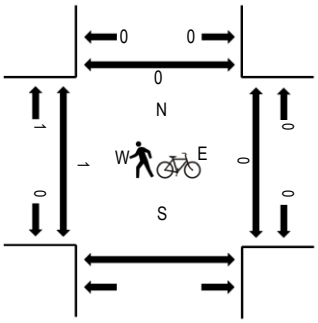
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 6 E CAMPUS DR & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:15 PM - 09:15 PM
Peak 15-Minutes: 08:30 PM - 08:45 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				Northbound				E CAMPUS DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	0	68	0	0	0	90	0					0	0	0	0	158	640	0	0		0
8:15 PM	0	0	60	0	0	0	101	0					0	0	0	1	162	641	1	0		0
8:30 PM	0	1	63	0	0	0	99	1					0	2	0	1	167	623	0	0		0
8:45 PM	0	0	49	0	0	0	104	0					0	0	0	0	153	603	0	0		0
9:00 PM	0	0	53	0	0	0	105	1					0	0	0	0	159	599	0	0		0
9:15 PM	0	0	60	0	0	0	82	1					0	1	0	0	144		0	0		0
9:30 PM	0	0	47	0	1	0	97	1					0	1	0	0	147		0	0		0
9:45 PM	0	0	45	0	0	0	104	0					0	0	0	0	149		0	0		0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0					0	0	0	0	1
Lights	0	1	224	0	0	0	408	2					0	2	0	2	639
Mediums	0	0	1	0	0	0	0	0					0	0	0	0	1
Total	0	1	225	0	0	0	409	2					0	2	0	2	641

All Traffic Data Services Inc.
(303) 216-2439
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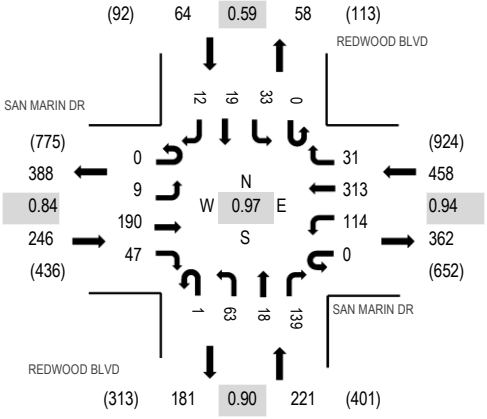
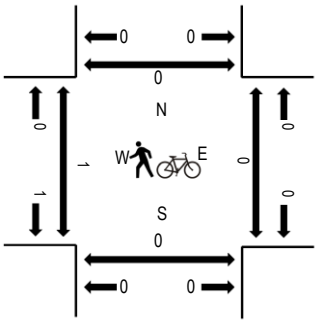
Location: 7 REDWOOD BLVD & SAN MARIN DR PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:30 PM - 08:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN MARIN DR Eastbound				SAN MARIN DR Westbound				REDWOOD BLVD Northbound				REDWOOD BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	5	52	16	0	27	77	5	0	11	3	37	0	6	4	1	244	989	0	0	0	0
8:15 PM	0	2	42	14	0	32	85	8	0	16	6	40	0	5	3	1	254	977	0	0	0	0
8:30 PM	0	2	51	9	0	27	74	13	0	20	4	28	0	15	6	6	255	926	0	0	0	0
8:45 PM	0	0	45	8	0	28	77	5	1	16	5	34	0	7	6	4	236	898	0	0	0	0
9:00 PM	0	2	37	10	0	22	96	5	0	14	5	34	0	3	3	1	232	864	0	0	0	0
9:15 PM	0	1	48	3	0	27	66	6	0	12	7	25	0	3	3	2	203		0	0	0	0
9:30 PM	0	2	43	8	0	24	89	10	0	7	5	32	0	6	1	0	227		0	0	0	0
9:45 PM	0	1	31	4	0	26	87	8	0	12	3	24	0	4	1	1	202		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	9	190	46	0	111	313	31	1	63	18	134	0	33	19	12	980
Mediums	0	0	0	1	0	3	0	0	0	0	0	5	0	0	0	0	9
Total	0	9	190	47	0	114	313	31	1	63	18	139	0	33	19	12	989

All Traffic Data Services Inc.

(303) 216-2439
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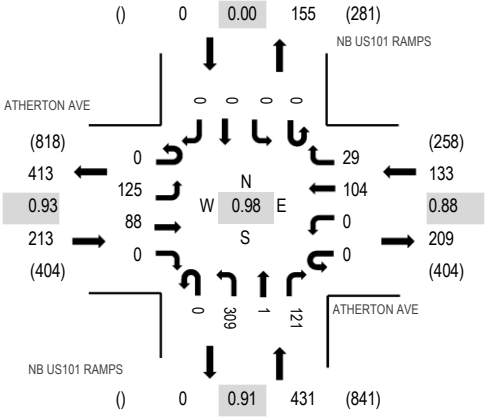
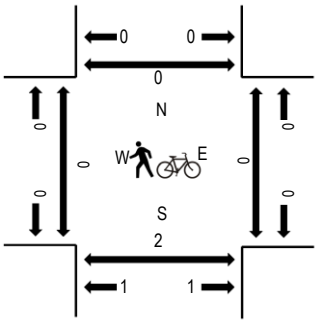
Location: 8 NB US101 RAMPS & ATHERTON AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:15 PM - 08:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	ATHERTON AVE Eastbound				ATHERTON AVE Westbound				NB US101 RAMPS Northbound				NB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	25	27	0	0	0	31	7	0	68	1	36	0	0	0	0	195	777	0	0	0	0
8:15 PM	0	36	15	0	0	0	26	4	0	85	0	33	0	0	0	0	199	753	0	0	0	0
8:30 PM	0	33	24	0	0	0	31	5	0	77	0	22	0	0	0	0	192	720	0	0	0	0
8:45 PM	0	31	22	0	0	0	16	13	0	79	0	30	0	0	0	0	191	745	0	0	1	0
9:00 PM	0	24	22	0	0	0	24	5	0	71	0	25	0	0	0	0	171	726	0	0	0	0
9:15 PM	0	25	23	0	0	0	27	5	0	66	0	20	0	0	0	0	166		0	0	1	0
9:30 PM	0	35	21	0	0	0	33	5	0	85	0	38	0	0	0	0	217		0	0	0	0
9:45 PM	0	23	18	0	0	0	22	4	0	77	0	28	0	0	0	0	172		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	121	88	0	0	0	104	29	0	309	1	121	0	0	0	0	773
Mediums	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	125	88	0	0	0	104	29	0	309	1	121	0	0	0	0	777

All Traffic Data Services Inc.
(303) 216-2439
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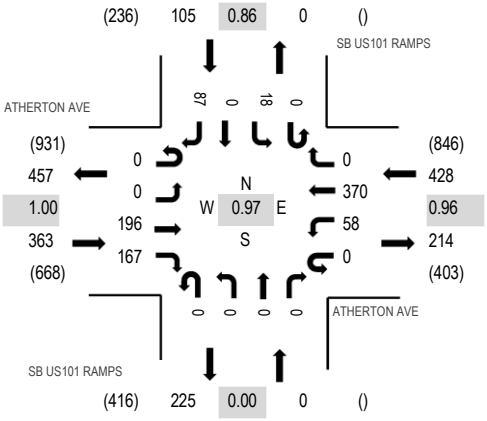
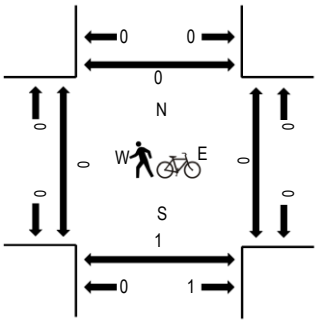
Location: 9 SB US101 RAMPS & ATHERTON AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:15 PM - 08:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	ATHERTON AVE Eastbound				ATHERTON AVE Westbound				SB US101 RAMPS Northbound				SB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	0	43	48	0	17	88	0	0	0	0	0	0	7	0	21	224	896	0	0	0	0
8:15 PM	0	0	46	45	0	18	93	0	0	0	0	0	0	5	0	25	232	874	0	0	0	0
8:30 PM	0	0	50	40	0	15	92	0	0	0	0	0	0	3	0	22	222	852	0	0	0	0
8:45 PM	0	0	57	34	0	8	97	0	0	0	0	0	0	3	0	19	218	858	0	0	1	0
9:00 PM	0	0	38	39	0	7	86	0	0	0	0	0	0	5	0	27	202	854	0	0	0	0
9:15 PM	0	0	41	41	0	13	84	0	0	0	0	0	0	8	0	23	210		0	0	1	0
9:30 PM	0	0	41	35	0	13	109	0	0	0	0	0	0	8	2	20	228		0	0	0	0
9:45 PM	0	0	37	33	0	8	98	0	0	0	0	0	0	11	0	27	214		0	0	0	0

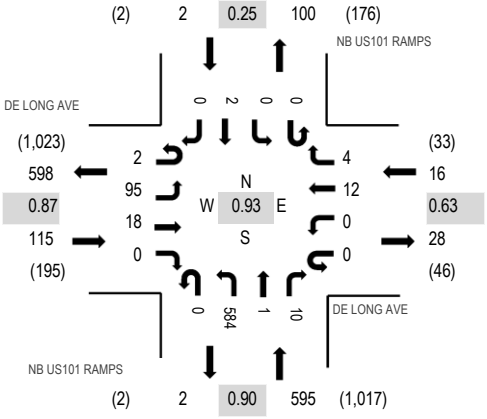
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	192	166	0	58	370	0	0	0	0	0	0	18	0	85	889
Mediums	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	2	6
Total	0	0	196	167	0	58	370	0	0	0	0	0	0	18	0	87	896

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

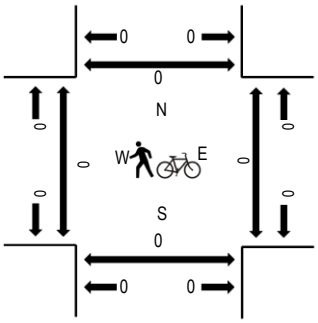
Location: 10 NB US101 RAMPS & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DE LONG AVE Eastbound				DE LONG AVE Westbound				NB US101 RAMPS Northbound				NB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	1	21	2	0	0	0	3	3	0	160	0	5	0	0	0	0	195	728	0	0	0	0
8:15 PM	1	28	2	0	0	0	3	0	0	142	0	2	0	0	2	0	180	673	0	0	0	0
8:30 PM	0	28	5	0	0	0	2	1	0	142	0	2	0	0	0	0	180	657	0	0	0	0
8:45 PM	0	18	9	0	0	0	4	0	0	140	1	1	0	0	0	0	173	592	0	0	0	0
9:00 PM	0	11	2	0	0	0	7	1	0	119	0	0	0	0	0	0	140	519	0	0	0	1
9:15 PM	1	25	4	0	0	0	2	1	0	126	0	5	0	0	0	0	164		0	0	0	0
9:30 PM	0	19	2	0	0	0	1	4	0	87	0	2	0	0	0	0	115		0	0	0	0
9:45 PM	0	13	3	0	0	0	1	0	0	81	2	0	0	0	0	0	100		0	1	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	2	95	18	0	0	0	12	4	0	578	1	10	0	0	2	0	722
Mediums	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
Total	2	95	18	0	0	0	12	4	0	584	1	10	0	0	2	0	728

All Traffic Data Services Inc.

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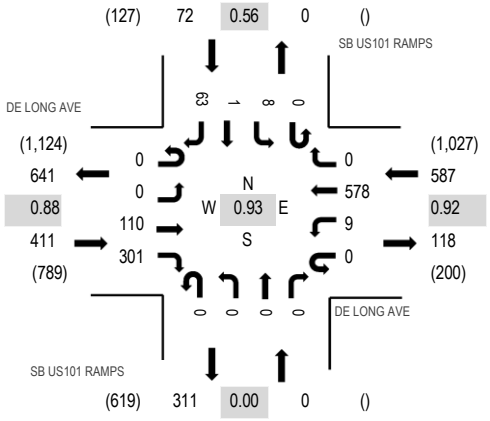
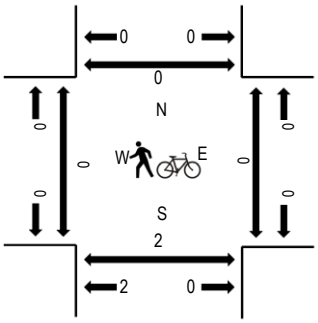
Location: 11 SB US101 RAMPS & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DE LONG AVE Eastbound				DE LONG AVE Westbound				SB US101 RAMPS Northbound				SB US101 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	0	26	91	0	3	156	0	0	0	0	0	0	1	0	12	289	1,070	0	0	0	0
8:15 PM	0	0	29	86	0	5	138	0	0	0	0	0	0	0	1	11	270	1,002	0	0	0	0
8:30 PM	0	0	33	67	0	0	140	0	0	0	0	0	0	3	0	29	272	992	0	0	2	0
8:45 PM	0	0	22	57	0	1	144	0	0	0	0	0	0	4	0	11	239	929	0	0	0	0
9:00 PM	0	0	14	70	0	5	122	0	0	0	0	0	0	0	0	10	221	873	0	0	0	1
9:15 PM	0	0	27	81	0	2	135	0	0	0	0	0	0	1	0	14	260		0	0	0	0
9:30 PM	0	0	20	84	0	2	87	0	0	0	0	0	0	2	0	14	209		0	0	0	0
9:45 PM	0	0	18	64	0	0	87	0	0	0	0	0	0	0	0	14	183		0	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	1	4
Lights	0	0	108	296	0	9	573	0	0	0	0	0	0	8	1	62	1,057
Mediums	0	0	2	4	0	0	3	0	0	0	0	0	0	0	0	0	9
Total	0	0	110	301	0	9	578	0	0	0	0	0	0	8	1	63	1,070

All Traffic Data Services Inc.

(303) 216-2439
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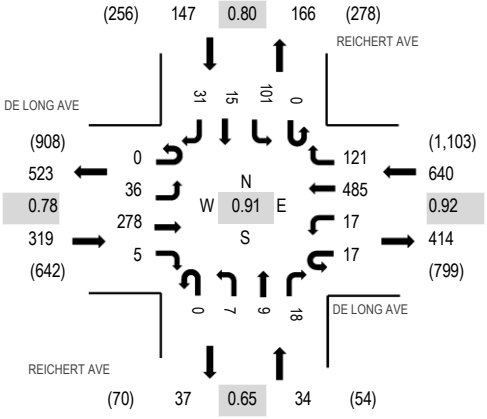
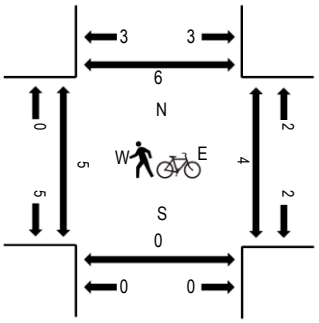
Location: 12 REICHERT AVE & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DE LONG AVE Eastbound				DE LONG AVE Westbound				REICHERT AVE Northbound				REICHERT AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	7	75	2	5	2	134	32	0	0	3	7	0	27	9	10	313	1,140	0	0	0	1
8:15 PM	0	11	77	1	6	6	105	25	0	3	1	2	0	36	1	9	283	1,053	0	0	0	4
8:30 PM	0	8	72	1	3	8	123	39	0	2	4	7	0	18	1	7	293	1,047	3	1	0	1
8:45 PM	0	10	54	1	3	1	123	25	0	2	1	2	0	20	4	5	251	983	2	3	0	0
9:00 PM	0	4	57	1	1	4	102	22	0	1	0	3	0	24	2	5	226	915	0	3	0	1
9:15 PM	0	10	92	2	2	4	111	22	0	2	2	5	0	14	5	6	277		0	0	0	0
9:30 PM	0	7	80	3	1	3	79	21	0	1	1	2	0	23	2	6	229		0	1	1	0
9:45 PM	0	5	60	2	0	5	70	16	0	1	2	0	0	21	0	1	183		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
Lights	0	36	273	5	17	17	479	121	0	7	9	18	0	100	15	31	1,128
Mediums	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	10
Total	0	36	278	5	17	17	485	121	0	7	9	18	0	101	15	31	1,140

All Traffic Data Services Inc.
(303) 216-2439
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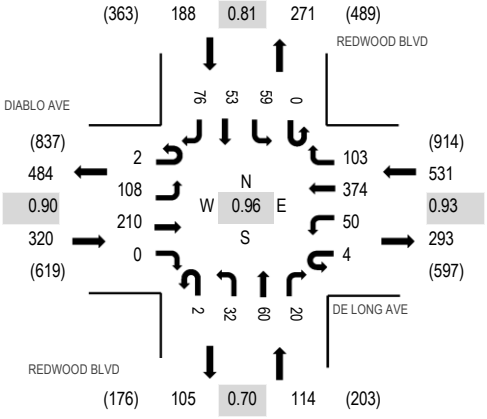
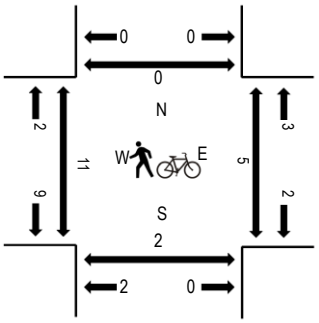
Location: 13 REDWOOD BLVD & DE LONG AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DIABLO AVE Eastbound				DE LONG AVE Westbound				REDWOOD BLVD Northbound				REDWOOD BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	1	31	57	0	3	7	102	31	0	6	16	2	0	9	12	24	301	1,153	0	0	0	0
8:15 PM	0	27	56	0	1	15	94	23	0	4	13	5	0	17	18	23	296	1,088	3	2	0	0
8:30 PM	0	27	47	0	0	15	73	25	1	10	20	11	0	20	9	16	274	1,068	1	1	0	0
8:45 PM	1	23	50	0	0	13	105	24	1	12	11	2	0	13	14	13	282	1,026	6	2	2	0
9:00 PM	0	21	40	0	2	9	73	23	0	8	12	3	0	14	12	19	236	946	4	0	2	0
9:15 PM	0	17	73	0	1	4	77	22	0	8	17	2	0	21	15	19	276		5	0	0	1
9:30 PM	0	20	63	0	1	9	60	22	0	7	8	2	0	18	9	13	232		2	0	0	1
9:45 PM	0	20	45	0	3	1	55	21	0	4	15	3	0	13	12	10	202		5	0	4	1

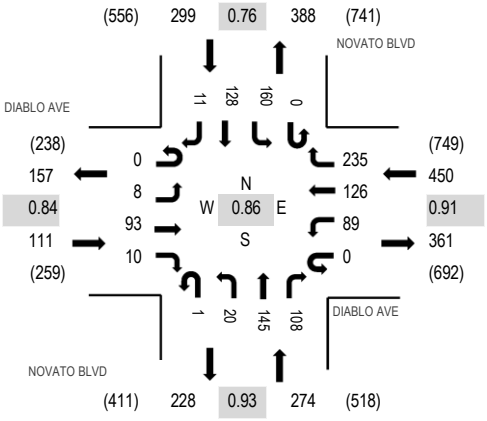
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
Lights	2	107	209	0	4	50	372	99	2	32	60	20	0	54	53	76	1,140
Mediums	0	1	1	0	0	0	1	2	0	0	0	0	0	5	0	0	10
Total	2	108	210	0	4	50	374	103	2	32	60	20	0	59	53	76	1,153

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

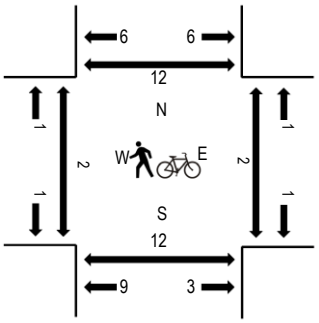
Location: 14 NOVATO BLVD & DIABLO AVE PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DIABLO AVE Eastbound				DIABLO AVE Westbound				NOVATO BLVD Northbound				NOVATO BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	4	29	5	0	26	32	66	0	6	40	23	0	54	40	5	330	1,134	0	0	3	4
8:15 PM	0	2	19	1	0	17	40	57	0	6	33	34	0	33	26	2	270	1,076	0	0	1	0
8:30 PM	0	1	20	1	0	27	19	42	1	3	32	24	0	43	30	2	245	1,048	0	2	3	5
8:45 PM	0	1	25	3	0	19	35	70	0	5	40	27	0	30	32	2	289	1,040	1	0	4	0
9:00 PM	0	4	23	3	0	21	19	54	0	9	44	22	0	36	31	6	272	948	0	1	1	0
9:15 PM	0	5	30	9	0	17	13	54	0	5	31	18	0	41	18	1	242		4	0	0	2
9:30 PM	0	5	29	1	0	16	10	43	0	4	42	18	0	39	26	4	237		0	0	1	3
9:45 PM	0	4	32	3	0	10	6	36	0	2	31	18	0	25	28	2	197		5	2	2	2

Peak Rolling Hour Flow Rates

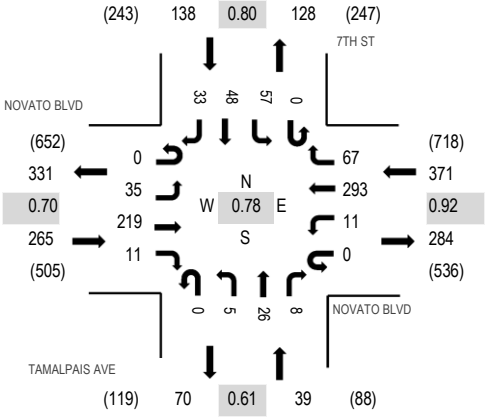
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	8	93	10	0	87	126	233	1	20	144	107	0	160	128	11	1,128
Mediums	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	6
Total	0	8	93	10	0	89	126	235	1	20	145	108	0	160	128	11	1,134

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

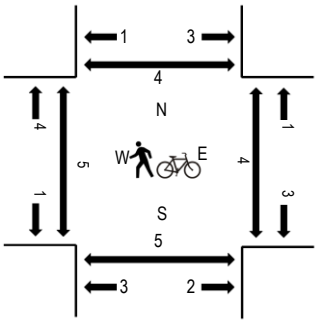
Location: 15 TAMALPAIS AVE & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				TAMALPAIS AVE Northbound				7TH ST Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	13	77	5	0	3	87	20	0	1	8	5	0	17	10	16	262	813	0	1	2	2
8:15 PM	0	4	38	1	0	3	67	15	0	1	7	1	0	14	14	3	168	762	2	0	0	0
8:30 PM	0	8	54	2	0	3	51	19	0	1	4	1	0	14	7	9	173	791	2	0	0	0
8:45 PM	0	10	50	3	0	2	88	13	0	2	7	1	0	12	17	5	210	794	0	0	0	0
9:00 PM	0	12	55	4	0	2	75	21	0	4	7	1	0	15	8	7	211	741	1	2	0	0
9:15 PM	0	6	46	5	0	2	76	12	0	8	10	2	0	17	4	9	197		4	2	0	2
9:30 PM	0	7	54	0	0	3	73	12	0	1	4	0	0	6	10	6	176		0	2	0	0
9:45 PM	0	8	41	2	0	3	54	14	0	3	6	3	0	12	6	5	157		0	3	0	0

Peak Rolling Hour Flow Rates

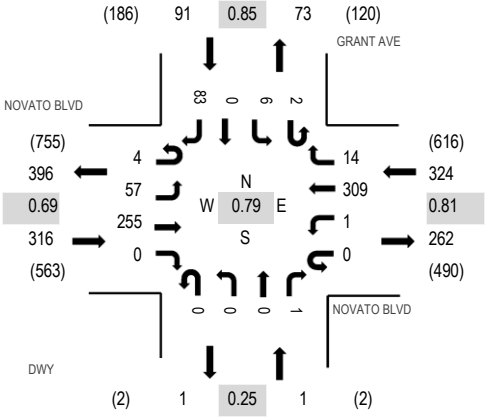
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	34	219	11	0	11	292	67	0	5	25	8	0	57	48	33	810
Mediums	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
Total	0	35	219	11	0	11	293	67	0	5	26	8	0	57	48	33	813

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

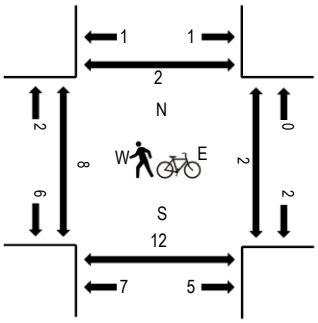
Location: 16 DWY & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				DWY Northbound				GRANT AVE Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
8:00 PM	2	18	94	0	0	0	95	5	0	0	0	0	1	2	0	14	231	732	3	1	1	0
8:15 PM	1	14	40	0	0	0	73	0	0	0	0	0	0	0	0	24	152	670	2	0	5	0
8:30 PM	0	16	59	0	0	1	57	5	0	0	0	1	0	2	0	27	168	697	0	0	1	1
8:45 PM	1	9	62	0	0	0	84	4	0	0	0	0	1	2	0	18	181	687	3	1	3	1
9:00 PM	0	5	64	0	0	0	73	4	0	0	0	0	0	4	0	19	169	635	2	0	0	1
9:15 PM	1	9	53	0	0	0	86	4	0	0	0	0	0	4	0	22	179		0	0	0	0
9:30 PM	2	14	45	0	0	0	67	1	0	0	0	1	0	8	0	20	158		1	0	0	0
9:45 PM	0	9	45	0	0	1	55	1	0	0	0	0	0	4	0	14	129		1	0	2	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	4	57	254	0	0	1	308	14	0	0	0	1	2	6	0	83	730
Mediums	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Total	4	57	255	0	0	1	309	14	0	0	0	1	2	6	0	83	732

All Traffic Data Services Inc.

(303) 216-2439
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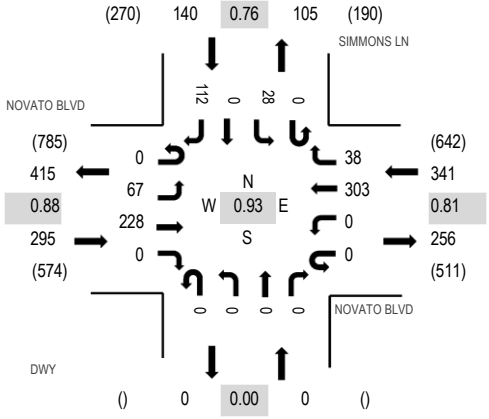
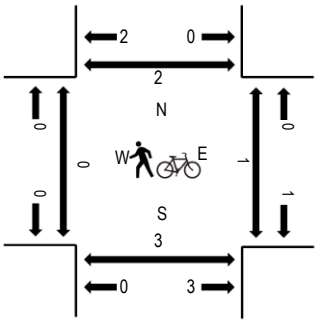
Location: 17 DWY & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:30 PM - 09:30 PM
Peak 15-Minutes: 09:15 PM - 09:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				DWY Northbound				SIMMONS LN Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	13	76	0	0	0	78	11	0	0	0	0	0	6	0	25	209	760	0	0	3	0
8:15 PM	0	14	55	0	0	0	67	2	0	0	0	0	0	12	0	29	179	747	0	1	2	0
8:30 PM	0	17	64	0	0	0	67	10	0	0	0	0	0	5	0	26	189	776	0	1	2	2
8:45 PM	0	16	59	0	0	0	73	10	0	0	0	0	0	1	0	24	183	765	0	0	0	0
9:00 PM	0	19	55	0	0	0	66	8	0	0	0	0	0	16	0	32	196	726	0	0	0	0
9:15 PM	0	15	50	0	0	0	97	10	0	0	0	0	0	6	0	30	208		0	0	0	0
9:30 PM	0	14	51	0	0	0	71	11	0	0	0	0	0	5	0	26	178		0	1	3	0
9:45 PM	0	12	44	0	0	0	53	8	0	0	0	0	0	6	0	21	144		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	67	228	0	0	0	302	38	0	0	0	0	0	28	0	112	775
Mediums	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	67	228	0	0	0	303	38	0	0	0	0	0	28	0	112	776

All Traffic Data Services Inc.

(303) 216-2439
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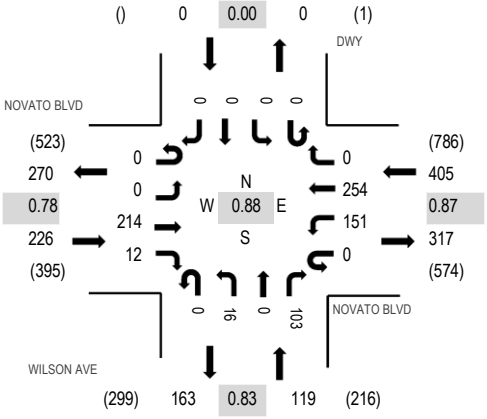
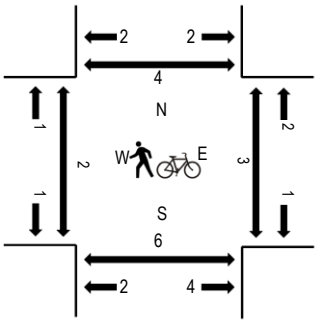
Location: 18 WILSON AVE & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				WILSON AVE Northbound				DWY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	0	66	6	0	36	74	0	0	6	0	25	0	0	0	0	213	750	1	1	0	0
8:15 PM	0	0	48	4	0	46	53	0	0	4	0	20	0	0	0	0	175	708	1	1	2	0
8:30 PM	0	0	50	0	0	34	62	0	0	0	0	28	0	0	0	0	174	723	0	0	2	2
8:45 PM	0	0	50	2	0	35	65	0	0	6	0	30	0	0	0	0	188	706	0	1	0	1
9:00 PM	0	0	46	3	2	41	56	0	0	0	0	23	0	0	0	0	171	647	0	1	1	3
9:15 PM	0	0	44	2	0	47	71	1	0	3	0	22	0	0	0	0	190		0	0	0	0
9:30 PM	0	0	36	1	0	19	72	0	0	1	0	28	0	0	0	0	157		0	1	0	3
9:45 PM	0	0	37	0	0	23	49	0	0	1	0	19	0	0	0	0	129		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	213	12	0	151	253	0	0	16	0	103	0	0	0	0	748
Mediums	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Total	0	0	214	12	0	151	254	0	0	16	0	103	0	0	0	0	750

All Traffic Data Services Inc.

(303) 216-2439
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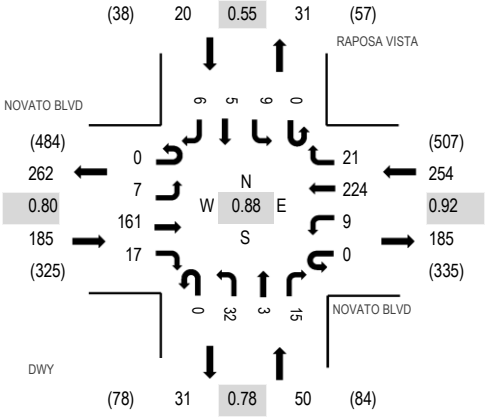
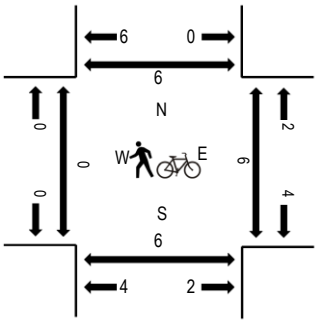
Location: 19 DWY & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				DWY Northbound				RAPOSA VISTA Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
8:00 PM	0	3	51	4	0	0	60	10	0	11	0	4	0	1	0	1	145	509	0	2	0	2
8:15 PM	0	1	36	6	0	4	52	4	0	8	0	4	0	6	3	1	125	466	0	2	2	0
8:30 PM	0	0	42	3	0	2	51	0	0	3	2	2	0	1	1	2	109	465	0	0	2	4
8:45 PM	0	3	32	4	0	3	61	7	0	10	1	5	0	1	1	2	130	473	0	2	2	0
9:00 PM	0	0	28	7	0	6	42	7	0	6	0	2	0	4	0	0	102	445	0	0	0	1
9:15 PM	0	2	40	2	0	4	61	5	0	3	0	2	0	5	0	0	124		0	0	0	0
9:30 PM	0	0	27	2	0	9	57	7	0	6	0	3	0	2	2	2	117		3	0	0	0
9:45 PM	0	1	29	2	0	12	39	4	0	6	0	6	0	2	1	0	102		0	3	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	7	160	17	0	9	223	21	0	32	3	15	0	9	5	6	507
Mediums	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Total	0	7	161	17	0	9	224	21	0	32	3	15	0	9	5	6	509

All Traffic Data Services Inc.
(303) 216-2439
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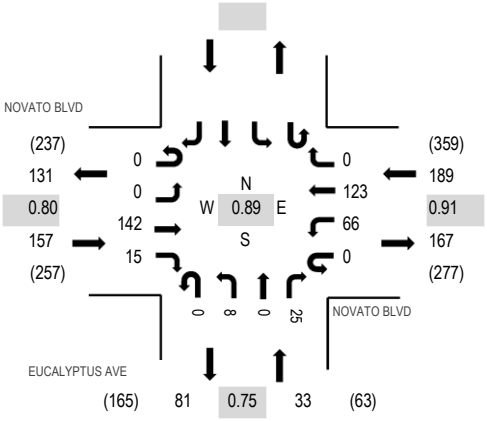
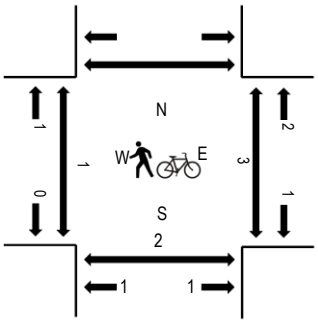
Location: 20 EUCALYPTUS AVE & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				EUCALYPTUS AVE Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
8:00 PM	0	0	46	3	0	25	27	0	0	1	0	5					107	379	0	0	0	
8:15 PM	0	0	35	4	0	8	38	0	0	2	0	8					95	349	0	0	2	
8:30 PM	0	0	32	5	0	16	26	0	0	2	0	4					85	324	1	1	0	
8:45 PM	0	0	29	3	0	17	32	0	0	3	0	8					92	319	0	1	0	
9:00 PM	0	0	28	1	0	19	21	0	0	1	0	7					77	300	0	0	0	
9:15 PM	0	0	20	3	0	17	25	0	0	2	0	3					70		0	2	0	
9:30 PM	0	0	17	0	0	23	28	0	0	5	0	7					80		0	0	0	
9:45 PM	0	0	25	6	0	14	23	0	1	1	0	3					73		0	0	0	

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0					0
Lights	0	0	141	15	0	66	122	0	0	8	0	25					377
Mediums	0	0	1	0	0	0	1	0	0	0	0	0					2
Total	0	0	142	15	0	66	123	0	0	8	0	25					379

All Traffic Data Services Inc.

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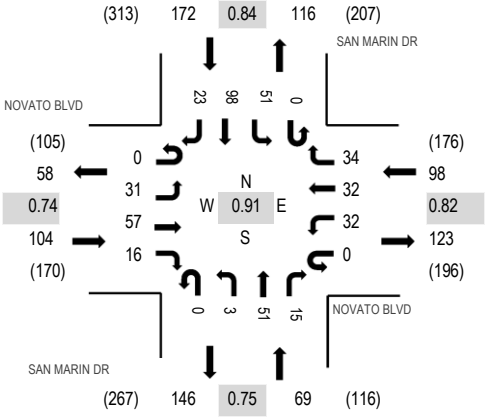
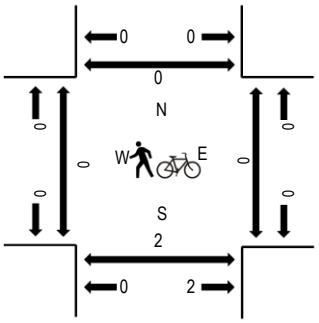
Location: 21 SAN MARIN DR & NOVATO BLVD PM
Date and Start Time: Friday, June 24, 2016
Peak Hour: 08:00 PM - 09:00 PM
Peak 15-Minutes: 08:00 PM - 08:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



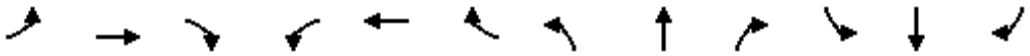
Traffic Counts

Interval Start Time	NOVATO BLVD Eastbound				NOVATO BLVD Westbound				SAN MARIN DR Northbound				SAN MARIN DR Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
8:00 PM	0	11	20	4	0	9	9	6	0	0	18	5	0	13	19	8	122	443	0	0	0	0
8:15 PM	0	7	8	4	0	9	11	10	0	0	9	2	0	18	27	6	111	409	0	0	0	0
8:30 PM	0	9	18	4	0	5	5	9	0	0	14	1	0	9	20	6	100	383	0	0	0	0
8:45 PM	0	4	11	4	0	9	7	9	0	3	10	7	0	11	32	3	110	364	0	0	0	0
9:00 PM	0	6	8	3	0	6	4	10	0	0	11	2	0	10	21	7	88	332	1	0	0	0
9:15 PM	0	11	6	1	0	6	6	12	0	1	8	7	0	4	18	5	85		0	0	0	0
9:30 PM	0	8	5	0	0	9	6	4	0	2	5	2	0	7	22	11	81		0	0	0	0
9:45 PM	0	5	11	2	0	10	1	4	0	0	7	2	0	9	23	4	78		0	0	0	0

Peak Rolling Hour Flow Rates

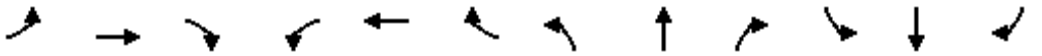
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	31	57	15	0	32	32	33	0	3	51	15	0	51	98	23	441
Mediums	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
Total	0	31	57	16	0	32	32	34	0	3	51	15	0	51	98	23	443

Appendix B
LOS Calculations



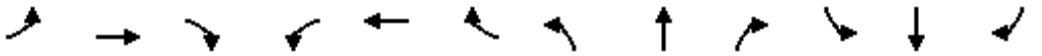
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	179	0	0	230	36	502	3	133	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	449	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	195	0	0	250	39	546	3	145	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	76	0	0	0
Lane Group Flow (vph)	179	195	0	0	250	6	273	276	69	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	32.2	46.5			10.4	10.4	14.7	14.7	14.7			
Effective Green, g (s)	32.2	46.5			10.4	10.4	14.7	14.7	14.7			
Actuated g/C Ratio	0.46	0.67			0.15	0.15	0.21	0.21	0.21			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	207	1244			528	236	355	356	334			
v/s Ratio Prot		0.10			c0.07							
v/s Ratio Perm	c0.40					0.00	0.16	0.16	0.04			
v/c Ratio	0.86	0.16			0.47	0.02	0.77	0.78	0.21			
Uniform Delay, d1	16.7	4.3			27.1	25.3	25.9	25.9	22.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	28.4	0.1			0.9	0.1	9.2	9.7	0.2			
Delay (s)	45.1	4.4			28.0	25.3	35.1	35.6	22.9			
Level of Service	D	A			C	C	D	D	C			
Approach Delay (s)		23.9			27.6			32.8			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	69.6	Sum of lost time (s)	12.3
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



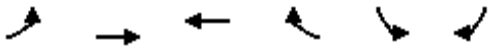
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	311	367	103	618	0	0	0	0	44	4	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1781	2787
Flt Permitted		1.00	1.00	0.27	1.00						0.96	1.00
Satd. Flow (perm)		3539	1583	497	3539						1781	2787
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	334	395	111	665	0	0	0	0	47	4	200
RTOR Reduction (vph)	0	0	302	0	0	0	0	0	0	0	0	172
Lane Group Flow (vph)	0	334	93	111	665	0	0	0	0	0	51	28
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		10.2	10.2	15.0	27.8						6.0	6.0
Effective Green, g (s)		10.2	10.2	15.0	27.8						6.0	6.0
Actuated g/C Ratio		0.24	0.24	0.35	0.65						0.14	0.14
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		837	374	172	2282						247	387
v/s Ratio Prot		c0.09			0.19							
v/s Ratio Perm			0.06	c0.22							0.03	0.01
v/c Ratio		0.40	0.25	0.65	0.29						0.21	0.07
Uniform Delay, d1		13.9	13.3	11.8	3.3						16.4	16.1
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.4	0.5	6.1	0.1						0.2	0.0
Delay (s)		14.3	13.8	17.9	3.4						16.6	16.2
Level of Service		B	B	B	A						B	B
Approach Delay (s)		14.0			5.5			0.0			16.2	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



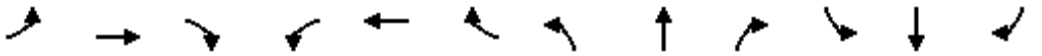
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	318	85	196	568	34	118	32	257	75	39	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4925		1770	5042		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4925		1770	5042		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	346	92	213	617	37	128	35	279	82	42	15
RTOR Reduction (vph)	0	38	0	0	3	0	0	0	253	0	0	14
Lane Group Flow (vph)	22	400	0	213	651	0	128	35	26	82	42	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.6	17.7		15.8	32.9		5.3	5.3	5.3	4.6	4.6	4.6
Effective Green, g (s)	1.6	17.7		15.8	32.9		5.3	5.3	5.3	4.6	4.6	4.6
Actuated g/C Ratio	0.03	0.31		0.28	0.58		0.09	0.09	0.09	0.08	0.08	0.08
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	50	1545		495	2941		322	175	148	144	151	129
v/s Ratio Prot	0.01	0.08		c0.12	c0.13		c0.04	0.02		c0.05	0.02	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.44	0.26		0.43	0.22		0.40	0.20	0.18	0.57	0.28	0.01
Uniform Delay, d1	27.0	14.5		16.6	5.6		24.0	23.6	23.5	24.9	24.3	23.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.4	0.1		0.6	0.1		0.3	0.2	0.2	3.1	0.4	0.0
Delay (s)	39.4	14.6		17.2	5.7		24.3	23.8	23.8	28.0	24.7	23.8
Level of Service	D	B		B	A		C	C	C	C	C	C
Approach Delay (s)		15.8			8.5			23.9			26.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	56.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



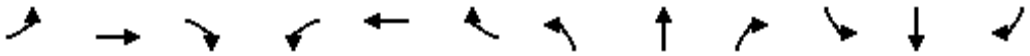
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	425	716	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3		4.3
Lane Util. Factor	1.00	0.95	0.95	1.00		1.00
Frt	1.00	1.00	1.00	0.85		0.85
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1770	3539	3539	1583		1583
Flt Permitted	0.43	1.00	1.00	1.00		1.00
Satd. Flow (perm)	801	3539	3539	1583		1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1	467	787	1	0	1
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	467	787	0	0	0
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	9.3	9.3	15.3	15.3		15.3
Effective Green, g (s)	9.3	9.3	15.3	15.3		15.3
Actuated g/C Ratio	0.29	0.29	0.48	0.48		0.48
Clearance Time (s)	3.0	3.0	4.3	4.3		4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5		3.5
Lane Grp Cap (vph)	233	1031	1697	759		759
v/s Ratio Prot		c0.13	c0.22			
v/s Ratio Perm	0.00			0.00		0.00
v/c Ratio	0.00	0.45	0.46	0.00		0.00
Uniform Delay, d1	8.0	9.2	5.6	4.3		4.3
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.0	0.1	0.2	0.0		0.0
Delay (s)	8.0	9.3	5.8	4.3		4.3
Level of Service	A	A	A	A		A
Approach Delay (s)		9.3	5.8		4.3	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	31.9	Sum of lost time (s)	10.8
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	394	1	5	674	1	1	0	2	11	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.95	1.00
Satd. Flow (prot)	1770	3538		1770	3539	1583		1667		1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	1.00
Satd. Flow (perm)	1770	3538		1770	3539	1583		1695		1770	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1	424	1	5	725	1	1	0	2	12	0	6
RTOR Reduction (vph)	0	0	0	0	0	1	0	3	0	0	0	6
Lane Group Flow (vph)	1	425	0	5	725	0	0	0	0	6	6	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.5	11.8		0.8	12.1	12.1		0.5		0.5	0.5	0.5
Effective Green, g (s)	0.5	11.8		0.8	12.1	12.1		0.5		0.5	0.5	0.5
Actuated g/C Ratio	0.02	0.47		0.03	0.48	0.48		0.02		0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	35	1663		56	1706	763		33		35	35	31
v/s Ratio Prot	0.00	0.12		c0.00	c0.20							
v/s Ratio Perm						0.00		0.00		c0.00	0.00	0.00
v/c Ratio	0.03	0.26		0.09	0.42	0.00		0.00		0.17	0.17	0.00
Uniform Delay, d1	12.1	4.0		11.8	4.2	3.4		12.1		12.1	12.1	12.1
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.3	0.2	0.0		0.0		0.8	0.8	0.0
Delay (s)	12.2	4.1		12.0	4.5	3.4		12.1		12.9	12.9	12.1
Level of Service	B	A		B	A	A		B		B	B	B
Approach Delay (s)		4.1			4.5			12.1			12.7	
Approach LOS		A			A			B			B	

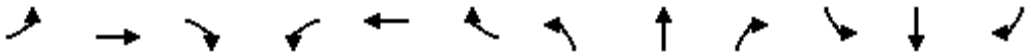
Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	25.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	252	7	97	398	5	7	0	60	8	0	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	11	300	8	115	474	6	8	0	71	10	0	6

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	161	158	352	243	80	15
Volume Left (vph)	11	0	115	0	8	10
Volume Right (vph)	0	8	0	6	71	6
Hadj (s)	0.07	0.00	0.20	0.02	-0.48	-0.07
Departure Headway (s)	5.4	5.4	5.3	5.1	5.3	5.8
Degree Utilization, x	0.24	0.24	0.52	0.34	0.12	0.03
Capacity (veh/h)	642	647	666	689	618	546
Control Delay (s)	9.0	8.8	12.6	9.6	9.0	9.0
Approach Delay (s)	8.9		11.4		9.0	9.0
Approach LOS	A		B		A	A

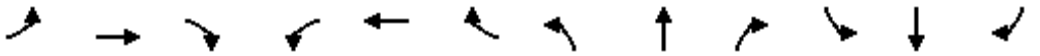
Intersection Summary				
Delay	10.4			
Level of Service	B			
Intersection Capacity Utilization	35.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	144	12	54	280	21	7	6	22	36	0	31
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
Hourly flow rate (vph)	77	173	14	65	337	25	8	7	27	43	0	37

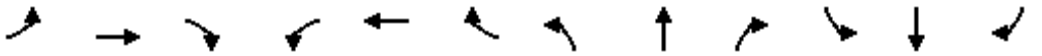
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	164	101	234	194	42	81
Volume Left (vph)	77	0	65	0	8	43
Volume Right (vph)	0	14	0	25	27	37
Hadj (s)	0.27	-0.07	0.17	-0.06	-0.30	-0.14
Departure Headway (s)	5.5	5.2	5.3	5.1	5.2	5.3
Degree Utilization, x	0.25	0.15	0.34	0.27	0.06	0.12
Capacity (veh/h)	621	664	660	691	615	610
Control Delay (s)	9.2	7.9	9.8	8.7	8.6	9.1
Approach Delay (s)	8.7		9.3		8.6	9.1
Approach LOS	A		A		A	A

Intersection Summary				
Delay	9.1			
Level of Service	A			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A	
Analysis Period (min)	15			



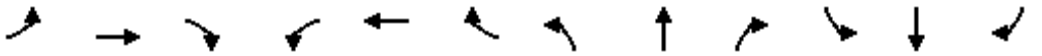
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	17	0	0	31	3	895	3	14	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3492		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3492		1681	1686	1583			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	101	17	0	0	31	3	904	3	14	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	7	0	0	0
Lane Group Flow (vph)	101	17	0	0	31	0	452	455	7	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	8.9	15.4			3.0		26.1	26.1	26.1			
Effective Green, g (s)	8.9	15.4			3.0		26.1	26.1	26.1			
Actuated g/C Ratio	0.18	0.31			0.06		0.53	0.53	0.53			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	317	1098			211		884	887	832			
v/s Ratio Prot	c0.06	0.00			c0.01							
v/s Ratio Perm							0.27	0.27	0.00			
v/c Ratio	0.32	0.02			0.15		0.51	0.51	0.01			
Uniform Delay, d1	17.7	11.8			22.1		7.6	7.6	5.6			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.4	0.0			0.1		0.5	0.5	0.0			
Delay (s)	18.1	11.8			22.2		8.1	8.1	5.6			
Level of Service	B	B			C		A	A	A			
Approach Delay (s)		17.2			22.2			8.1			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	49.6	Sum of lost time (s)	11.6
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



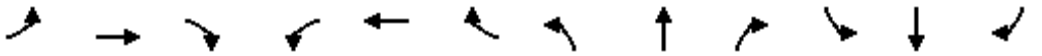
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	117	530	20	909	0	0	0	0	3	5	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1770	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	122	552	21	947	0	0	0	0	3	5	110
RTOR Reduction (vph)	0	0	309	0	0	0	0	0	0	0	0	89
Lane Group Flow (vph)	0	122	243	21	947	0	0	0	0	3	5	21
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		13.8	13.8	1.0	17.8					6.0	6.0	6.0
Effective Green, g (s)		13.8	13.8	1.0	17.8					6.0	6.0	6.0
Actuated g/C Ratio		0.44	0.44	0.03	0.57					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1555	695	56	2006					321	338	302
v/s Ratio Prot		0.03		0.01	c0.27							
v/s Ratio Perm			0.15							0.00	0.00	c0.01
v/c Ratio		0.08	0.35	0.38	0.47					0.01	0.01	0.07
Uniform Delay, d1		5.1	5.8	14.9	4.0					10.3	10.3	10.4
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.4	1.5	0.2					0.0	0.0	0.1
Delay (s)		5.1	6.2	16.4	4.3					10.3	10.3	10.5
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		6.0			4.5			0.0			10.5	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	31.4	Sum of lost time (s)	10.6
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



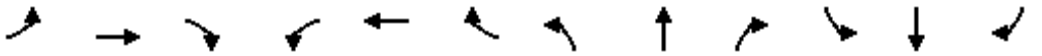
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	397	3	29	748	198	8	13	18	188	27	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3535		1770	3428		1770	1863	1583	1770	1680	
Flt Permitted	0.95	1.00		0.95	1.00		0.70	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3535		1770	3428		1312	1863	1583	1394	1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	418	3	31	787	208	8	14	19	198	28	53
RTOR Reduction (vph)	0	1	0	0	19	0	0	0	14	0	38	0
Lane Group Flow (vph)	65	420	0	31	976	0	8	14	5	198	43	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.0	23.9		2.1	22.0		13.9	13.9	13.9	13.9	13.9	
Effective Green, g (s)	4.0	23.9		2.1	22.0		13.9	13.9	13.9	13.9	13.9	
Actuated g/C Ratio	0.08	0.47		0.04	0.44		0.28	0.28	0.28	0.28	0.28	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	140	1676		73	1496		361	513	436	384	463	
v/s Ratio Prot	c0.04	0.12		0.02	c0.28			0.01			0.03	
v/s Ratio Perm							0.01		0.00	c0.14		
v/c Ratio	0.46	0.25		0.42	0.65		0.02	0.03	0.01	0.52	0.09	
Uniform Delay, d1	22.2	7.9		23.6	11.2		13.3	13.3	13.3	15.4	13.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.1		1.4	1.0		0.0	0.0	0.0	0.5	0.0	
Delay (s)	23.1	8.0		25.0	12.2		13.3	13.3	13.3	15.9	13.6	
Level of Service	C	A		C	B		B	B	B	B	B	
Approach Delay (s)		10.0			12.6			13.3			15.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	10.5
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



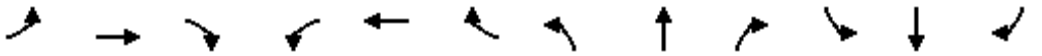
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	348	0	68	564	161	53	111	38	110	120	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	165	359	0	70	581	166	55	114	39	113	124	118
RTOR Reduction (vph)	0	0	0	0	0	123	0	0	32	0	0	95
Lane Group Flow (vph)	165	359	0	70	581	43	55	114	7	113	124	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.8	15.4		6.1	13.7	13.7	4.0	9.2	9.2	5.2	10.4	10.4
Effective Green, g (s)	7.8	15.4		6.1	13.7	13.7	4.0	9.2	9.2	5.2	10.4	10.4
Actuated g/C Ratio	0.15	0.29		0.12	0.26	0.26	0.08	0.17	0.17	0.10	0.20	0.20
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	506	1030		204	916	409	133	615	275	337	366	311
v/s Ratio Prot	c0.05	0.10		0.04	c0.16		0.03	0.03		c0.03	c0.07	
v/s Ratio Perm						0.03			0.00			0.01
v/c Ratio	0.33	0.35		0.34	0.63	0.11	0.41	0.19	0.02	0.34	0.34	0.07
Uniform Delay, d1	20.2	14.8		21.6	17.4	14.9	23.3	18.7	18.1	22.2	18.3	17.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.7	1.1	0.0	0.8	0.1	0.0	0.2	0.2	0.0
Delay (s)	20.3	14.9		22.3	18.4	15.0	24.1	18.7	18.1	22.5	18.5	17.4
Level of Service	C	B		C	B	B	C	B	B	C	B	B
Approach Delay (s)		16.6			18.1			20.0			19.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	17.0
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



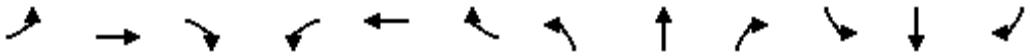
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	144	24	137	193	388	47	261	141	270	181	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3520	1583	1610	3367	1583	1770	1863	1583	1610	3310	
Flt Permitted		0.62	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2207	1583	1610	3367	1583	1770	1863	1583	1610	3310	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	153	26	146	205	413	50	278	150	287	193	11
RTOR Reduction (vph)	0	0	22	0	0	349	0	0	116	0	2	0
Lane Group Flow (vph)	0	172	4	114	237	64	50	278	34	161	328	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		7.4	7.4	8.1	8.1	8.1	12.0	12.0	12.0	11.1	11.1	
Effective Green, g (s)		7.4	7.4	8.1	8.1	8.1	12.0	12.0	12.0	11.1	11.1	
Actuated g/C Ratio		0.14	0.14	0.15	0.15	0.15	0.23	0.23	0.23	0.21	0.21	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		310	222	247	518	243	403	425	361	339	698	
v/s Ratio Prot				c0.07	0.07		0.03	c0.15		c0.10	0.10	
v/s Ratio Perm		c0.08	0.00			0.04			0.02			
v/c Ratio		0.55	0.02	0.46	0.46	0.26	0.12	0.65	0.09	0.47	0.47	
Uniform Delay, d1		21.1	19.5	20.3	20.3	19.6	16.1	18.4	16.0	18.2	18.2	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.2	0.0	0.5	0.2	0.2	0.1	2.8	0.0	0.4	0.2	
Delay (s)		22.3	19.5	20.8	20.5	19.8	16.2	21.2	16.1	18.6	18.4	
Level of Service		C	B	C	C	B	B	C	B	B	B	
Approach Delay (s)		21.9			20.2			19.0			18.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	52.6	Sum of lost time (s)	14.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



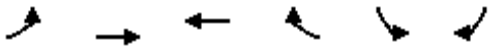
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	330	25	32	462	127	20	50	8	96	59	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1843		1770	1863	1583	1770	1823		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.72	1.00	1.00
Satd. Flow (perm)	1770	1843		1770	1863	1583	1331	1823		1332	1863	1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	64	363	27	35	508	140	22	55	9	105	65	62
RTOR Reduction (vph)	0	4	0	0	0	90	0	7	0	0	0	47
Lane Group Flow (vph)	64	386	0	35	508	50	22	57	0	105	65	15
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	4.9	17.3		2.8	15.2	15.2	10.4	10.4		10.4	10.4	10.4
Effective Green, g (s)	4.9	17.3		2.8	15.2	15.2	10.4	10.4		10.4	10.4	10.4
Actuated g/C Ratio	0.12	0.41		0.07	0.36	0.36	0.24	0.24		0.24	0.24	0.24
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	204	750		116	666	566	325	446		325	455	387
v/s Ratio Prot	c0.04	0.21		0.02	c0.27			0.03			0.03	
v/s Ratio Perm						0.03	0.02			c0.08		0.01
v/c Ratio	0.31	0.52		0.30	0.76	0.09	0.07	0.13		0.32	0.14	0.04
Uniform Delay, d1	17.3	9.5		18.9	12.1	9.1	12.3	12.5		13.2	12.6	12.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.4		1.1	4.9	0.0	0.1	0.1		0.4	0.1	0.0
Delay (s)	17.9	9.9		20.0	17.0	9.1	12.4	12.6		13.6	12.7	12.3
Level of Service	B	A		B	B	A	B	B		B	B	B
Approach Delay (s)		11.0			15.5			12.6			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	363	0	0	487	22	0	0	1	18	0	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00			1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539			3539	1583		1611		1774	1583	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	74	370	0	0	497	22	0	0	1	18	0	174
RTOR Reduction (vph)	0	0	0	0	0	13	0	1	0	0	149	0
Lane Group Flow (vph)	74	370	0	0	497	9	0	0	0	18	25	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	2.3	17.5			11.9	11.9		4.2		4.2	4.2	
Effective Green, g (s)	2.3	17.5			11.9	11.9		4.2		4.2	4.2	
Actuated g/C Ratio	0.08	0.61			0.41	0.41		0.15		0.15	0.15	
Clearance Time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0			3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	141	2150			1462	654		234		258	230	
v/s Ratio Prot	c0.04	0.10			c0.14			0.00			c0.02	
v/s Ratio Perm						0.01				0.01		
v/c Ratio	0.52	0.17			0.34	0.01		0.00		0.07	0.11	
Uniform Delay, d1	12.7	2.5			5.8	5.0		10.5		10.6	10.7	
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.0			0.1	0.0		0.0		0.0	0.1	
Delay (s)	14.3	2.5			5.9	5.0		10.5		10.7	10.8	
Level of Service	B	A			A	A		B		B	B	
Approach Delay (s)		4.5			5.9			10.5			10.7	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	28.8	Sum of lost time (s)	10.4
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	96	390	485	52	64	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3488		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3488		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	419	522	56	69	174
RTOR Reduction (vph)	0	0	8	0	0	149
Lane Group Flow (vph)	103	419	570	0	69	25
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	7.1	22.5	12.4		4.8	4.8
Effective Green, g (s)	7.1	22.5	12.4		4.8	4.8
Actuated g/C Ratio	0.21	0.67	0.37		0.14	0.14
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	371	2355	1279		251	224
v/s Ratio Prot	c0.06	c0.12	c0.16		c0.04	
v/s Ratio Perm						0.02
v/c Ratio	0.28	0.18	0.45		0.27	0.11
Uniform Delay, d1	11.2	2.1	8.1		12.9	12.6
Progression Factor	1.02	0.89	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.0	0.2		0.2	0.1
Delay (s)	11.6	1.9	8.3		13.2	12.7
Level of Service	B	A	A		B	B
Approach Delay (s)		3.8	8.3		12.8	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	33.8	Sum of lost time (s)	9.5
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	327	16	179	463	25	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3515		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3515		1770	3539	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	352	17	192	498	27	167
RTOR Reduction (vph)	3	0	0	0	0	143
Lane Group Flow (vph)	366	0	192	498	27	24
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	10.4		9.1	22.5	4.8	4.8
Effective Green, g (s)	10.4		9.1	22.5	4.8	4.8
Actuated g/C Ratio	0.31		0.27	0.67	0.14	0.14
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1081		476	2355	251	224
v/s Ratio Prot	c0.10		c0.11	c0.14	c0.02	0.01
v/s Ratio Perm						
v/c Ratio	0.34		0.40	0.21	0.11	0.11
Uniform Delay, d1	9.0		10.1	2.2	12.6	12.6
Progression Factor	1.00		1.30	0.90	1.00	1.00
Incremental Delay, d2	0.2		0.2	0.0	0.1	0.1
Delay (s)	9.2		13.4	2.0	12.7	12.7
Level of Service	A		B	A	B	B
Approach Delay (s)	9.2			5.2	12.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	33.8	Sum of lost time (s)	9.5
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	194	12	105	247	20	51
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	220	14	119	281	23	58

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	234	119	281	23	58
Volume Left (vph)	0	119	0	23	0
Volume Right (vph)	14	0	0	0	58
Hadj (s)	0.00	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.0	5.5	5.0	6.5	5.3
Degree Utilization, x	0.32	0.18	0.39	0.04	0.09
Capacity (veh/h)	710	640	710	509	615
Control Delay (s)	10.3	8.5	9.9	8.6	7.6
Approach Delay (s)	10.3	9.5		7.9	
Approach LOS	B	A		A	

Intersection Summary			
Delay	9.6		
Level of Service	A		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	266	55	0	214	451	14	0	41	9	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	289	60	0	233	490	15	0	45	10	118
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	13	15	11.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	82%	0%	100%	0%	0%	100%	0%	0%	50%
Vol Thru, %	18%	0%	0%	100%	62%	0%	100%	91%	15%
Vol Right, %	0%	100%	0%	0%	38%	0%	0%	9%	35%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	109	7	177	144	214	301	164	26
LT Vol	41	0	7	0	0	214	0	0	13
Through Vol	9	0	0	177	89	0	301	150	4
RT Vol	0	109	0	0	55	0	0	14	9
Lane Flow Rate	54	118	8	193	156	233	327	179	28
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.12	0.226	0.016	0.371	0.289	0.437	0.567	0.307	0.064
Departure Headway (Hd)	7.974	6.858	7.429	6.922	6.651	6.757	6.251	6.191	8.114
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	447	519	479	517	537	530	575	577	444
Service Time	5.77	4.654	5.212	4.705	4.434	4.527	4.021	3.961	5.814
HCM Lane V/C Ratio	0.121	0.227	0.017	0.373	0.291	0.44	0.569	0.31	0.063
HCM Control Delay	11.9	11.7	10.3	13.8	12.1	14.7	17	11.7	11.4
HCM Lane LOS	B	B	B	B	B	B	C	B	B
HCM 95th-tile Q	0.4	0.9	0	1.7	1.2	2.2	3.5	1.3	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	13	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	14	4	10
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	11.4
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	24	171	13	0	12	305	65	0	11	6	10
Peak Hour Factor	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	199	15	0	14	355	76	0	13	7	12
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11.3	14.1	9.6
HCM LOS	B	B	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	6	10	24	171	13	12	305	65	82	16
LT Vol	11	0	0	24	0	0	12	0	0	82	0
Through Vol	0	6	0	0	171	0	0	305	0	0	16
RT Vol	0	0	10	0	0	13	0	0	65	0	0
Lane Flow Rate	13	7	12	28	199	15	14	355	76	95	19
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.026	0.013	0.02	0.051	0.335	0.023	0.024	0.561	0.105	0.186	0.034
Departure Headway (Hd)	7.293	6.793	6.093	6.563	6.063	5.363	6.195	5.695	4.995	7.023	6.523
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	491	527	587	546	595	668	579	635	718	511	549
Service Time	5.034	4.534	3.834	4.293	3.793	3.093	3.922	3.422	2.722	4.758	4.258
HCM Lane V/C Ratio	0.026	0.013	0.02	0.051	0.334	0.022	0.024	0.559	0.106	0.186	0.035
HCM Control Delay	10.2	9.6	9	9.6	11.8	8.2	9.1	15.5	8.3	11.4	9.5
HCM Lane LOS	B	A	A	A	B	A	A	C	A	B	A
HCM 95th-tile Q	0.1	0	0.1	0.2	1.5	0.1	0.1	3.5	0.4	0.7	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	82	16	20
Peak Hour Factor	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	19	23
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.7
HCM LOS	B

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	3	242	26	0	30	381	27	0	57	7	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	263	28	0	33	414	29	0	62	8	16
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	11.3	10.5	10.5
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	72%	100%	0%	0%	100%	0%	0%	78%
Vol Thru, %	9%	0%	100%	0%	0%	100%	82%	9%
Vol Right, %	19%	0%	0%	100%	0%	0%	18%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	3	242	26	30	254	154	32
LT Vol	57	3	0	0	30	0	0	25
Through Vol	7	0	242	0	0	254	127	3
RT Vol	15	0	0	26	0	0	27	4
Lane Flow Rate	86	3	263	28	33	276	167	35
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.157	0.005	0.394	0.037	0.052	0.399	0.236	0.065
Departure Headway (Hd)	6.572	5.889	5.386	4.681	5.701	5.198	5.075	6.765
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	549	603	663	756	624	687	701	533
Service Time	4.273	3.673	3.169	2.464	3.475	2.972	2.848	4.469
HCM Lane V/C Ratio	0.157	0.005	0.397	0.037	0.053	0.402	0.238	0.066
HCM Control Delay	10.5	8.7	11.7	7.6	8.8	11.4	9.4	9.9
HCM Lane LOS	B	A	B	A	A	B	A	A
HCM 95th-tile Q	0.6	0	1.9	0.1	0.2	1.9	0.9	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	25	3	4
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	27	3	4
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.9
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	48	57	19	0	35	103	90	0	31	112	38
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	58	69	23	0	42	124	108	0	37	135	46
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	11.4	13.5	11.6
HCM LOS	B	B	B

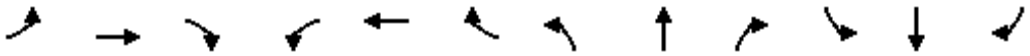
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	75%	0%	53%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	25%	0%	47%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	112	38	48	76	35	193	59	159	112
LT Vol	31	0	0	48	0	35	0	59	0	0
Through Vol	0	112	0	0	57	0	103	0	159	0
RT Vol	0	0	38	0	19	0	90	0	0	112
Lane Flow Rate	37	135	46	58	92	42	233	71	192	135
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.078	0.264	0.08	0.125	0.18	0.086	0.42	0.141	0.354	0.223
Departure Headway (Hd)	7.648	7.138	6.425	7.751	7.071	7.335	6.506	7.165	6.657	5.946
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	471	506	561	466	511	485	549	497	536	598
Service Time	5.348	4.838	4.125	5.451	4.771	5.134	4.304	4.963	4.454	3.742
HCM Lane V/C Ratio	0.079	0.267	0.082	0.124	0.18	0.087	0.424	0.143	0.358	0.226
HCM Control Delay	11	12.4	9.7	11.6	11.3	10.8	14	11.2	13.1	10.5
HCM Lane LOS	B	B	A	B	B	B	B	B	B	B
HCM 95th-tile Q	0.3	1.1	0.3	0.4	0.7	0.3	2.1	0.5	1.6	0.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	59	159	112
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	71	192	135
Number of Lanes	0	1	1	1

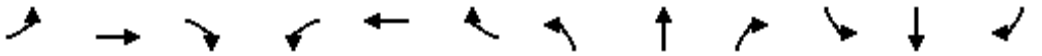
Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	11.9
HCM LOS	B

Lane



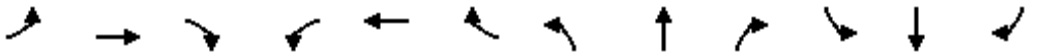
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	88	0	0	104	29	309	1	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.17	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	602	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	128	90	0	0	106	30	315	1	123	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	24	0	0	104	0	0	0
Lane Group Flow (vph)	128	90	0	0	106	6	157	159	19	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	24.0	38.4			10.5	10.5	8.8	8.8	8.8			
Effective Green, g (s)	24.0	38.4			10.5	10.5	8.8	8.8	8.8			
Actuated g/C Ratio	0.43	0.69			0.19	0.19	0.16	0.16	0.16			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	259	1286			668	298	266	266	250			
v/s Ratio Prot		0.05			c0.03							
v/s Ratio Perm	c0.21					0.00	0.09	0.09	0.01			
v/c Ratio	0.49	0.07			0.16	0.02	0.59	0.60	0.08			
Uniform Delay, d1	11.4	2.8			18.9	18.4	21.7	21.8	19.9			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.5	0.0			0.2	0.0	2.9	3.0	0.1			
Delay (s)	12.0	2.8			19.0	18.4	24.6	24.8	20.0			
Level of Service	B	A			B	B	C	C	C			
Approach Delay (s)		8.2			18.9			23.4			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	55.6	Sum of lost time (s)	12.3
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



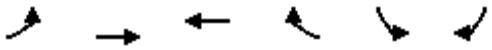
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	196	167	58	370	0	0	0	0	18	0	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1770	2787
Flt Permitted		1.00	1.00	0.69	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	1285	3539						1770	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	202	172	60	381	0	0	0	0	19	0	90
RTOR Reduction (vph)	0	0	119	0	0	0	0	0	0	0	0	82
Lane Group Flow (vph)	0	202	53	60	381	0	0	0	0	0	19	8
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		9.1	9.1	5.8	17.5						2.7	2.7
Effective Green, g (s)		9.1	9.1	5.8	17.5						2.7	2.7
Actuated g/C Ratio		0.31	0.31	0.20	0.59						0.09	0.09
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		1091	488	252	2099						162	255
v/s Ratio Prot		0.06			c0.11							
v/s Ratio Perm			0.03	c0.05							0.01	0.00
v/c Ratio		0.19	0.11	0.24	0.18						0.12	0.03
Uniform Delay, d1		7.5	7.3	10.0	2.7						12.3	12.2
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.1	0.1	0.2	0.1						0.1	0.0
Delay (s)		7.6	7.4	10.2	2.8						12.4	12.2
Level of Service		A	A	B	A						B	B
Approach Delay (s)		7.5			3.8			0.0			12.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	29.5	Sum of lost time (s)	11.9
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



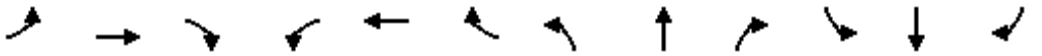
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	190	47	114	313	31	63	18	139	33	19	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4935		1770	5017		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4935		1770	5017		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	9	196	48	118	323	32	65	19	143	34	20	12
RTOR Reduction (vph)	0	29	0	0	6	0	0	0	128	0	0	11
Lane Group Flow (vph)	9	215	0	118	349	0	65	19	15	34	20	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.3	17.6		6.5	23.8		4.5	4.5	4.5	2.3	2.3	2.3
Effective Green, g (s)	1.3	17.6		6.5	23.8		4.5	4.5	4.5	2.3	2.3	2.3
Actuated g/C Ratio	0.03	0.40		0.15	0.54		0.10	0.10	0.10	0.05	0.05	0.05
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	52	1978		262	2719		351	190	162	92	97	82
v/s Ratio Prot	0.01	0.04		c0.07	c0.07		c0.02	0.01		c0.02	0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.17	0.11		0.45	0.13		0.19	0.10	0.09	0.37	0.21	0.01
Uniform Delay, d1	20.8	8.2		17.1	4.9		18.0	17.9	17.8	20.1	19.9	19.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0		1.2	0.0		0.1	0.1	0.1	0.9	0.4	0.0
Delay (s)	24.1	8.3		18.3	5.0		18.1	17.9	17.9	21.0	20.3	19.7
Level of Service	C	A		B	A		B	B	B	C	C	B
Approach Delay (s)		8.8			8.3			18.0			20.6	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	43.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



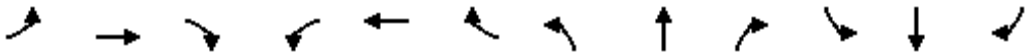
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	225	409	2	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.63	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1183	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	234	426	2	2	2
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	234	426	1	2	1
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	6.3	6.3	15.8	15.8	0.7	20.0
Effective Green, g (s)	6.3	6.3	15.8	15.8	0.7	20.0
Actuated g/C Ratio	0.19	0.19	0.47	0.47	0.02	0.60
Clearance Time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5	2.0	3.5
Lane Grp Cap (vph)	221	663	1664	744	71	942
v/s Ratio Prot		c0.07	c0.12			
v/s Ratio Perm	0.00			0.00	c0.00	0.00
v/c Ratio	0.00	0.35	0.26	0.00	0.03	0.00
Uniform Delay, d1	11.1	11.9	5.4	4.7	16.1	2.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1	0.1	0.0	0.1	0.0
Delay (s)	11.1	12.0	5.5	4.7	16.2	2.8
Level of Service	B	B	A	A	B	A
Approach Delay (s)		12.0	5.5		9.5	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	33.6	Sum of lost time (s)	10.8
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	219	0	1	407	2	0	0	0	5	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	1770	3539		1770	3539	1583				1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00				1.00	1.00	1.00
Satd. Flow (perm)	1770	3539		1770	3539	1583				1770	1770	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	226	0	1	420	2	0	0	0	5	0	2
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	0	2
Lane Group Flow (vph)	1	226	0	1	420	1	0	0	0	2	3	0
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.5	11.3		0.9	11.7	11.7				0.5	0.5	0.5
Effective Green, g (s)	0.5	11.3		0.9	11.7	11.7				0.5	0.5	0.5
Actuated g/C Ratio	0.02	0.46		0.04	0.47	0.47				0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0				2.0	2.0	2.0
Lane Grp Cap (vph)	35	1619		64	1676	749				35	35	32
v/s Ratio Prot	c0.00	0.06		0.00	c0.12							
v/s Ratio Perm						0.00				0.00	c0.00	0.00
v/c Ratio	0.03	0.14		0.02	0.25	0.00				0.06	0.09	0.00
Uniform Delay, d1	11.9	3.9		11.5	3.9	3.4				11.9	11.9	11.9
Progression Factor	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.0	0.1	0.0				0.2	0.4	0.0
Delay (s)	12.0	3.9		11.5	4.0	3.4				12.1	12.3	11.9
Level of Service	B	A		B	A	A				B	B	B
Approach Delay (s)		4.0			4.0			0.0			12.1	
Approach LOS		A			A			A			B	

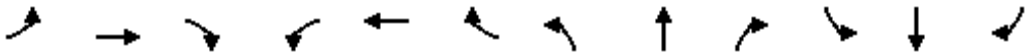
Intersection Summary			
HCM 2000 Control Delay	4.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	24.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	135	3	56	180	3	3	1	40	2	2	3
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
Hourly flow rate (vph)	4	152	3	63	202	3	3	1	45	2	2	3

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	80	79	164	104	49	8
Volume Left (vph)	4	0	63	0	3	2
Volume Right (vph)	0	3	0	3	45	3
Hadj (s)	0.06	0.00	0.23	0.01	-0.50	-0.17
Departure Headway (s)	4.9	4.9	5.0	4.8	4.4	4.7
Degree Utilization, x	0.11	0.11	0.23	0.14	0.06	0.01
Capacity (veh/h)	717	721	703	736	762	692
Control Delay (s)	7.3	7.2	8.3	7.3	7.6	7.8
Approach Delay (s)	7.3		7.9		7.6	7.8
Approach LOS	A		A		A	A

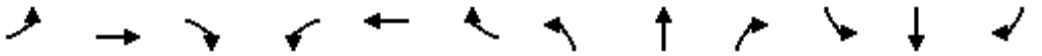
Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	75	7	30	137	13	5	6	16	20	2	21
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
Hourly flow rate (vph)	30	90	8	36	165	16	6	7	19	24	2	25

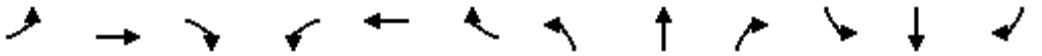
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	75	54	119	98	33	52
Volume Left (vph)	30	0	36	0	6	24
Volume Right (vph)	0	8	0	16	19	25
Hadj (s)	0.23	-0.08	0.19	-0.08	-0.28	-0.17
Departure Headway (s)	5.1	4.8	5.0	4.7	4.5	4.6
Degree Utilization, x	0.11	0.07	0.16	0.13	0.04	0.07
Capacity (veh/h)	687	725	698	739	748	731
Control Delay (s)	7.5	7.0	7.8	7.2	7.7	7.9
Approach Delay (s)	7.3		7.5		7.7	7.9
Approach LOS	A		A		A	A

Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	23.8%	ICU Level of Service	A	
Analysis Period (min)	15			



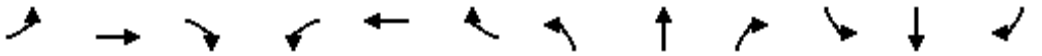
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	18	0	0	12	4	584	1	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3414		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3414		1681	1686	1583			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	19	0	0	13	4	628	1	11	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	6	0	0	0
Lane Group Flow (vph)	102	19	0	0	13	0	314	315	5	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	9.4	14.3			1.4		20.3	20.3	20.3			
Effective Green, g (s)	9.4	14.3			1.4		20.3	20.3	20.3			
Actuated g/C Ratio	0.22	0.33			0.03		0.48	0.48	0.48			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	389	1185			111		799	801	752			
v/s Ratio Prot	c0.06	0.01			c0.00							
v/s Ratio Perm							0.19	0.19	0.00			
v/c Ratio	0.26	0.02			0.12		0.39	0.39	0.01			
Uniform Delay, d1	13.8	9.5			20.1		7.2	7.2	5.9			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.3	0.0			0.2		0.3	0.3	0.0			
Delay (s)	14.0	9.5			20.2		7.5	7.5	5.9			
Level of Service	B	A			C		A	A	A			
Approach Delay (s)		13.3			20.2			7.5			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	42.7	Sum of lost time (s)	11.6
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



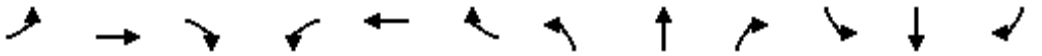
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	110	301	9	578	0	0	0	0	8	1	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1702	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1702	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	118	324	10	622	0	0	0	0	9	1	68
RTOR Reduction (vph)	0	0	182	0	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	118	142	10	622	0	0	0	0	5	5	13
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Effective Green, g (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Actuated g/C Ratio		0.44	0.44	0.03	0.56					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1553	695	51	1996					323	327	304
v/s Ratio Prot		0.03		0.01	c0.18							
v/s Ratio Perm			0.09							0.00	0.00	c0.01
v/c Ratio		0.08	0.20	0.20	0.31					0.02	0.02	0.04
Uniform Delay, d1		5.1	5.4	14.8	3.6					10.2	10.2	10.3
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.2	0.7	0.1					0.0	0.0	0.0
Delay (s)		5.1	5.6	15.5	3.7					10.2	10.2	10.3
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		5.5			3.9			0.0			10.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	31.2	Sum of lost time (s)	10.6
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



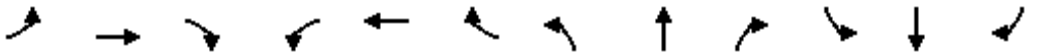
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	278	5	17	485	121	7	9	18	101	15	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3531		1770	3433		1770	1863	1583	1770	1673	
Flt Permitted	0.95	1.00		0.95	1.00		0.72	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3531		1770	3433		1349	1863	1583	1399	1673	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	40	305	5	19	533	133	8	10	20	111	16	34
RTOR Reduction (vph)	0	1	0	0	18	0	0	0	16	0	27	0
Lane Group Flow (vph)	40	309	0	19	648	0	8	10	4	111	23	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	1.8	15.0		0.8	14.0		6.3	6.3	6.3	6.3	6.3	
Effective Green, g (s)	1.8	15.0		0.8	14.0		6.3	6.3	6.3	6.3	6.3	
Actuated g/C Ratio	0.06	0.46		0.02	0.43		0.19	0.19	0.19	0.19	0.19	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	97	1624		43	1474		260	360	305	270	323	
v/s Ratio Prot	c0.02	0.09		0.01	c0.19			0.01			0.01	
v/s Ratio Perm							0.01		0.00	c0.08		
v/c Ratio	0.41	0.19		0.44	0.44		0.03	0.03	0.01	0.41	0.07	
Uniform Delay, d1	14.9	5.2		15.7	6.5		10.7	10.7	10.6	11.5	10.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1		2.6	0.2		0.0	0.0	0.0	0.4	0.0	
Delay (s)	15.9	5.3		18.3	6.8		10.7	10.7	10.6	11.9	10.8	
Level of Service	B	A		B	A		B	B	B	B	B	
Approach Delay (s)		6.5			7.1			10.7			11.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	32.6	Sum of lost time (s)	10.5
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



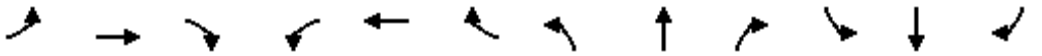
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	210	0	50	374	103	32	60	20	59	53	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	112	219	0	52	390	107	33	62	21	61	55	79
RTOR Reduction (vph)	0	0	0	0	0	83	0	0	17	0	0	62
Lane Group Flow (vph)	112	219	0	52	390	24	33	62	4	61	55	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.8	10.9		3.6	9.7	9.7	2.1	8.5	8.5	2.9	9.3	9.3
Effective Green, g (s)	4.8	10.9		3.6	9.7	9.7	2.1	8.5	8.5	2.9	9.3	9.3
Actuated g/C Ratio	0.11	0.25		0.08	0.23	0.23	0.05	0.20	0.20	0.07	0.22	0.22
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	384	899		148	800	357	86	701	313	232	403	343
v/s Ratio Prot	c0.03	0.06		0.03	c0.11		c0.02	0.02		0.02	c0.03	
v/s Ratio Perm						0.02			0.00			0.01
v/c Ratio	0.29	0.24		0.35	0.49	0.07	0.38	0.09	0.01	0.26	0.14	0.05
Uniform Delay, d1	17.5	12.7		18.5	14.4	13.0	19.8	14.0	13.8	19.0	13.6	13.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1		1.1	0.2	0.0	1.0	0.0	0.0	0.2	0.1	0.0
Delay (s)	17.6	12.8		19.6	14.6	13.1	20.8	14.1	13.8	19.2	13.6	13.3
Level of Service	B	B		B	B	B	C	B	B	B	B	B
Approach Delay (s)		14.4			14.8			15.9			15.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	17.0
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



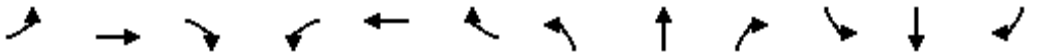
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	93	10	89	126	235	20	145	108	160	128	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3526	1583	1610	3368	1583	1770	1863	1583	1610	3311	
Flt Permitted		0.75	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2652	1583	1610	3368	1583	1770	1863	1583	1610	3311	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	9	108	12	103	147	273	23	169	126	186	149	13
RTOR Reduction (vph)	0	0	11	0	0	233	0	0	103	0	4	0
Lane Group Flow (vph)	0	117	1	81	169	40	23	169	23	113	231	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		3.9	3.9	5.7	5.7	5.7	7.1	7.1	7.1	8.1	8.1	
Effective Green, g (s)		3.9	3.9	5.7	5.7	5.7	7.1	7.1	7.1	8.1	8.1	
Actuated g/C Ratio		0.10	0.10	0.15	0.15	0.15	0.18	0.18	0.18	0.21	0.21	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		266	159	236	494	232	323	340	289	336	691	
v/s Ratio Prot				c0.05	0.05		0.01	c0.09		c0.07	0.07	
v/s Ratio Perm		c0.04	0.00			0.03			0.01			
v/c Ratio		0.44	0.01	0.34	0.34	0.17	0.07	0.50	0.08	0.34	0.33	
Uniform Delay, d1		16.4	15.7	14.9	14.9	14.5	13.1	14.2	13.1	13.1	13.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.4	0.0	0.3	0.2	0.1	0.0	0.4	0.0	0.2	0.1	
Delay (s)		16.8	15.7	15.2	15.0	14.6	13.2	14.7	13.2	13.3	13.2	
Level of Service		B	B	B	B	B	B	B	B	B	B	
Approach Delay (s)		16.7			14.8			14.0			13.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	38.8	Sum of lost time (s)	14.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



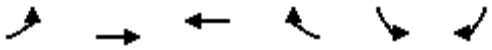
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	219	11	11	293	67	5	26	8	57	48	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1849		1770	1863	1583	1770	1798		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.72	1.00		0.73	1.00	1.00
Satd. Flow (perm)	1770	1849		1770	1863	1583	1335	1798		1358	1863	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	45	281	14	14	376	86	6	33	10	73	62	42
RTOR Reduction (vph)	0	3	0	0	0	58	0	7	0	0	0	31
Lane Group Flow (vph)	45	292	0	14	376	28	6	36	0	73	62	11
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	3.0	13.6		1.3	11.9	11.9	9.7	9.7		9.7	9.7	9.7
Effective Green, g (s)	3.0	13.6		1.3	11.9	11.9	9.7	9.7		9.7	9.7	9.7
Actuated g/C Ratio	0.08	0.37		0.04	0.33	0.33	0.27	0.27		0.27	0.27	0.27
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	145	687		62	605	514	353	476		359	493	419
v/s Ratio Prot	c0.03	0.16		0.01	c0.20			0.02			0.03	
v/s Ratio Perm						0.02	0.00			c0.05		0.01
v/c Ratio	0.31	0.43		0.23	0.62	0.05	0.02	0.07		0.20	0.13	0.03
Uniform Delay, d1	15.8	8.6		17.2	10.4	8.5	9.9	10.1		10.4	10.2	10.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		1.3	1.7	0.0	0.0	0.0		0.2	0.1	0.0
Delay (s)	16.7	8.9		18.5	12.2	8.5	9.9	10.1		10.7	10.3	10.0
Level of Service	B	A		B	B	A	A	B		B	B	A
Approach Delay (s)		9.9			11.7			10.1			10.4	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	36.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	255	0	1	309	14	0	0	1	6	0	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539		1770	3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	
Satd. Flow (perm)	1770	3539		1770	3539	1583		1611		1863	1583	
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	72	323	0	1	391	18	0	0	1	8	0	105
RTOR Reduction (vph)	0	0	0	0	0	9	0	1	0	0	95	0
Lane Group Flow (vph)	72	323	0	1	391	9	0	0	0	8	10	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	2.4	16.2		0.8	14.6	14.6		2.8		2.8	2.8	
Effective Green, g (s)	2.4	16.2		0.8	14.6	14.6		2.8		2.8	2.8	
Actuated g/C Ratio	0.08	0.54		0.03	0.48	0.48		0.09		0.09	0.09	
Clearance Time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	140	1898		46	1710	765		149		172	146	
v/s Ratio Prot	c0.04	0.09		0.00	c0.11			0.00			c0.01	
v/s Ratio Perm						0.01				0.00		
v/c Ratio	0.51	0.17		0.02	0.23	0.01		0.00		0.05	0.07	
Uniform Delay, d1	13.3	3.6		14.3	4.5	4.1		12.4		12.5	12.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.0		0.1	0.1	0.0		0.0		0.0	0.1	
Delay (s)	14.7	3.6		14.4	4.6	4.1		12.4		12.5	12.6	
Level of Service	B	A		B	A	A		B		B	B	
Approach Delay (s)		5.6			4.6			12.4			12.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	30.2	Sum of lost time (s)	10.4
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	67	228	303	38	28	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3480		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3480		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	72	245	326	41	30	120
RTOR Reduction (vph)	0	0	9	0	0	103
Lane Group Flow (vph)	72	245	358	0	30	17
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	5.9	19.0	10.1		4.3	4.3
Effective Green, g (s)	5.9	19.0	10.1		4.3	4.3
Actuated g/C Ratio	0.20	0.64	0.34		0.14	0.14
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	350	2256	1179		255	228
v/s Ratio Prot	c0.04	c0.07	c0.10		c0.02	
v/s Ratio Perm						0.01
v/c Ratio	0.21	0.11	0.30		0.12	0.08
Uniform Delay, d1	10.0	2.1	7.3		11.1	11.0
Progression Factor	0.92	2.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.0	0.1		0.1	0.1
Delay (s)	9.3	4.2	7.4		11.2	11.1
Level of Service	A	A	A		B	B
Approach Delay (s)		5.4	7.4		11.1	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	29.8	Sum of lost time (s)	9.5
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	214	12	151	254	16	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3510		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3510		1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	243	14	172	289	18	117
RTOR Reduction (vph)	4	0	0	0	0	100
Lane Group Flow (vph)	253	0	172	289	18	17
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	8.5		7.5	19.0	4.3	4.3
Effective Green, g (s)	8.5		7.5	19.0	4.3	4.3
Actuated g/C Ratio	0.29		0.25	0.64	0.14	0.14
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1001		445	2256	255	228
v/s Ratio Prot	c0.07		c0.10	c0.08	0.01	c0.01
v/s Ratio Perm						
v/c Ratio	0.25		0.39	0.13	0.07	0.07
Uniform Delay, d1	8.2		9.2	2.1	11.0	11.0
Progression Factor	1.00		1.19	0.86	1.00	1.00
Incremental Delay, d2	0.1		0.2	0.0	0.0	0.1
Delay (s)	8.3		11.2	1.8	11.1	11.1
Level of Service	A		B	A	B	B
Approach Delay (s)	8.3			5.3	11.1	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	29.8	Sum of lost time (s)	9.5
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	142	15	66	123	8	25
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	160	17	74	138	9	28

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	176	74	138	9	28
Volume Left (vph)	0	74	0	9	0
Volume Right (vph)	17	0	0	0	28
Hadj (s)	-0.02	0.53	0.03	0.53	-0.67
Departure Headway (s)	4.6	5.3	4.8	5.9	4.7
Degree Utilization, x	0.23	0.11	0.18	0.01	0.04
Capacity (veh/h)	771	667	740	567	701
Control Delay (s)	8.9	7.7	7.6	7.8	6.7
Approach Delay (s)	8.9	7.6		7.0	
Approach LOS	A	A		A	

Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	2	132	23	0	150	236	17	0	26	4	82
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	145	25	0	165	259	19	0	29	4	90
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	9.4	10	9.3
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	87%	0%	100%	0%	0%	100%	0%	0%	36%
Vol Thru, %	13%	0%	0%	100%	66%	0%	100%	82%	29%
Vol Right, %	0%	100%	0%	0%	34%	0%	0%	18%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	82	2	88	67	150	157	96	14
LT Vol	26	0	2	0	0	150	0	0	5
Through Vol	4	0	0	88	44	0	157	79	4
RT Vol	0	82	0	0	23	0	0	17	5
Lane Flow Rate	33	90	2	97	74	165	173	105	15
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.06	0.135	0.004	0.156	0.114	0.267	0.256	0.152	0.027
Departure Headway (Hd)	6.545	5.413	6.328	5.825	5.584	5.831	5.329	5.204	6.392
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	543	655	561	610	635	612	669	683	563
Service Time	4.338	3.207	4.121	3.618	3.376	3.607	3.104	2.979	4.092
HCM Lane V/C Ratio	0.061	0.137	0.004	0.159	0.117	0.27	0.259	0.154	0.027
HCM Control Delay	9.8	9.1	9.1	9.7	9.1	10.7	10	8.9	9.3
HCM Lane LOS	A	A	A	A	A	B	A	A	A
HCM 95th-tile Q	0.2	0.5	0	0.5	0.4	1.1	1	0.5	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	5	4	5
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	4	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	20	92	2	0	4	144	31	0	3	4	6
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	105	2	0	5	164	35	0	3	5	7
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	8.8	8.9	8.2
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	4	6	20	92	2	4	144	31	46	15
LT Vol	3	0	0	20	0	0	4	0	0	46	0
Through Vol	0	4	0	0	92	0	0	144	0	0	15
RT Vol	0	0	6	0	0	2	0	0	31	0	0
Lane Flow Rate	3	5	7	23	105	2	5	164	35	52	17
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.006	0.007	0.009	0.036	0.151	0.003	0.007	0.231	0.043	0.086	0.026
Departure Headway (Hd)	6.077	5.577	4.877	5.71	5.21	4.51	5.585	5.085	4.385	5.933	5.433
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	588	641	732	628	689	793	642	707	817	604	659
Service Time	3.821	3.321	2.621	3.44	2.94	2.24	3.312	2.812	2.112	3.668	3.168
HCM Lane V/C Ratio	0.005	0.008	0.01	0.037	0.152	0.003	0.008	0.232	0.043	0.086	0.026
HCM Control Delay	8.9	8.4	7.7	8.7	8.9	7.3	8.4	9.3	7.3	9.2	8.3
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0.1	0.5	0	0	0.9	0.1	0.3	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	46	15	13
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	17	15
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	8.7
HCM LOS	A

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	161	17	0	9	224	21	0	32	3	15
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	183	19	0	10	255	24	0	36	3	17
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	9.2	8.8	9.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	64%	100%	0%	0%	100%	0%	0%	45%
Vol Thru, %	6%	0%	100%	0%	0%	100%	78%	25%
Vol Right, %	30%	0%	0%	100%	0%	0%	22%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	7	161	17	9	149	96	20
LT Vol	32	7	0	0	9	0	0	9
Through Vol	3	0	161	0	0	149	75	5
RT Vol	15	0	0	17	0	0	21	6
Lane Flow Rate	57	8	183	19	10	170	109	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.091	0.012	0.255	0.023	0.015	0.233	0.144	0.036
Departure Headway (Hd)	5.762	5.514	5.012	4.309	5.441	4.939	4.785	5.719
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	622	650	717	831	659	728	750	625
Service Time	3.5	3.24	2.738	2.035	3.166	2.664	2.51	3.462
HCM Lane V/C Ratio	0.092	0.012	0.255	0.023	0.015	0.234	0.145	0.037
HCM Control Delay	9.1	8.3	9.5	7.1	8.2	9.2	8.3	8.7
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0	1	0.1	0	0.9	0.5	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	9	5	6
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	10	6	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	8.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	31	57	16	0	32	32	34	0	3	51	15
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	34	63	18	0	35	35	37	0	3	56	16
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	8.9	8.7	8.6
HCM LOS	A	A	A

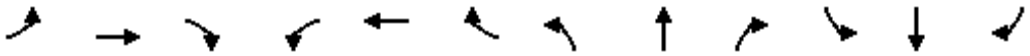
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	78%	0%	48%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	22%	0%	52%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	51	15	31	73	32	66	51	98	23
LT Vol	3	0	0	31	0	32	0	51	0	0
Through Vol	0	51	0	0	57	0	32	0	98	0
RT Vol	0	0	15	0	16	0	34	0	0	23
Lane Flow Rate	3	56	16	34	80	35	73	56	108	25
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.006	0.087	0.022	0.056	0.118	0.059	0.103	0.091	0.16	0.033
Departure Headway (Hd)	6.079	5.575	4.871	5.97	5.317	5.99	5.129	5.849	5.346	4.642
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	586	639	730	598	671	596	695	611	669	767
Service Time	3.843	3.34	2.635	3.73	3.076	3.748	2.887	3.602	3.099	2.395
HCM Lane V/C Ratio	0.005	0.088	0.022	0.057	0.119	0.059	0.105	0.092	0.161	0.033
HCM Control Delay	8.9	8.9	7.7	9.1	8.8	9.1	8.5	9.2	9.1	7.6
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.1	0.2	0.4	0.2	0.3	0.3	0.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	51	98	23
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	56	108	25
Number of Lanes	0	1	1	1

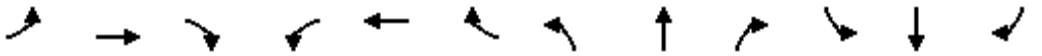
Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	8.9
HCM LOS	A

Lane



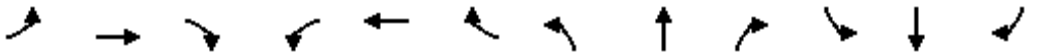
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	181	0	0	251	36	564	3	133	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	448	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	197	0	0	273	39	613	3	145	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	65	0	0	0
Lane Group Flow (vph)	190	197	0	0	273	6	306	310	80	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	32.3	46.8			10.6	10.6	16.5	16.5	16.5			
Effective Green, g (s)	32.3	46.8			10.6	10.6	16.5	16.5	16.5			
Actuated g/C Ratio	0.45	0.65			0.15	0.15	0.23	0.23	0.23			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	201	1216			523	234	386	387	364			
v/s Ratio Prot		0.11			c0.08							
v/s Ratio Perm	c0.42					0.00	0.18	0.18	0.05			
v/c Ratio	0.95	0.16			0.52	0.02	0.79	0.80	0.22			
Uniform Delay, d1	18.9	4.8			28.2	26.1	26.0	26.1	22.4			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	47.3	0.1			1.2	0.1	10.3	11.0	0.2			
Delay (s)	66.1	4.9			29.4	26.2	36.3	37.1	22.6			
Level of Service	E	A			C	C	D	D	C			
Approach Delay (s)		35.0			29.0			34.0			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	12.3
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



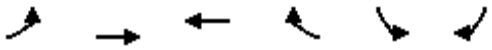
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	323	372	103	700	0	0	0	0	44	4	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1781	2787
Flt Permitted		1.00	1.00	0.27	1.00						0.96	1.00
Satd. Flow (perm)		3539	1583	497	3539						1781	2787
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	347	400	111	753	0	0	0	0	47	4	332
RTOR Reduction (vph)	0	0	305	0	0	0	0	0	0	0	0	276
Lane Group Flow (vph)	0	347	95	111	753	0	0	0	0	0	51	56
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		10.2	10.2	15.0	27.8						6.0	6.0
Effective Green, g (s)		10.2	10.2	15.0	27.8						6.0	6.0
Actuated g/C Ratio		0.24	0.24	0.35	0.65						0.14	0.14
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		837	374	172	2282						247	387
v/s Ratio Prot		c0.10			0.21							
v/s Ratio Perm			0.06	c0.22							0.03	0.02
v/c Ratio		0.41	0.25	0.65	0.33						0.21	0.14
Uniform Delay, d1		13.9	13.4	11.8	3.4						16.4	16.3
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.5	0.5	6.1	0.1						0.2	0.1
Delay (s)		14.4	13.8	17.9	3.6						16.6	16.4
Level of Service		B	B	B	A						B	B
Approach Delay (s)		14.1			5.4			0.0			16.4	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



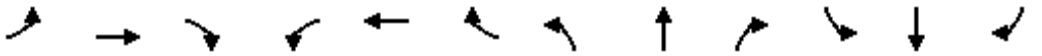
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	330	85	196	712	34	118	32	257	75	39	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4930		1770	5050		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4930		1770	5050		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	359	92	213	774	37	128	35	279	82	42	15
RTOR Reduction (vph)	0	36	0	0	3	0	0	0	252	0	0	14
Lane Group Flow (vph)	22	415	0	213	808	0	128	35	27	82	42	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.7	17.7		16.0	33.0		5.4	5.4	5.4	4.7	4.7	4.7
Effective Green, g (s)	1.7	17.7		16.0	33.0		5.4	5.4	5.4	4.7	4.7	4.7
Actuated g/C Ratio	0.03	0.31		0.28	0.58		0.10	0.10	0.10	0.08	0.08	0.08
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	52	1536		498	2933		326	177	150	146	154	130
v/s Ratio Prot	0.01	0.08		c0.12	c0.16		c0.04	0.02		c0.05	0.02	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.42	0.27		0.43	0.28		0.39	0.20	0.18	0.56	0.27	0.01
Uniform Delay, d1	27.1	14.7		16.7	5.9		24.2	23.7	23.7	25.1	24.4	23.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.2	0.1		0.6	0.1		0.3	0.2	0.2	2.9	0.4	0.0
Delay (s)	38.3	14.8		17.3	6.0		24.4	23.9	23.9	28.0	24.8	23.9
Level of Service	D	B		B	A		C	C	C	C	C	C
Approach Delay (s)		15.9			8.3			24.0			26.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



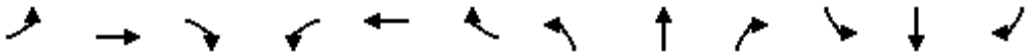
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	437	860	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3		4.3
Lane Util. Factor	1.00	0.95	0.95	1.00		1.00
Frt	1.00	1.00	1.00	0.85		0.85
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1770	3539	3539	1583		1583
Flt Permitted	0.39	1.00	1.00	1.00		1.00
Satd. Flow (perm)	723	3539	3539	1583		1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1	480	945	1	0	1
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	480	945	0	0	0
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	10.3	10.3	16.2	16.2		16.2
Effective Green, g (s)	10.3	10.3	16.2	16.2		16.2
Actuated g/C Ratio	0.30	0.30	0.48	0.48		0.48
Clearance Time (s)	3.0	3.0	4.3	4.3		4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5		3.5
Lane Grp Cap (vph)	220	1078	1696	758		758
v/s Ratio Prot		c0.14	c0.27			
v/s Ratio Perm	0.00			0.00		0.00
v/c Ratio	0.00	0.45	0.56	0.00		0.00
Uniform Delay, d1	8.2	9.5	6.3	4.6		4.6
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.0	0.1	0.4	0.0		0.0
Delay (s)	8.2	9.6	6.7	4.6		4.6
Level of Service	A	A	A	A		A
Approach Delay (s)		9.6	6.7		4.6	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	33.8	Sum of lost time (s)	10.8
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	406	1	5	818	1	1	0	2	11	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.95	1.00
Satd. Flow (prot)	1770	3538		1770	3539	1583		1667		1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	1.00
Satd. Flow (perm)	1770	3538		1770	3539	1583		1695		1770	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1	437	1	5	880	1	1	0	2	12	0	6
RTOR Reduction (vph)	0	0	0	0	0	1	0	3	0	0	0	6
Lane Group Flow (vph)	1	438	0	5	880	0	0	0	0	6	6	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.5	11.9		0.8	12.2	12.2		0.5		0.5	0.5	0.5
Effective Green, g (s)	0.5	11.9		0.8	12.2	12.2		0.5		0.5	0.5	0.5
Actuated g/C Ratio	0.02	0.47		0.03	0.48	0.48		0.02		0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	35	1670		56	1713	766		33		35	35	31
v/s Ratio Prot	0.00	0.12		c0.00	c0.25							
v/s Ratio Perm						0.00		0.00		c0.00	0.00	0.00
v/c Ratio	0.03	0.26		0.09	0.51	0.00		0.00		0.17	0.17	0.00
Uniform Delay, d1	12.1	4.0		11.8	4.5	3.4		12.1		12.1	12.1	12.1
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.3	0.3	0.0		0.0		0.8	0.8	0.0
Delay (s)	12.2	4.1		12.1	4.8	3.4		12.1		13.0	13.0	12.1
Level of Service	B	A		B	A	A		B		B	B	B
Approach Delay (s)		4.1			4.9			12.1			12.7	
Approach LOS		A			A			B			B	

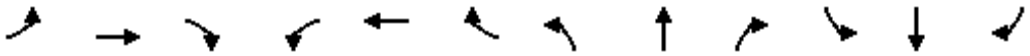
Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	25.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	264	9	97	542	5	28	0	60	8	0	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	11	314	11	115	645	6	33	0	71	10	0	6

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	168	168	438	329	105	15
Volume Left (vph)	11	0	115	0	33	10
Volume Right (vph)	0	11	0	6	71	6
Hadj (s)	0.07	-0.01	0.17	0.02	-0.31	-0.07
Departure Headway (s)	5.8	5.7	5.4	5.3	5.8	6.2
Degree Utilization, x	0.27	0.27	0.66	0.48	0.17	0.03
Capacity (veh/h)	592	607	654	671	578	515
Control Delay (s)	9.7	9.6	17.1	11.9	9.9	9.4
Approach Delay (s)	9.7		14.8		9.9	9.4
Approach LOS	A		B		A	A

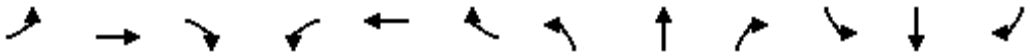
Intersection Summary				
Delay	12.9			
Level of Service	B			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	161	12	54	485	21	7	6	22	36	0	31
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
Hourly flow rate (vph)	77	194	14	65	584	25	8	7	27	43	0	37

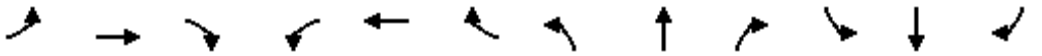
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	174	111	357	317	42	81
Volume Left (vph)	77	0	65	0	8	43
Volume Right (vph)	0	14	0	25	27	37
Hadj (s)	0.26	-0.06	0.13	-0.02	-0.30	-0.14
Departure Headway (s)	5.9	5.5	5.3	5.2	5.7	5.8
Degree Utilization, x	0.28	0.17	0.53	0.46	0.07	0.13
Capacity (veh/h)	587	623	662	683	567	565
Control Delay (s)	10.0	8.5	12.9	11.2	9.1	9.6
Approach Delay (s)	9.4		12.1		9.1	9.6
Approach LOS	A		B		A	A

Intersection Summary				
Delay	11.1			
Level of Service	B			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			



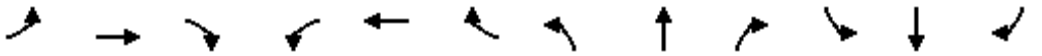
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	17	0	0	31	3	957	3	14	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3492		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3492		1681	1686	1583			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	101	17	0	0	31	3	967	3	14	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	6	0	0	0
Lane Group Flow (vph)	101	17	0	0	31	0	483	487	8	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	8.9	15.4			3.0		27.6	27.6	27.6			
Effective Green, g (s)	8.9	15.4			3.0		27.6	27.6	27.6			
Actuated g/C Ratio	0.17	0.30			0.06		0.54	0.54	0.54			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	308	1066			205		907	910	855			
v/s Ratio Prot	c0.06	0.00			c0.01							
v/s Ratio Perm							0.29	0.29	0.00			
v/c Ratio	0.33	0.02			0.15		0.53	0.54	0.01			
Uniform Delay, d1	18.5	12.5			22.8		7.6	7.6	5.4			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.5	0.0			0.1		0.6	0.6	0.0			
Delay (s)	18.9	12.5			23.0		8.2	8.2	5.4			
Level of Service	B	B			C		A	A	A			
Approach Delay (s)		18.0			23.0			8.2			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	11.6
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



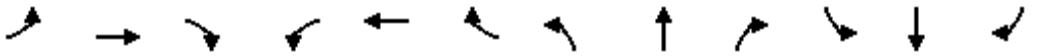
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	117	535	20	971	0	0	0	0	3	5	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1770	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	122	557	21	1011	0	0	0	0	3	5	110
RTOR Reduction (vph)	0	0	310	0	0	0	0	0	0	0	0	89
Lane Group Flow (vph)	0	122	247	21	1011	0	0	0	0	3	5	21
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		14.0	14.0	1.0	18.0					6.0	6.0	6.0
Effective Green, g (s)		14.0	14.0	1.0	18.0					6.0	6.0	6.0
Actuated g/C Ratio		0.44	0.44	0.03	0.57					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1567	701	56	2015					319	336	300
v/s Ratio Prot		0.03		0.01	c0.29							
v/s Ratio Perm			0.16							0.00	0.00	c0.01
v/c Ratio		0.08	0.35	0.38	0.50					0.01	0.01	0.07
Uniform Delay, d1		5.1	5.8	15.0	4.1					10.4	10.4	10.5
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.4	1.5	0.3					0.0	0.0	0.1
Delay (s)		5.1	6.2	16.5	4.4					10.4	10.4	10.6
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		6.0			4.6			0.0			10.6	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	31.6	Sum of lost time (s)	10.6
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



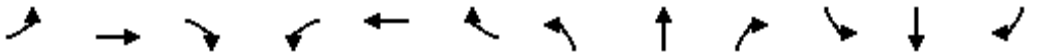
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	402	3	29	810	198	8	13	18	188	27	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3535		1770	3435		1770	1863	1583	1770	1680	
Flt Permitted	0.95	1.00		0.95	1.00		0.70	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3535		1770	3435		1312	1863	1583	1394	1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	423	3	31	853	208	8	14	19	198	28	53
RTOR Reduction (vph)	0	1	0	0	16	0	0	0	14	0	39	0
Lane Group Flow (vph)	65	425	0	31	1045	0	8	14	5	198	42	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.0	25.9		2.1	24.0		14.3	14.3	14.3	14.3	14.3	
Effective Green, g (s)	4.0	25.9		2.1	24.0		14.3	14.3	14.3	14.3	14.3	
Actuated g/C Ratio	0.08	0.49		0.04	0.45		0.27	0.27	0.27	0.27	0.27	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	134	1734		70	1561		355	504	428	377	455	
v/s Ratio Prot	c0.04	0.12		0.02	c0.30			0.01			0.03	
v/s Ratio Perm							0.01		0.00	c0.14		
v/c Ratio	0.49	0.25		0.44	0.67		0.02	0.03	0.01	0.53	0.09	
Uniform Delay, d1	23.4	7.8		24.8	11.3		14.1	14.1	14.1	16.4	14.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1		1.6	1.1		0.0	0.0	0.0	0.6	0.0	
Delay (s)	24.4	7.9		26.4	12.4		14.1	14.2	14.1	17.0	14.4	
Level of Service	C	A		C	B		B	B	B	B	B	
Approach Delay (s)		10.1			12.8			14.1			16.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	52.8	Sum of lost time (s)	10.5
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



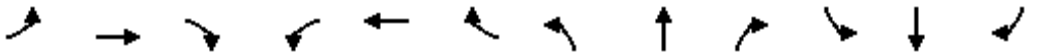
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	353	0	68	626	161	53	111	38	110	120	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	167	364	0	70	645	166	55	114	39	113	124	139
RTOR Reduction (vph)	0	0	0	0	0	120	0	0	32	0	0	112
Lane Group Flow (vph)	167	364	0	70	645	46	55	114	7	113	124	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	8.0	17.0		6.2	15.2	15.2	4.1	9.3	9.3	5.4	10.6	10.6
Effective Green, g (s)	8.0	17.0		6.2	15.2	15.2	4.1	9.3	9.3	5.4	10.6	10.6
Actuated g/C Ratio	0.15	0.31		0.11	0.28	0.28	0.07	0.17	0.17	0.10	0.19	0.19
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	500	1095		199	979	438	132	599	268	337	359	305
v/s Ratio Prot	c0.05	0.10		0.04	c0.18		0.03	0.03		c0.03	c0.07	
v/s Ratio Perm						0.03			0.00			0.02
v/c Ratio	0.33	0.33		0.35	0.66	0.10	0.42	0.19	0.02	0.34	0.35	0.09
Uniform Delay, d1	21.1	14.6		22.5	17.6	14.8	24.3	19.6	19.0	23.1	19.2	18.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.8	1.2	0.0	0.8	0.1	0.0	0.2	0.2	0.0
Delay (s)	21.2	14.6		23.3	18.8	14.8	25.0	19.6	19.0	23.3	19.4	18.2
Level of Service	C	B		C	B	B	C	B	B	C	B	B
Approach Delay (s)		16.7			18.4			20.9			20.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	54.9	Sum of lost time (s)	17.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



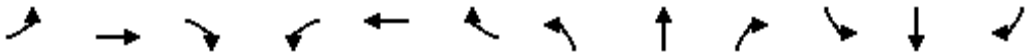
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	144	24	137	193	470	47	261	141	277	181	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3520	1583	1610	3367	1583	1770	1863	1583	1610	3308	
Flt Permitted		0.62	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2200	1583	1610	3367	1583	1770	1863	1583	1610	3308	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	153	26	146	205	500	50	278	150	295	193	11
RTOR Reduction (vph)	0	0	22	0	0	418	0	0	116	0	2	0
Lane Group Flow (vph)	0	172	4	114	237	82	50	278	34	162	335	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		7.5	7.5	8.9	8.9	8.9	12.2	12.2	12.2	11.4	11.4	
Effective Green, g (s)		7.5	7.5	8.9	8.9	8.9	12.2	12.2	12.2	11.4	11.4	
Actuated g/C Ratio		0.14	0.14	0.16	0.16	0.16	0.23	0.23	0.23	0.21	0.21	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		305	219	265	554	260	399	420	357	339	698	
v/s Ratio Prot				c0.07	0.07		0.03	c0.15		0.10	c0.10	
v/s Ratio Perm		c0.08	0.00			0.05			0.02			
v/c Ratio		0.56	0.02	0.43	0.43	0.32	0.13	0.66	0.09	0.48	0.48	
Uniform Delay, d1		21.7	20.1	20.3	20.3	19.9	16.6	19.0	16.5	18.7	18.7	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4	0.0	0.4	0.2	0.3	0.1	3.0	0.0	0.4	0.2	
Delay (s)		23.1	20.1	20.7	20.5	20.1	16.7	22.1	16.6	19.1	18.9	
Level of Service		C	C	C	C	C	B	C	B	B	B	
Approach Delay (s)		22.7			20.3			19.8			18.9	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



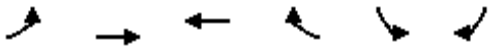
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	337	27	32	544	127	41	50	8	96	59	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1842		1770	1863	1583	1770	1823		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.72	1.00	1.00
Satd. Flow (perm)	1770	1842		1770	1863	1583	1331	1823		1332	1863	1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	66	370	30	35	598	140	45	55	9	105	65	85
RTOR Reduction (vph)	0	4	0	0	0	82	0	7	0	0	0	66
Lane Group Flow (vph)	66	396	0	35	598	58	45	57	0	105	65	19
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	4.9	21.2		2.9	19.2	19.2	10.2	10.2		10.2	10.2	10.2
Effective Green, g (s)	4.9	21.2		2.9	19.2	19.2	10.2	10.2		10.2	10.2	10.2
Actuated g/C Ratio	0.11	0.46		0.06	0.41	0.41	0.22	0.22		0.22	0.22	0.22
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	187	843		110	772	656	293	401		293	410	348
v/s Ratio Prot	c0.04	0.22		0.02	c0.32			0.03			0.03	
v/s Ratio Perm						0.04	0.03			c0.08		0.01
v/c Ratio	0.35	0.47		0.32	0.77	0.09	0.15	0.14		0.36	0.16	0.05
Uniform Delay, d1	19.2	8.7		20.8	11.7	8.2	14.6	14.5		15.3	14.6	14.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.3		1.2	4.7	0.0	0.2	0.1		0.5	0.1	0.0
Delay (s)	20.1	9.0		22.0	16.4	8.3	14.7	14.6		15.8	14.7	14.3
Level of Service	C	A		C	B	A	B	B		B	B	B
Approach Delay (s)		10.5			15.2			14.7			15.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	373	0	0	610	22	0	0	1	18	0	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00			1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00		1.00		0.78	1.00	
Satd. Flow (perm)	1770	3539			3539	1583		1611		1461	1583	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	74	381	0	0	622	22	0	0	1	18	0	174
RTOR Reduction (vph)	0	0	0	0	0	13	0	1	0	0	146	0
Lane Group Flow (vph)	74	381	0	0	622	9	0	0	0	18	28	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	3.9	19.7			12.5	12.5		5.1		5.1	5.1	
Effective Green, g (s)	3.9	19.7			12.5	12.5		5.1		5.1	5.1	
Actuated g/C Ratio	0.12	0.62			0.39	0.39		0.16		0.16	0.16	
Clearance Time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0			3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	216	2185			1386	620		257		233	253	
v/s Ratio Prot	c0.04	0.11			c0.18			0.00			c0.02	
v/s Ratio Perm						0.01				0.01		
v/c Ratio	0.34	0.17			0.45	0.01		0.00		0.08	0.11	
Uniform Delay, d1	12.8	2.6			7.2	5.9		11.3		11.4	11.5	
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.0			0.2	0.0		0.0		0.1	0.1	
Delay (s)	13.2	2.7			7.4	5.9		11.3		11.5	11.5	
Level of Service	B	A			A	A		B		B	B	
Approach Delay (s)		4.4			7.3			11.3			11.5	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	31.9	Sum of lost time (s)	10.4
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	96	400	608	52	64	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3497		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3497		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	430	654	56	69	174
RTOR Reduction (vph)	0	0	6	0	0	145
Lane Group Flow (vph)	103	430	704	0	69	29
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	7.4	24.5	14.1		6.1	6.1
Effective Green, g (s)	7.4	24.5	14.1		6.1	6.1
Actuated g/C Ratio	0.20	0.66	0.38		0.16	0.16
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	353	2337	1329		291	260
v/s Ratio Prot	c0.06	c0.12	c0.20		c0.04	
v/s Ratio Perm						0.02
v/c Ratio	0.29	0.18	0.53		0.24	0.11
Uniform Delay, d1	12.6	2.4	8.9		13.5	13.2
Progression Factor	1.05	0.84	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.0	0.4		0.2	0.1
Delay (s)	13.4	2.1	9.3		13.6	13.3
Level of Service	B	A	A		B	B
Approach Delay (s)		4.3	9.3		13.4	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	37.1	Sum of lost time (s)	9.5
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	337	23	179	586	107	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505		1770	3539	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	362	25	192	630	115	167
RTOR Reduction (vph)	5	0	0	0	0	140
Lane Group Flow (vph)	382	0	192	630	115	27
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	11.3		10.2	24.5	6.1	6.1
Effective Green, g (s)	11.3		10.2	24.5	6.1	6.1
Actuated g/C Ratio	0.30		0.27	0.66	0.16	0.16
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1067		486	2337	291	260
v/s Ratio Prot	c0.11		c0.11	c0.18	c0.06	0.02
v/s Ratio Perm						
v/c Ratio	0.36		0.40	0.27	0.40	0.11
Uniform Delay, d1	10.1		10.9	2.6	13.9	13.2
Progression Factor	1.00		1.46	0.79	1.00	1.00
Incremental Delay, d2	0.2		0.2	0.0	0.3	0.1
Delay (s)	10.3		16.1	2.1	14.2	13.2
Level of Service	B		B	A	B	B
Approach Delay (s)	10.3			5.4	13.6	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	37.1	Sum of lost time (s)	9.5
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	211	14	105	452	41	51
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	240	16	119	514	47	58

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	256	119	514	47	58
Volume Left (vph)	0	119	0	47	0
Volume Right (vph)	16	0	0	0	58
Hadj (s)	0.00	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.3	5.6	5.1	7.1	5.9
Degree Utilization, x	0.38	0.19	0.73	0.09	0.09
Capacity (veh/h)	651	624	686	466	551
Control Delay (s)	11.5	8.7	19.5	9.6	8.3
Approach Delay (s)	11.5	17.5		8.9	
Approach LOS	B	C		A	

Intersection Summary			
Delay	15.1		
Level of Service	C		
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	278	55	0	214	595	14	0	41	9	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	302	60	0	233	647	15	0	45	10	118
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	14	20.3	12.4
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	82%	0%	100%	0%	0%	100%	0%	0%	50%
Vol Thru, %	18%	0%	0%	100%	63%	0%	100%	93%	15%
Vol Right, %	0%	100%	0%	0%	37%	0%	0%	7%	35%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	109	7	185	148	214	397	212	26
LT Vol	41	0	7	0	0	214	0	0	13
Through Vol	9	0	0	185	93	0	397	198	4
RT Vol	0	109	0	0	55	0	0	14	9
Lane Flow Rate	54	118	8	201	161	233	431	231	28
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.128	0.242	0.016	0.405	0.311	0.443	0.761	0.404	0.067
Departure Headway (Hd)	8.472	7.354	7.859	7.351	7.087	6.861	6.355	6.308	8.549
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	426	492	458	494	510	521	565	565	421
Service Time	6.174	5.056	5.559	5.051	4.787	4.652	4.145	4.099	6.259
HCM Lane V/C Ratio	0.127	0.24	0.017	0.407	0.316	0.447	0.763	0.409	0.067
HCM Control Delay	12.4	12.4	10.7	15	13	15.1	26.8	13.4	11.9
HCM Lane LOS	B	B	B	B	B	C	D	B	B
HCM 95th-tile Q	0.4	0.9	0	1.9	1.3	2.2	6.8	1.9	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	13	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	14	4	10
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	11.9
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	27.2
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	24	184	16	0	12	469	65	0	52	6	10
Peak Hour Factor	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	214	19	0	14	545	76	0	60	7	12
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	13.3	38.1	11.5
HCM LOS	B	E	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	6	10	24	184	16	12	469	65	82	16
LT Vol	52	0	0	24	0	0	12	0	0	82	0
Through Vol	0	6	0	0	184	0	0	469	0	0	16
RT Vol	0	0	10	0	0	16	0	0	65	0	0
Lane Flow Rate	60	7	12	28	214	19	14	545	76	95	19
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.134	0.014	0.022	0.056	0.401	0.031	0.025	0.913	0.112	0.207	0.038
Departure Headway (Hd)	7.978	7.478	6.778	7.255	6.755	6.055	6.528	6.028	5.328	7.822	7.322
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	447	476	525	492	531	588	547	600	670	457	487
Service Time	5.763	5.263	4.563	5.024	4.524	3.824	4.28	3.78	3.08	5.599	5.099
HCM Lane V/C Ratio	0.134	0.015	0.023	0.057	0.403	0.032	0.026	0.908	0.113	0.208	0.039
HCM Control Delay	12	10.4	9.7	10.5	14	9	9.4	42.9	8.8	12.6	10.4
HCM Lane LOS	B	B	A	B	B	A	A	E	A	B	B
HCM 95th-tile Q	0.5	0	0.1	0.2	1.9	0.1	0.1	11.4	0.4	0.8	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	82	16	20
Peak Hour Factor	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	19	23
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	11.8
HCM LOS	B

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	3	259	26	0	30	586	27	0	57	7	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	282	28	0	33	637	29	0	62	8	16
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	12.6	14	11.2
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	72%	100%	0%	0%	100%	0%	0%	78%
Vol Thru, %	9%	0%	100%	0%	0%	100%	88%	9%
Vol Right, %	19%	0%	0%	100%	0%	0%	12%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	3	259	26	30	391	222	32
LT Vol	57	3	0	0	30	0	0	25
Through Vol	7	0	259	0	0	391	195	3
RT Vol	15	0	0	26	0	0	27	4
Lane Flow Rate	86	3	282	28	33	425	242	35
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.168	0.006	0.45	0.04	0.052	0.619	0.346	0.07
Departure Headway (Hd)	7.041	6.26	5.755	5.048	5.854	5.35	5.264	7.259
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	512	574	628	712	615	679	686	495
Service Time	4.756	3.969	3.464	2.758	3.554	3.05	2.964	4.977
HCM Lane V/C Ratio	0.168	0.005	0.449	0.039	0.054	0.626	0.353	0.071
HCM Control Delay	11.2	9	13.1	8	8.9	16.3	10.7	10.5
HCM Lane LOS	B	A	B	A	A	C	B	B
HCM 95th-tile Q	0.6	0	2.3	0.1	0.2	4.3	1.5	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	25	3	4
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	27	3	4
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.5
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	31.9
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	48	57	19	0	35	103	316	0	31	153	38
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	58	69	23	0	42	124	381	0	37	184	46
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	13.7	57	16
HCM LOS	B	F	C

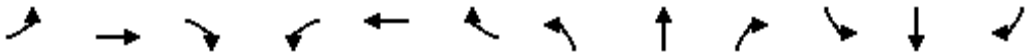
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	75%	0%	25%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	25%	0%	75%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	153	38	48	76	35	419	61	162	112
LT Vol	31	0	0	48	0	35	0	61	0	0
Through Vol	0	153	0	0	57	0	103	0	162	0
RT Vol	0	0	38	0	19	0	316	0	0	112
Lane Flow Rate	37	184	46	58	92	42	505	73	195	135
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.094	0.439	0.1	0.149	0.218	0.094	0.978	0.177	0.442	0.279
Departure Headway (Hd)	9.101	8.583	7.858	9.257	8.569	8.011	6.976	8.785	8.268	7.545
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	396	422	458	389	421	445	515	411	439	479
Service Time	6.81	6.292	5.567	6.969	6.281	5.807	4.771	6.485	5.968	5.245
HCM Lane V/C Ratio	0.093	0.436	0.1	0.149	0.219	0.094	0.981	0.178	0.444	0.282
HCM Control Delay	12.8	17.8	11.4	13.6	13.7	11.6	60.8	13.4	17.4	13.1
HCM Lane LOS	B	C	B	B	B	B	F	B	C	B
HCM 95th-tile Q	0.3	2.2	0.3	0.5	0.8	0.3	13	0.6	2.2	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	61	162	112
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	73	195	135
Number of Lanes	0	1	1	1

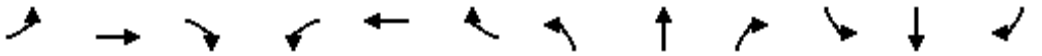
Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	15.2
HCM LOS	C

Lane



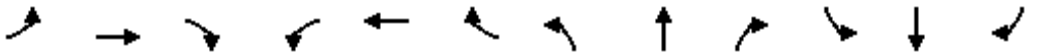
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	248	109	0	0	106	29	314	1	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	450	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	253	111	0	0	108	30	320	1	123	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	105	0	0	0
Lane Group Flow (vph)	253	111	0	0	108	5	160	161	18	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	32.1	46.0			10.0	10.0	9.2	9.2	9.2			
Effective Green, g (s)	32.1	46.0			10.0	10.0	9.2	9.2	9.2			
Actuated g/C Ratio	0.50	0.72			0.16	0.16	0.14	0.14	0.14			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	227	1347			556	248	243	243	228			
v/s Ratio Prot		0.06			c0.03							
v/s Ratio Perm	c0.56					0.00	0.10	0.10	0.01			
v/c Ratio	1.11	0.08			0.19	0.02	0.66	0.66	0.08			
Uniform Delay, d1	15.8	2.6			23.3	22.7	25.7	25.7	23.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	93.9	0.0			0.2	0.0	5.6	6.0	0.1			
Delay (s)	109.6	2.6			23.5	22.7	31.4	31.7	23.6			
Level of Service	F	A			C	C	C	C	C			
Approach Delay (s)		77.0			23.4			29.4			0.0	
Approach LOS		E			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	63.6	Sum of lost time (s)	12.3
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



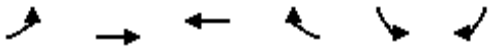
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	340	229	58	377	0	0	0	0	18	0	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1770	2787
Flt Permitted		1.00	1.00	0.60	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	1112	3539						1770	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	351	236	60	389	0	0	0	0	19	0	100
RTOR Reduction (vph)	0	0	147	0	0	0	0	0	0	0	0	88
Lane Group Flow (vph)	0	351	89	60	389	0	0	0	0	0	19	12
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		13.9	13.9	6.7	23.2						4.4	4.4
Effective Green, g (s)		13.9	13.9	6.7	23.2						4.4	4.4
Actuated g/C Ratio		0.38	0.38	0.18	0.63						0.12	0.12
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		1333	596	201	2225						211	332
v/s Ratio Prot		c0.10			0.11							
v/s Ratio Perm			0.06	c0.05							0.01	0.00
v/c Ratio		0.26	0.15	0.30	0.17						0.09	0.04
Uniform Delay, d1		8.0	7.6	13.1	2.9						14.5	14.4
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.1	0.2	0.3	0.1						0.1	0.0
Delay (s)		8.1	7.8	13.4	2.9						14.5	14.4
Level of Service		A	A	B	A						B	B
Approach Delay (s)		8.0			4.3			0.0			14.4	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	36.9	Sum of lost time (s)	11.9
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



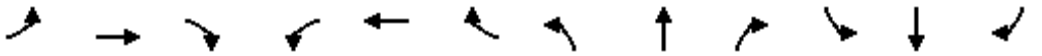
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	334	47	114	325	31	63	18	139	33	19	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4992		1770	5019		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4992		1770	5019		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	9	344	48	118	335	32	65	19	143	34	20	12
RTOR Reduction (vph)	0	13	0	0	6	0	0	0	128	0	0	11
Lane Group Flow (vph)	9	379	0	118	361	0	65	19	15	34	20	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.3	17.6		6.6	23.9		4.5	4.5	4.5	2.3	2.3	2.3
Effective Green, g (s)	1.3	17.6		6.6	23.9		4.5	4.5	4.5	2.3	2.3	2.3
Actuated g/C Ratio	0.03	0.40		0.15	0.54		0.10	0.10	0.10	0.05	0.05	0.05
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	52	1996		265	2726		351	190	161	92	97	82
v/s Ratio Prot	0.01	c0.08		c0.07	0.07		c0.02	0.01		c0.02	0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.17	0.19		0.45	0.13		0.19	0.10	0.09	0.37	0.21	0.01
Uniform Delay, d1	20.8	8.6		17.0	4.9		18.1	17.9	17.9	20.1	20.0	19.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.1		1.2	0.0		0.1	0.1	0.1	0.9	0.4	0.0
Delay (s)	24.1	8.6		18.2	5.0		18.2	18.0	18.0	21.1	20.4	19.8
Level of Service	C	A		B	A		B	B	B	C	C	B
Approach Delay (s)		9.0			8.2			18.0			20.6	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	44.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



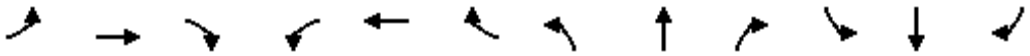
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	369	421	2	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.52	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	968	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	384	439	2	2	2
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	384	439	1	2	1
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	7.7	7.7	15.3	15.3	0.7	19.5
Effective Green, g (s)	7.7	7.7	15.3	15.3	0.7	19.5
Actuated g/C Ratio	0.22	0.22	0.44	0.44	0.02	0.57
Clearance Time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5	2.0	3.5
Lane Grp Cap (vph)	216	789	1569	702	69	894
v/s Ratio Prot		c0.11	c0.12			
v/s Ratio Perm	0.00			0.00	c0.00	0.00
v/c Ratio	0.00	0.49	0.28	0.00	0.03	0.00
Uniform Delay, d1	10.4	11.7	6.1	5.3	16.6	3.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.2	0.1	0.0	0.1	0.0
Delay (s)	10.4	11.9	6.2	5.3	16.6	3.3
Level of Service	B	B	A	A	B	A
Approach Delay (s)		11.8	6.2		9.9	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	34.5	Sum of lost time (s)	10.8
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	363	0	1	419	2	0	0	0	5	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	1770	3539		1770	3539	1583				1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00				1.00	1.00	1.00
Satd. Flow (perm)	1770	3539		1770	3539	1583				1770	1770	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	374	0	1	432	2	0	0	0	5	0	2
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	0	2
Lane Group Flow (vph)	1	374	0	1	432	1	0	0	0	2	3	0
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.4	8.6		0.8	9.0	9.0				0.4	0.4	0.4
Effective Green, g (s)	0.4	8.6		0.8	9.0	9.0				0.4	0.4	0.4
Actuated g/C Ratio	0.02	0.39		0.04	0.41	0.41				0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0				2.0	2.0	2.0
Lane Grp Cap (vph)	32	1396		64	1461	653				32	32	29
v/s Ratio Prot	c0.00	0.11		0.00	c0.12							
v/s Ratio Perm						0.00				0.00	c0.00	0.00
v/c Ratio	0.03	0.27		0.02	0.30	0.00				0.06	0.09	0.00
Uniform Delay, d1	10.5	4.5		10.1	4.3	3.8				10.5	10.5	10.5
Progression Factor	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.0	0.2	0.0				0.3	0.5	0.0
Delay (s)	10.7	4.6		10.2	4.4	3.8				10.8	11.0	10.5
Level of Service	B	A		B	A	A				B	B	B
Approach Delay (s)		4.6			4.4			0.0			10.8	
Approach LOS		A			A			A			B	

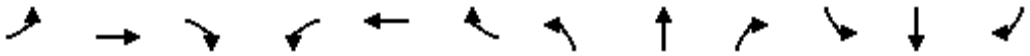
Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	21.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	279	24	56	192	3	5	1	40	2	2	3
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
Hourly flow rate (vph)	4	313	27	63	216	3	6	1	45	2	2	3

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	161	184	171	111	52	8
Volume Left (vph)	4	0	63	0	6	2
Volume Right (vph)	0	27	0	3	45	3
Hadj (s)	0.05	-0.07	0.22	0.01	-0.47	-0.17
Departure Headway (s)	4.9	4.8	5.2	5.0	4.8	5.1
Degree Utilization, x	0.22	0.25	0.24	0.15	0.07	0.01
Capacity (veh/h)	715	729	678	707	685	626
Control Delay (s)	8.1	8.2	8.6	7.7	8.1	8.2
Approach Delay (s)	8.2		8.2		8.1	8.2
Approach LOS	A		A		A	A

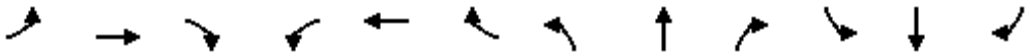
Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	29.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	280	7	30	154	13	5	6	16	20	2	21
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
Hourly flow rate (vph)	30	337	8	36	186	16	6	7	19	24	2	25

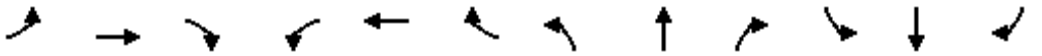
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	199	177	129	108	33	52
Volume Left (vph)	30	0	36	0	6	24
Volume Right (vph)	0	8	0	16	19	25
Hadj (s)	0.11	0.00	0.17	-0.07	-0.28	-0.17
Departure Headway (s)	5.1	4.9	5.2	5.0	5.0	5.1
Degree Utilization, x	0.28	0.24	0.19	0.15	0.05	0.07
Capacity (veh/h)	699	711	663	696	649	639
Control Delay (s)	8.8	8.3	8.2	7.7	8.3	8.5
Approach Delay (s)	8.6		8.0		8.3	8.5
Approach LOS	A		A		A	A

Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	29.6%	ICU Level of Service		A
Analysis Period (min)	15			



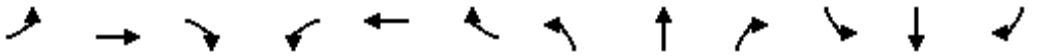
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	18	0	0	12	4	589	1	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3414		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3414		1681	1686	1583			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	102	19	0	0	13	4	633	1	11	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	6	0	0	0
Lane Group Flow (vph)	102	19	0	0	13	0	316	318	5	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	9.4	14.3			1.4		20.6	20.6	20.6			
Effective Green, g (s)	9.4	14.3			1.4		20.6	20.6	20.6			
Actuated g/C Ratio	0.22	0.33			0.03		0.48	0.48	0.48			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	386	1176			111		805	807	758			
v/s Ratio Prot	c0.06	0.01			c0.00							
v/s Ratio Perm							0.19	0.19	0.00			
v/c Ratio	0.26	0.02			0.12		0.39	0.39	0.01			
Uniform Delay, d1	13.9	9.6			20.2		7.2	7.2	5.9			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.3	0.0			0.2		0.3	0.3	0.0			
Delay (s)	14.2	9.6			20.4		7.5	7.5	5.9			
Level of Service	B	A			C		A	A	A			
Approach Delay (s)		13.5			20.4			7.5			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	43.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



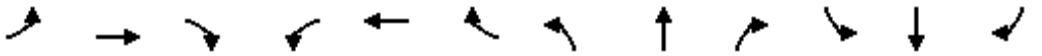
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	110	363	9	583	0	0	0	0	8	1	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1702	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1702	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	118	390	10	627	0	0	0	0	9	1	68
RTOR Reduction (vph)	0	0	219	0	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	118	171	10	627	0	0	0	0	5	5	13
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Effective Green, g (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Actuated g/C Ratio		0.44	0.44	0.03	0.56					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1553	695	51	1996					323	327	304
v/s Ratio Prot		0.03		0.01	c0.18							
v/s Ratio Perm			0.11							0.00	0.00	c0.01
v/c Ratio		0.08	0.25	0.20	0.31					0.02	0.02	0.04
Uniform Delay, d1		5.1	5.5	14.8	3.6					10.2	10.2	10.3
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.3	0.7	0.1					0.0	0.0	0.0
Delay (s)		5.1	5.8	15.5	3.7					10.2	10.2	10.3
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		5.6			3.9			0.0			10.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	31.2	Sum of lost time (s)	10.6
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



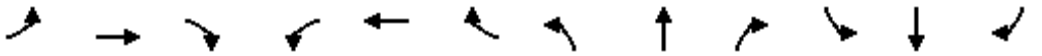
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	340	5	17	490	121	7	9	18	101	15	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3532		1770	3434		1770	1863	1583	1770	1673	
Flt Permitted	0.95	1.00		0.95	1.00		0.72	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3532		1770	3434		1349	1863	1583	1399	1673	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	40	374	5	19	538	133	8	10	20	111	16	34
RTOR Reduction (vph)	0	1	0	0	18	0	0	0	16	0	27	0
Lane Group Flow (vph)	40	378	0	19	653	0	8	10	4	111	23	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	1.8	15.0		0.8	14.0		6.3	6.3	6.3	6.3	6.3	
Effective Green, g (s)	1.8	15.0		0.8	14.0		6.3	6.3	6.3	6.3	6.3	
Actuated g/C Ratio	0.06	0.46		0.02	0.43		0.19	0.19	0.19	0.19	0.19	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	97	1625		43	1474		260	360	305	270	323	
v/s Ratio Prot	c0.02	0.11		0.01	c0.19			0.01			0.01	
v/s Ratio Perm							0.01		0.00	c0.08		
v/c Ratio	0.41	0.23		0.44	0.44		0.03	0.03	0.01	0.41	0.07	
Uniform Delay, d1	14.9	5.3		15.7	6.6		10.7	10.7	10.6	11.5	10.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1		2.6	0.2		0.0	0.0	0.0	0.4	0.0	
Delay (s)	15.9	5.4		18.3	6.8		10.7	10.7	10.6	11.9	10.8	
Level of Service	B	A		B	A		B	B	B	B	B	
Approach Delay (s)		6.4			7.1			10.7			11.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	32.6	Sum of lost time (s)	10.5
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



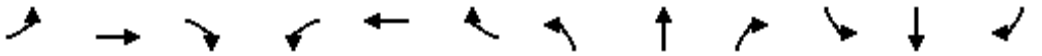
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	272	0	50	379	103	32	60	20	59	53	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	134	283	0	52	395	107	33	62	21	61	55	81
RTOR Reduction (vph)	0	0	0	0	0	82	0	0	17	0	0	64
Lane Group Flow (vph)	134	283	0	52	395	25	33	62	4	61	55	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	5.0	11.4		3.6	10.0	10.0	2.1	8.5	8.5	2.9	9.3	9.3
Effective Green, g (s)	5.0	11.4		3.6	10.0	10.0	2.1	8.5	8.5	2.9	9.3	9.3
Actuated g/C Ratio	0.12	0.26		0.08	0.23	0.23	0.05	0.20	0.20	0.07	0.21	0.21
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	395	929		146	815	364	85	693	310	229	399	339
v/s Ratio Prot	c0.04	0.08		0.03	c0.11		c0.02	0.02		0.02	c0.03	
v/s Ratio Perm						0.02			0.00			0.01
v/c Ratio	0.34	0.30		0.36	0.48	0.07	0.39	0.09	0.01	0.27	0.14	0.05
Uniform Delay, d1	17.7	12.8		18.8	14.5	13.1	20.0	14.3	14.1	19.2	13.8	13.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1		1.1	0.2	0.0	1.1	0.0	0.0	0.2	0.1	0.0
Delay (s)	17.9	12.9		19.9	14.6	13.1	21.1	14.3	14.1	19.5	13.9	13.6
Level of Service	B	B		B	B	B	C	B	B	B	B	B
Approach Delay (s)		14.5			14.8			16.2			15.5	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	43.4	Sum of lost time (s)	17.0
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



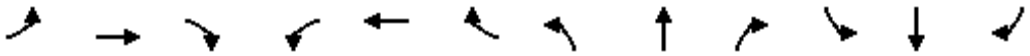
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	93	10	89	126	242	20	145	108	242	128	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3526	1583	1610	3368	1583	1770	1863	1583	1610	3293	
Flt Permitted		0.74	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2627	1583	1610	3368	1583	1770	1863	1583	1610	3293	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	9	108	12	103	147	281	23	169	126	281	149	13
RTOR Reduction (vph)	0	0	11	0	0	241	0	0	103	0	3	0
Lane Group Flow (vph)	0	117	1	81	169	40	23	169	23	146	294	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		4.0	4.0	5.8	5.8	5.8	7.3	7.3	7.3	9.2	9.2	
Effective Green, g (s)		4.0	4.0	5.8	5.8	5.8	7.3	7.3	7.3	9.2	9.2	
Actuated g/C Ratio		0.10	0.10	0.14	0.14	0.14	0.18	0.18	0.18	0.23	0.23	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		260	157	231	484	227	320	337	286	367	751	
v/s Ratio Prot				c0.05	0.05		0.01	c0.09		c0.09	0.09	
v/s Ratio Perm		c0.04	0.00			0.03			0.01			
v/c Ratio		0.45	0.01	0.35	0.35	0.18	0.07	0.50	0.08	0.40	0.39	
Uniform Delay, d1		17.1	16.4	15.6	15.5	15.2	13.7	14.9	13.7	13.2	13.2	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.0	0.3	0.2	0.1	0.0	0.4	0.0	0.3	0.1	
Delay (s)		17.6	16.4	15.9	15.7	15.3	13.7	15.3	13.8	13.5	13.3	
Level of Service		B	B	B	B	B	B	B	B	B	B	
Approach Delay (s)		17.5			15.5			14.6			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	14.0
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



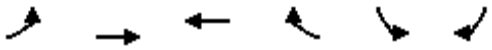
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	301	32	11	300	67	7	26	8	57	48	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1836		1770	1863	1583	1770	1798		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.72	1.00		0.73	1.00	1.00
Satd. Flow (perm)	1770	1836		1770	1863	1583	1335	1798		1358	1863	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	72	386	41	14	385	86	9	33	10	73	62	45
RTOR Reduction (vph)	0	5	0	0	0	57	0	8	0	0	0	34
Lane Group Flow (vph)	72	422	0	14	385	29	9	35	0	73	62	11
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	5.0	16.9		1.4	13.3	13.3	9.7	9.7		9.7	9.7	9.7
Effective Green, g (s)	5.0	16.9		1.4	13.3	13.3	9.7	9.7		9.7	9.7	9.7
Actuated g/C Ratio	0.12	0.42		0.03	0.33	0.33	0.24	0.24		0.24	0.24	0.24
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	221	775		61	619	526	323	436		329	451	383
v/s Ratio Prot	c0.04	c0.23		0.01	0.21			0.02			0.03	
v/s Ratio Perm						0.02	0.01			c0.05		0.01
v/c Ratio	0.33	0.54		0.23	0.62	0.05	0.03	0.08		0.22	0.14	0.03
Uniform Delay, d1	16.0	8.7		18.8	11.2	9.1	11.6	11.7		12.1	11.9	11.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.6		1.4	1.7	0.0	0.0	0.1		0.2	0.1	0.0
Delay (s)	16.6	9.3		20.2	12.9	9.1	11.6	11.8		12.4	12.0	11.6
Level of Service	B	A		C	B	A	B	B		B	B	B
Approach Delay (s)		10.3			12.5			11.7			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	378	0	1	319	14	0	0	1	6	0	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539		1770	3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	
Satd. Flow (perm)	1770	3539		1770	3539	1583		1611		1863	1583	
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	72	478	0	1	404	18	0	0	1	8	0	105
RTOR Reduction (vph)	0	0	0	0	0	9	0	1	0	0	95	0
Lane Group Flow (vph)	72	478	0	1	404	9	0	0	0	8	10	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	2.4	16.6		0.8	15.0	15.0		2.8		2.8	2.8	
Effective Green, g (s)	2.4	16.6		0.8	15.0	15.0		2.8		2.8	2.8	
Actuated g/C Ratio	0.08	0.54		0.03	0.49	0.49		0.09		0.09	0.09	
Clearance Time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	138	1919		46	1734	775		147		170	144	
v/s Ratio Prot	c0.04	c0.14		0.00	0.11			0.00			c0.01	
v/s Ratio Perm						0.01				0.00		
v/c Ratio	0.52	0.25		0.02	0.23	0.01		0.00		0.05	0.07	
Uniform Delay, d1	13.5	3.7		14.5	4.5	4.0		12.6		12.7	12.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.1		0.1	0.1	0.0		0.0		0.0	0.1	
Delay (s)	15.2	3.8		14.6	4.6	4.0		12.6		12.7	12.8	
Level of Service	B	A		B	A	A		B		B	B	
Approach Delay (s)		5.3			4.6			12.6			12.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	30.6	Sum of lost time (s)	10.4
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	67	351	313	38	28	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3482		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3482		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	72	377	337	41	30	120
RTOR Reduction (vph)	0	0	8	0	0	104
Lane Group Flow (vph)	72	377	370	0	30	16
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	6.3	21.5	12.2		4.4	4.4
Effective Green, g (s)	6.3	21.5	12.2		4.4	4.4
Actuated g/C Ratio	0.19	0.66	0.38		0.14	0.14
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	344	2348	1311		240	214
v/s Ratio Prot	c0.04	c0.11	c0.11		c0.02	
v/s Ratio Perm						0.01
v/c Ratio	0.21	0.16	0.28		0.12	0.08
Uniform Delay, d1	11.0	2.1	7.0		12.3	12.2
Progression Factor	0.95	1.39	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.0	0.1		0.1	0.1
Delay (s)	10.5	2.9	7.2		12.4	12.3
Level of Service	B	A	A		B	B
Approach Delay (s)		4.1	7.2		12.3	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	32.4	Sum of lost time (s)	9.5
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	337	94	151	264	23	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3423		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3423		1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	383	107	172	300	26	117
RTOR Reduction (vph)	25	0	0	0	0	101
Lane Group Flow (vph)	465	0	172	300	26	16
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	10.4		8.1	21.5	4.4	4.4
Effective Green, g (s)	10.4		8.1	21.5	4.4	4.4
Actuated g/C Ratio	0.32		0.25	0.66	0.14	0.14
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1098		442	2348	240	214
v/s Ratio Prot	c0.14		c0.10	c0.08	c0.01	0.01
v/s Ratio Perm						
v/c Ratio	0.42		0.39	0.13	0.11	0.07
Uniform Delay, d1	8.6		10.1	2.0	12.3	12.2
Progression Factor	1.00		1.26	0.85	1.00	1.00
Incremental Delay, d2	0.3		0.2	0.0	0.1	0.1
Delay (s)	8.9		12.9	1.7	12.4	12.3
Level of Service	A		B	A	B	B
Approach Delay (s)	8.9			5.8	12.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	32.4	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	347	36	66	140	10	25
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	390	40	74	157	11	28

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	430	74	157	11	28
Volume Left (vph)	0	74	0	11	0
Volume Right (vph)	40	0	0	0	28
Hadj (s)	-0.02	0.53	0.03	0.53	-0.67
Departure Headway (s)	4.6	5.5	5.0	6.6	5.4
Degree Utilization, x	0.56	0.11	0.22	0.02	0.04
Capacity (veh/h)	767	640	706	498	599
Control Delay (s)	13.3	8.0	8.1	8.5	7.4
Approach Delay (s)	13.3	8.1		7.7	
Approach LOS	B	A		A	

Intersection Summary			
Delay	11.3		
Level of Service	B		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	2	276	23	0	150	248	17	0	26	4	82
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	303	25	0	165	273	19	0	29	4	90
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	11.2	10.8	10
HCM LOS	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	87%	0%	100%	0%	0%	100%	0%	0%	36%
Vol Thru, %	13%	0%	0%	100%	80%	0%	100%	83%	29%
Vol Right, %	0%	100%	0%	0%	20%	0%	0%	17%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	82	2	184	115	150	165	100	14
LT Vol	26	0	2	0	0	150	0	0	5
Through Vol	4	0	0	184	92	0	165	83	4
RT Vol	0	82	0	0	23	0	0	17	5
Lane Flow Rate	33	90	2	202	126	165	182	110	15
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.065	0.15	0.004	0.339	0.207	0.289	0.293	0.173	0.03
Departure Headway (Hd)	7.143	6.008	6.533	6.029	5.888	6.302	5.798	5.678	6.918
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	501	597	548	596	610	570	620	632	517
Service Time	4.887	3.752	4.265	3.762	3.621	4.031	3.528	3.408	4.668
HCM Lane V/C Ratio	0.066	0.151	0.004	0.339	0.207	0.289	0.294	0.174	0.029
HCM Control Delay	10.4	9.8	9.3	11.8	10.2	11.6	10.9	9.6	9.9
HCM Lane LOS	B	A	A	B	B	B	B	A	A
HCM 95th-tile Q	0.2	0.5	0	1.5	0.8	1.2	1.2	0.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	5	4	5
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	4	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.9
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	20	256	43	0	4	157	31	0	6	4	6
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	291	49	0	5	178	35	0	7	5	7
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11.2	10	9
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	4	6	20	256	43	4	157	31	46	15
LT Vol	6	0	0	20	0	0	4	0	0	46	0
Through Vol	0	4	0	0	256	0	0	157	0	0	15
RT Vol	0	0	6	0	0	43	0	0	31	0	0
Lane Flow Rate	7	5	7	23	291	49	5	178	35	52	17
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.013	0.008	0.011	0.037	0.428	0.062	0.008	0.275	0.047	0.095	0.029
Departure Headway (Hd)	6.799	6.299	5.599	5.796	5.296	4.596	6.054	5.554	4.854	6.551	6.051
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	572	643	615	678	774	588	642	732	543	587
Service Time	4.499	3.999	3.299	3.556	3.056	2.356	3.824	3.324	2.624	4.341	3.841
HCM Lane V/C Ratio	0.013	0.009	0.011	0.037	0.429	0.063	0.009	0.277	0.048	0.096	0.029
HCM Control Delay	9.6	9	8.4	8.8	12	7.7	8.9	10.4	7.9	10	9
HCM Lane LOS	A	A	A	A	B	A	A	B	A	A	A
HCM 95th-tile Q	0	0	0	0.1	2.1	0.2	0	1.1	0.1	0.3	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	46	15	13
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	17	15
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.5
HCM LOS	A

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	366	17	0	9	241	21	0	32	3	15
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	416	19	0	10	274	24	0	36	3	17
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	14.3	9.3	9.8
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	64%	100%	0%	0%	100%	0%	0%	45%
Vol Thru, %	6%	0%	100%	0%	0%	100%	79%	25%
Vol Right, %	30%	0%	0%	100%	0%	0%	21%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	7	366	17	9	161	101	20
LT Vol	32	7	0	0	9	0	0	9
Through Vol	3	0	366	0	0	161	80	5
RT Vol	15	0	0	17	0	0	21	6
Lane Flow Rate	57	8	416	19	10	183	115	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.1	0.012	0.584	0.023	0.016	0.261	0.16	0.04
Departure Headway (Hd)	6.315	5.556	5.054	4.351	5.65	5.148	5.002	6.291
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	564	643	711	819	632	696	715	565
Service Time	4.09	3.3	2.798	2.095	3.398	2.895	2.75	4.075
HCM Lane V/C Ratio	0.101	0.012	0.585	0.023	0.016	0.263	0.161	0.041
HCM Control Delay	9.8	8.4	14.7	7.2	8.5	9.7	8.7	9.3
HCM Lane LOS	A	A	B	A	A	A	A	A
HCM 95th-tile Q	0.3	0	3.8	0.1	0	1	0.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	9	5	6
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	10	6	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	31	57	16	0	32	32	52	0	3	54	15
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	34	63	18	0	35	35	57	0	3	59	16
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	9.2	9	8.9
HCM LOS	A	A	A

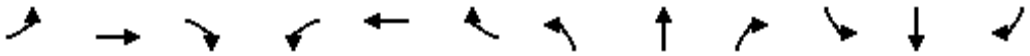
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	78%	0%	38%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	22%	0%	62%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	54	15	31	73	32	84	72	139	23
LT Vol	3	0	0	31	0	32	0	72	0	0
Through Vol	0	54	0	0	57	0	32	0	139	0
RT Vol	0	0	15	0	16	0	52	0	0	23
Lane Flow Rate	3	59	16	34	80	35	92	79	153	25
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.006	0.095	0.023	0.059	0.124	0.06	0.135	0.13	0.23	0.033
Departure Headway (Hd)	6.29	5.786	5.081	6.205	5.552	6.189	5.256	5.927	5.424	4.72
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	564	614	697	573	640	575	677	601	657	752
Service Time	4.079	3.575	2.869	3.985	3.331	3.967	3.033	3.7	3.196	2.491
HCM Lane V/C Ratio	0.005	0.096	0.023	0.059	0.125	0.061	0.136	0.131	0.233	0.033
HCM Control Delay	9.1	9.2	8	9.4	9.1	9.4	8.9	9.6	9.8	7.7
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.1	0.2	0.4	0.2	0.5	0.4	0.9	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	72	139	23
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	79	153	25
Number of Lanes	0	1	1	1

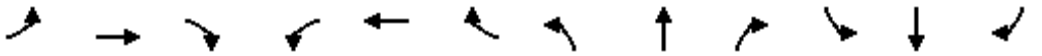
Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.5
HCM LOS	A

Lane



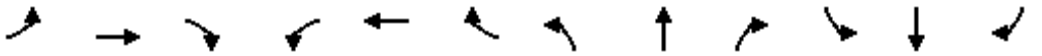
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	179	0	0	230	36	502	3	133	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	449	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	195	0	0	250	39	546	3	145	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	76	0	0	0
Lane Group Flow (vph)	179	195	0	0	250	6	273	276	69	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	32.2	46.5			10.4	10.4	14.7	14.7	14.7			
Effective Green, g (s)	32.2	46.5			10.4	10.4	14.7	14.7	14.7			
Actuated g/C Ratio	0.46	0.67			0.15	0.15	0.21	0.21	0.21			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	207	1244			528	236	355	356	334			
v/s Ratio Prot		0.10			c0.07							
v/s Ratio Perm	c0.40					0.00	0.16	0.16	0.04			
v/c Ratio	0.86	0.16			0.47	0.02	0.77	0.78	0.21			
Uniform Delay, d1	16.7	4.3			27.1	25.3	25.9	25.9	22.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	28.4	0.1			0.9	0.1	9.2	9.7	0.2			
Delay (s)	45.1	4.4			28.0	25.3	35.1	35.6	22.9			
Level of Service	D	A			C	C	D	D	C			
Approach Delay (s)		23.9			27.6			32.8			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	69.6	Sum of lost time (s)	12.3
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



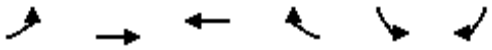
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	311	367	103	618	0	0	0	0	44	4	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1781	2787
Flt Permitted		1.00	1.00	0.27	1.00						0.96	1.00
Satd. Flow (perm)		3539	1583	497	3539						1781	2787
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	334	395	111	665	0	0	0	0	47	4	200
RTOR Reduction (vph)	0	0	302	0	0	0	0	0	0	0	0	172
Lane Group Flow (vph)	0	334	93	111	665	0	0	0	0	0	51	28
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		10.2	10.2	15.0	27.8						6.0	6.0
Effective Green, g (s)		10.2	10.2	15.0	27.8						6.0	6.0
Actuated g/C Ratio		0.24	0.24	0.35	0.65						0.14	0.14
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		837	374	172	2282						247	387
v/s Ratio Prot		c0.09			0.19							
v/s Ratio Perm			0.06	c0.22							0.03	0.01
v/c Ratio		0.40	0.25	0.65	0.29						0.21	0.07
Uniform Delay, d1		13.9	13.3	11.8	3.3						16.4	16.1
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.4	0.5	6.1	0.1						0.2	0.0
Delay (s)		14.3	13.8	17.9	3.4						16.6	16.2
Level of Service		B	B	B	A						B	B
Approach Delay (s)		14.0			5.5			0.0			16.2	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



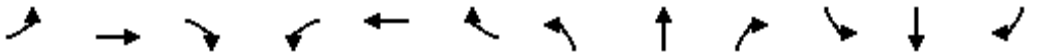
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	318	85	196	568	34	118	32	257	75	39	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4925		1770	5042		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4925		1770	5042		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	346	92	213	617	37	128	35	279	82	42	15
RTOR Reduction (vph)	0	38	0	0	3	0	0	0	253	0	0	14
Lane Group Flow (vph)	22	400	0	213	651	0	128	35	26	82	42	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.6	17.7		15.8	32.9		5.3	5.3	5.3	4.6	4.6	4.6
Effective Green, g (s)	1.6	17.7		15.8	32.9		5.3	5.3	5.3	4.6	4.6	4.6
Actuated g/C Ratio	0.03	0.31		0.28	0.58		0.09	0.09	0.09	0.08	0.08	0.08
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	50	1545		495	2941		322	175	148	144	151	129
v/s Ratio Prot	0.01	0.08		c0.12	c0.13		c0.04	0.02		c0.05	0.02	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.44	0.26		0.43	0.22		0.40	0.20	0.18	0.57	0.28	0.01
Uniform Delay, d1	27.0	14.5		16.6	5.6		24.0	23.6	23.5	24.9	24.3	23.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.4	0.1		0.6	0.1		0.3	0.2	0.2	3.1	0.4	0.0
Delay (s)	39.4	14.6		17.2	5.7		24.3	23.8	23.8	28.0	24.7	23.8
Level of Service	D	B		B	A		C	C	C	C	C	C
Approach Delay (s)		15.8			8.5			23.9			26.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	56.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



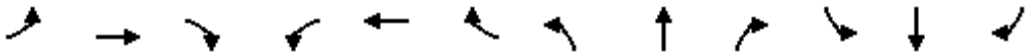
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	425	716	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3		4.3
Lane Util. Factor	1.00	0.95	0.95	1.00		1.00
Frt	1.00	1.00	1.00	0.85		0.85
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1770	3539	3539	1583		1583
Flt Permitted	0.43	1.00	1.00	1.00		1.00
Satd. Flow (perm)	801	3539	3539	1583		1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1	467	787	1	0	1
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	467	787	0	0	0
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	9.3	9.3	15.3	15.3		15.3
Effective Green, g (s)	9.3	9.3	15.3	15.3		15.3
Actuated g/C Ratio	0.29	0.29	0.48	0.48		0.48
Clearance Time (s)	3.0	3.0	4.3	4.3		4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5		3.5
Lane Grp Cap (vph)	233	1031	1697	759		759
v/s Ratio Prot		c0.13	c0.22			
v/s Ratio Perm	0.00			0.00		0.00
v/c Ratio	0.00	0.45	0.46	0.00		0.00
Uniform Delay, d1	8.0	9.2	5.6	4.3		4.3
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.0	0.1	0.2	0.0		0.0
Delay (s)	8.0	9.3	5.8	4.3		4.3
Level of Service	A	A	A	A		A
Approach Delay (s)		9.3	5.8		4.3	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	31.9	Sum of lost time (s)	10.8
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	394	1	5	674	1	1	0	2	11	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.95	1.00
Satd. Flow (prot)	1770	3538		1770	3539	1583		1667		1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	1.00
Satd. Flow (perm)	1770	3538		1770	3539	1583		1695		1770	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1	424	1	5	725	1	1	0	2	12	0	6
RTOR Reduction (vph)	0	0	0	0	0	1	0	3	0	0	0	6
Lane Group Flow (vph)	1	425	0	5	725	0	0	0	0	6	6	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.5	11.8		0.8	12.1	12.1		0.5		0.5	0.5	0.5
Effective Green, g (s)	0.5	11.8		0.8	12.1	12.1		0.5		0.5	0.5	0.5
Actuated g/C Ratio	0.02	0.47		0.03	0.48	0.48		0.02		0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	35	1663		56	1706	763		33		35	35	31
v/s Ratio Prot	0.00	0.12		c0.00	c0.20							
v/s Ratio Perm						0.00		0.00		c0.00	0.00	0.00
v/c Ratio	0.03	0.26		0.09	0.42	0.00		0.00		0.17	0.17	0.00
Uniform Delay, d1	12.1	4.0		11.8	4.2	3.4		12.1		12.1	12.1	12.1
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.3	0.2	0.0		0.0		0.8	0.8	0.0
Delay (s)	12.2	4.1		12.0	4.5	3.4		12.1		12.9	12.9	12.1
Level of Service	B	A		B	A	A		B		B	B	B
Approach Delay (s)		4.1			4.5			12.1			12.7	
Approach LOS		A			A			B			B	

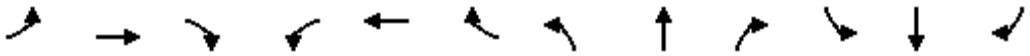
Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	25.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	252	7	97	398	5	7	0	60	8	0	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	11	300	8	115	474	6	8	0	71	10	0	6

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	161	158	352	243	80	15
Volume Left (vph)	11	0	115	0	8	10
Volume Right (vph)	0	8	0	6	71	6
Hadj (s)	0.07	0.00	0.20	0.02	-0.48	-0.07
Departure Headway (s)	5.4	5.4	5.3	5.1	5.3	5.8
Degree Utilization, x	0.24	0.24	0.52	0.34	0.12	0.03
Capacity (veh/h)	642	647	666	689	618	546
Control Delay (s)	9.0	8.8	12.6	9.6	9.0	9.0
Approach Delay (s)	8.9		11.4		9.0	9.0
Approach LOS	A		B		A	A

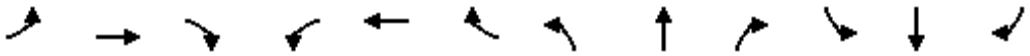
Intersection Summary				
Delay	10.4			
Level of Service	B			
Intersection Capacity Utilization	35.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	144	12	54	280	21	7	6	22	36	0	31
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
Hourly flow rate (vph)	77	173	14	65	337	25	8	7	27	43	0	37

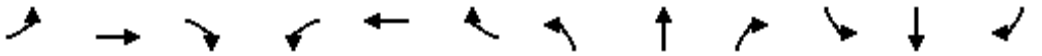
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	164	101	234	194	42	81
Volume Left (vph)	77	0	65	0	8	43
Volume Right (vph)	0	14	0	25	27	37
Hadj (s)	0.27	-0.07	0.17	-0.06	-0.30	-0.14
Departure Headway (s)	5.5	5.2	5.3	5.1	5.2	5.3
Degree Utilization, x	0.25	0.15	0.34	0.27	0.06	0.12
Capacity (veh/h)	621	664	660	691	615	610
Control Delay (s)	9.2	7.9	9.8	8.7	8.6	9.1
Approach Delay (s)	8.7		9.3		8.6	9.1
Approach LOS	A		A		A	A

Intersection Summary				
Delay	9.1			
Level of Service	A			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A	
Analysis Period (min)	15			



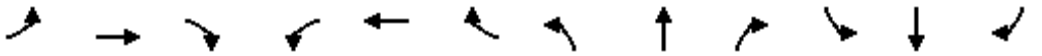
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	18	0	0	32	3	931	3	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3494		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3494		1681	1686	1583			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	105	18	0	0	32	3	940	3	15	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	7	0	0	0
Lane Group Flow (vph)	105	18	0	0	32	0	470	473	8	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	9.0	15.5			3.0		26.8	26.8	26.8			
Effective Green, g (s)	9.0	15.5			3.0		26.8	26.8	26.8			
Actuated g/C Ratio	0.18	0.31			0.06		0.53	0.53	0.53			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	316	1088			207		893	896	841			
v/s Ratio Prot	c0.06	0.01			c0.01							
v/s Ratio Perm							0.28	0.28	0.01			
v/c Ratio	0.33	0.02			0.16		0.53	0.53	0.01			
Uniform Delay, d1	18.1	12.1			22.5		7.7	7.7	5.6			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.5	0.0			0.1		0.6	0.6	0.0			
Delay (s)	18.5	12.1			22.6		8.2	8.2	5.6			
Level of Service	B	B			C		A	A	A			
Approach Delay (s)		17.6			22.6			8.2			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	11.6
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



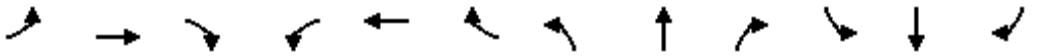
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	122	551	21	945	0	0	0	0	3	5	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1770	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	127	574	22	984	0	0	0	0	3	5	115
RTOR Reduction (vph)	0	0	318	0	0	0	0	0	0	0	0	93
Lane Group Flow (vph)	0	127	256	22	984	0	0	0	0	3	5	22
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		14.2	14.2	1.0	18.2					6.1	6.1	6.1
Effective Green, g (s)		14.2	14.2	1.0	18.2					6.1	6.1	6.1
Actuated g/C Ratio		0.45	0.45	0.03	0.57					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1575	704	55	2019					321	338	302
v/s Ratio Prot		0.04		0.01	c0.28							
v/s Ratio Perm			0.16							0.00	0.00	c0.01
v/c Ratio		0.08	0.36	0.40	0.49					0.01	0.01	0.07
Uniform Delay, d1		5.1	5.9	15.2	4.1					10.5	10.5	10.6
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.4	1.7	0.3					0.0	0.0	0.1
Delay (s)		5.1	6.3	16.9	4.3					10.5	10.5	10.7
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		6.1			4.6			0.0			10.6	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	31.9	Sum of lost time (s)	10.6
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



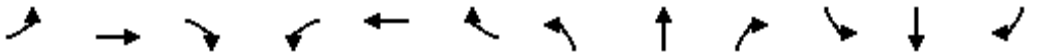
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	413	3	30	778	206	8	14	19	196	28	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3536		1770	3428		1770	1863	1583	1770	1680	
Flt Permitted	0.95	1.00		0.95	1.00		0.70	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3536		1770	3428		1308	1863	1583	1393	1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	435	3	32	819	217	8	15	20	206	29	55
RTOR Reduction (vph)	0	1	0	0	19	0	0	0	14	0	40	0
Lane Group Flow (vph)	67	437	0	32	1017	0	8	15	6	206	44	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	4.1	25.4		2.1	23.4		14.7	14.7	14.7	14.7	14.7	
Effective Green, g (s)	4.1	25.4		2.1	23.4		14.7	14.7	14.7	14.7	14.7	
Actuated g/C Ratio	0.08	0.48		0.04	0.44		0.28	0.28	0.28	0.28	0.28	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	137	1704		70	1522		364	519	441	388	468	
v/s Ratio Prot	c0.04	0.12		0.02	c0.30			0.01			0.03	
v/s Ratio Perm							0.01		0.00	c0.15		
v/c Ratio	0.49	0.26		0.46	0.67		0.02	0.03	0.01	0.53	0.09	
Uniform Delay, d1	23.3	8.1		24.7	11.6		13.8	13.8	13.7	16.1	14.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1		1.7	1.1		0.0	0.0	0.0	0.7	0.0	
Delay (s)	24.3	8.1		26.5	12.7		13.8	13.8	13.8	16.8	14.1	
Level of Service	C	A		C	B		B	B	B	B	B	
Approach Delay (s)		10.3			13.1			13.8			16.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	10.5
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



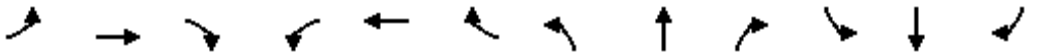
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	362	0	71	587	167	55	115	40	114	125	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	171	373	0	73	605	172	57	119	41	118	129	123
RTOR Reduction (vph)	0	0	0	0	0	126	0	0	34	0	0	99
Lane Group Flow (vph)	171	373	0	73	605	46	57	119	7	118	129	24
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	8.0	16.2		6.2	14.4	14.4	4.1	9.3	9.3	5.4	10.6	10.6
Effective Green, g (s)	8.0	16.2		6.2	14.4	14.4	4.1	9.3	9.3	5.4	10.6	10.6
Actuated g/C Ratio	0.15	0.30		0.11	0.27	0.27	0.08	0.17	0.17	0.10	0.20	0.20
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	507	1059		202	941	421	134	608	272	342	365	310
v/s Ratio Prot	c0.05	0.11		0.04	c0.17		0.03	0.03		c0.03	c0.07	
v/s Ratio Perm						0.03			0.00			0.02
v/c Ratio	0.34	0.35		0.36	0.64	0.11	0.43	0.20	0.03	0.35	0.35	0.08
Uniform Delay, d1	20.7	14.8		22.1	17.6	15.0	23.9	19.2	18.6	22.7	18.8	17.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.8	1.1	0.0	0.8	0.1	0.0	0.2	0.2	0.0
Delay (s)	20.8	14.9		22.9	18.7	15.0	24.7	19.3	18.6	22.9	19.0	17.8
Level of Service	C	B		C	B	B	C	B	B	C	B	B
Approach Delay (s)		16.8			18.3			20.6			19.9	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	54.1	Sum of lost time (s)	17.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



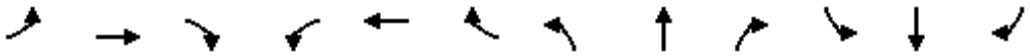
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	150	25	142	201	404	49	271	147	281	188	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3520	1583	1610	3368	1583	1770	1863	1583	1610	3310	
Flt Permitted		0.62	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2179	1583	1610	3368	1583	1770	1863	1583	1610	3310	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	160	27	151	214	430	52	288	156	299	200	11
RTOR Reduction (vph)	0	0	23	0	0	362	0	0	120	0	2	0
Lane Group Flow (vph)	0	180	4	118	247	68	52	288	36	167	341	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		7.8	7.8	8.6	8.6	8.6	12.7	12.7	12.7	11.6	11.6	
Effective Green, g (s)		7.8	7.8	8.6	8.6	8.6	12.7	12.7	12.7	11.6	11.6	
Actuated g/C Ratio		0.14	0.14	0.16	0.16	0.16	0.23	0.23	0.23	0.21	0.21	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		310	225	253	529	248	410	432	367	341	701	
v/s Ratio Prot				0.07	c0.07		0.03	c0.15		c0.10	0.10	
v/s Ratio Perm		c0.08	0.00			0.04			0.02			
v/c Ratio		0.58	0.02	0.47	0.47	0.27	0.13	0.67	0.10	0.49	0.49	
Uniform Delay, d1		21.9	20.2	21.0	21.0	20.3	16.6	19.1	16.5	18.9	18.9	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.8	0.0	0.5	0.2	0.2	0.1	3.0	0.0	0.4	0.2	
Delay (s)		23.7	20.2	21.5	21.2	20.5	16.7	22.1	16.5	19.4	19.1	
Level of Service		C	C	C	C	C	B	C	B	B	B	
Approach Delay (s)		23.2			20.9			19.8			19.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	14.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



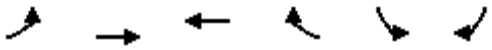
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	343	26	33	480	132	21	52	8	100	61	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1843		1770	1863	1583	1770	1825		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.71	1.00	1.00
Satd. Flow (perm)	1770	1843		1770	1863	1583	1329	1825		1330	1863	1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	66	377	29	36	527	145	23	57	9	110	67	64
RTOR Reduction (vph)	0	4	0	0	0	92	0	7	0	0	0	48
Lane Group Flow (vph)	66	402	0	36	527	53	23	59	0	110	67	16
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	4.8	17.8		2.8	15.8	15.8	10.5	10.5		10.5	10.5	10.5
Effective Green, g (s)	4.8	17.8		2.8	15.8	15.8	10.5	10.5		10.5	10.5	10.5
Actuated g/C Ratio	0.11	0.41		0.06	0.37	0.37	0.24	0.24		0.24	0.24	0.24
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	197	761		114	682	580	323	444		324	453	385
v/s Ratio Prot	c0.04	0.22		0.02	c0.28			0.03			0.04	
v/s Ratio Perm						0.03	0.02			c0.08		0.01
v/c Ratio	0.34	0.53		0.32	0.77	0.09	0.07	0.13		0.34	0.15	0.04
Uniform Delay, d1	17.7	9.5		19.2	12.1	8.9	12.5	12.7		13.4	12.8	12.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.5		1.2	5.2	0.1	0.1	0.1		0.5	0.1	0.0
Delay (s)	18.4	10.0		20.4	17.3	9.0	12.6	12.8		13.9	12.9	12.5
Level of Service	B	B		C	B	A	B	B		B	B	B
Approach Delay (s)		11.2			15.7			12.8			13.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	378	0	0	506	23	0	0	1	19	0	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00			1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00		1.00		0.77	1.00	
Satd. Flow (perm)	1770	3539			3539	1583		1611		1433	1583	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	78	386	0	0	516	23	0	0	1	19	0	182
RTOR Reduction (vph)	0	0	0	0	0	14	0	1	0	0	150	0
Lane Group Flow (vph)	78	386	0	0	516	9	0	0	0	19	32	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	2.5	17.3			11.5	11.5		5.2		5.2	5.2	
Effective Green, g (s)	2.5	17.3			11.5	11.5		5.2		5.2	5.2	
Actuated g/C Ratio	0.08	0.58			0.39	0.39		0.18		0.18	0.18	
Clearance Time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0			3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	149	2068			1374	615		283		251	278	
v/s Ratio Prot	c0.04	0.11			c0.15			0.00			c0.02	
v/s Ratio Perm						0.01				0.01		
v/c Ratio	0.52	0.19			0.38	0.01		0.00		0.08	0.12	
Uniform Delay, d1	13.0	2.9			6.5	5.6		10.1		10.2	10.3	
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.0			0.2	0.0		0.0		0.0	0.1	
Delay (s)	14.5	2.9			6.7	5.6		10.1		10.2	10.3	
Level of Service	B	A			A	A		B		B	B	
Approach Delay (s)		4.9			6.6			10.1			10.3	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	29.6	Sum of lost time (s)	10.4
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	100	406	504	54	67	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3488		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3488		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	108	437	542	58	72	181
RTOR Reduction (vph)	0	0	8	0	0	155
Lane Group Flow (vph)	108	437	592	0	72	26
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	7.2	23.0	12.8		4.9	4.9
Effective Green, g (s)	7.2	23.0	12.8		4.9	4.9
Actuated g/C Ratio	0.21	0.67	0.37		0.14	0.14
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	370	2366	1297		252	225
v/s Ratio Prot	c0.06	c0.12	c0.17		c0.04	
v/s Ratio Perm						0.02
v/c Ratio	0.29	0.18	0.46		0.29	0.11
Uniform Delay, d1	11.5	2.2	8.2		13.2	12.9
Progression Factor	1.03	0.89	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.0	0.3		0.2	0.1
Delay (s)	12.0	1.9	8.4		13.4	12.9
Level of Service	B	A	A		B	B
Approach Delay (s)		3.9	8.4		13.1	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	34.4	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	340	17	186	482	26	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3514		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3514		1770	3539	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	366	18	200	518	28	173
RTOR Reduction (vph)	3	0	0	0	0	148
Lane Group Flow (vph)	381	0	200	518	28	25
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	10.6		9.4	23.0	4.9	4.9
Effective Green, g (s)	10.6		9.4	23.0	4.9	4.9
Actuated g/C Ratio	0.31		0.27	0.67	0.14	0.14
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1082		483	2366	252	225
v/s Ratio Prot	c0.11		c0.11	c0.15	c0.02	0.02
v/s Ratio Perm						
v/c Ratio	0.35		0.41	0.22	0.11	0.11
Uniform Delay, d1	9.2		10.2	2.2	12.9	12.8
Progression Factor	1.00		1.33	0.86	1.00	1.00
Incremental Delay, d2	0.2		0.2	0.0	0.1	0.1
Delay (s)	9.4		13.8	1.9	12.9	12.9
Level of Service	A		B	A	B	B
Approach Delay (s)	9.4			5.2	12.9	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	34.4	Sum of lost time (s)	9.5
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	202	12	109	257	21	53
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	230	14	124	292	24	60

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	243	124	292	24	60
Volume Left (vph)	0	124	0	24	0
Volume Right (vph)	14	0	0	0	60
Hadj (s)	0.00	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.0	5.5	5.0	6.6	5.4
Degree Utilization, x	0.34	0.19	0.41	0.04	0.09
Capacity (veh/h)	705	638	707	503	606
Control Delay (s)	10.5	8.6	10.2	8.7	7.7
Approach Delay (s)	10.5	9.7		8.0	
Approach LOS	B	A		A	

Intersection Summary			
Delay	9.8		
Level of Service	A		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	266	55	0	214	451	14	0	41	9	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	289	60	0	233	490	15	0	45	10	118
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	13	15	11.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	82%	0%	100%	0%	0%	100%	0%	0%	50%
Vol Thru, %	18%	0%	0%	100%	62%	0%	100%	91%	15%
Vol Right, %	0%	100%	0%	0%	38%	0%	0%	9%	35%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	109	7	177	144	214	301	164	26
LT Vol	41	0	7	0	0	214	0	0	13
Through Vol	9	0	0	177	89	0	301	150	4
RT Vol	0	109	0	0	55	0	0	14	9
Lane Flow Rate	54	118	8	193	156	233	327	179	28
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.12	0.226	0.016	0.371	0.289	0.437	0.567	0.307	0.064
Departure Headway (Hd)	7.974	6.858	7.429	6.922	6.651	6.757	6.251	6.191	8.114
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	447	519	479	517	537	530	575	577	444
Service Time	5.77	4.654	5.212	4.705	4.434	4.527	4.021	3.961	5.814
HCM Lane V/C Ratio	0.121	0.227	0.017	0.373	0.291	0.44	0.569	0.31	0.063
HCM Control Delay	11.9	11.7	10.3	13.8	12.1	14.7	17	11.7	11.4
HCM Lane LOS	B	B	B	B	B	B	C	B	B
HCM 95th-tile Q	0.4	0.9	0	1.7	1.2	2.2	3.5	1.3	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	13	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	14	4	10
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	11.4
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	24	171	13	0	12	305	65	0	11	6	10
Peak Hour Factor	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	199	15	0	14	355	76	0	13	7	12
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11.3	14.1	9.6
HCM LOS	B	B	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	6	10	24	171	13	12	305	65	82	16
LT Vol	11	0	0	24	0	0	12	0	0	82	0
Through Vol	0	6	0	0	171	0	0	305	0	0	16
RT Vol	0	0	10	0	0	13	0	0	65	0	0
Lane Flow Rate	13	7	12	28	199	15	14	355	76	95	19
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.026	0.013	0.02	0.051	0.335	0.023	0.024	0.561	0.105	0.186	0.034
Departure Headway (Hd)	7.293	6.793	6.093	6.563	6.063	5.363	6.195	5.695	4.995	7.023	6.523
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	491	527	587	546	595	668	579	635	718	511	549
Service Time	5.034	4.534	3.834	4.293	3.793	3.093	3.922	3.422	2.722	4.758	4.258
HCM Lane V/C Ratio	0.026	0.013	0.02	0.051	0.334	0.022	0.024	0.559	0.106	0.186	0.035
HCM Control Delay	10.2	9.6	9	9.6	11.8	8.2	9.1	15.5	8.3	11.4	9.5
HCM Lane LOS	B	A	A	A	B	A	A	C	A	B	A
HCM 95th-tile Q	0.1	0	0.1	0.2	1.5	0.1	0.1	3.5	0.4	0.7	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	82	16	20
Peak Hour Factor	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	19	23
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.7
HCM LOS	B

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	3	252	27	0	31	396	28	0	59	7	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	274	29	0	34	430	30	0	64	8	17
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	11.6	10.8	10.6
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	72%	100%	0%	0%	100%	0%	0%	79%
Vol Thru, %	9%	0%	100%	0%	0%	100%	82%	9%
Vol Right, %	20%	0%	0%	100%	0%	0%	17%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	3	252	27	31	264	160	33
LT Vol	59	3	0	0	31	0	0	26
Through Vol	7	0	252	0	0	264	132	3
RT Vol	16	0	0	27	0	0	28	4
Lane Flow Rate	89	3	274	29	34	287	174	36
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.164	0.005	0.413	0.038	0.054	0.417	0.247	0.068
Departure Headway (Hd)	6.639	5.931	5.428	4.722	5.734	5.231	5.107	6.852
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	544	598	657	749	620	683	697	526
Service Time	4.34	3.72	3.216	2.51	3.512	3.008	2.885	4.555
HCM Lane V/C Ratio	0.164	0.005	0.417	0.039	0.055	0.42	0.25	0.068
HCM Control Delay	10.6	8.8	12	7.7	8.8	11.8	9.6	10.1
HCM Lane LOS	B	A	B	A	A	B	A	B
HCM 95th-tile Q	0.6	0	2	0.1	0.2	2.1	1	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	26	3	4
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	28	3	4
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.1
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	50	59	20	0	36	107	94	0	32	116	40
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	60	71	24	0	43	129	113	0	39	140	48
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	11.7	14.1	11.9
HCM LOS	B	B	B

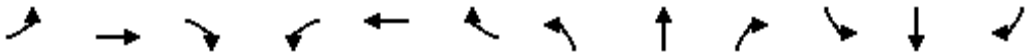
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	75%	0%	53%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	25%	0%	47%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	116	40	50	79	36	201	61	165	116
LT Vol	32	0	0	50	0	36	0	61	0	0
Through Vol	0	116	0	0	59	0	107	0	165	0
RT Vol	0	0	40	0	20	0	94	0	0	116
Lane Flow Rate	39	140	48	60	95	43	242	73	199	140
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.083	0.282	0.088	0.132	0.191	0.09	0.445	0.151	0.379	0.235
Departure Headway (Hd)	7.777	7.267	6.552	7.889	7.207	7.575	6.744	7.375	6.866	6.171
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	462	496	548	456	500	476	538	488	527	586
Service Time	5.497	4.986	4.271	5.612	4.93	5.275	4.444	5.094	4.584	3.871
HCM Lane V/C Ratio	0.084	0.282	0.088	0.132	0.19	0.09	0.45	0.15	0.378	0.239
HCM Control Delay	11.2	12.8	9.9	11.8	11.6	11	14.7	11.4	13.7	10.8
HCM Lane LOS	B	B	A	B	B	B	B	B	B	B
HCM 95th-tile Q	0.3	1.1	0.3	0.5	0.7	0.3	2.3	0.5	1.8	0.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	61	165	116
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	73	199	140
Number of Lanes	0	1	1	1

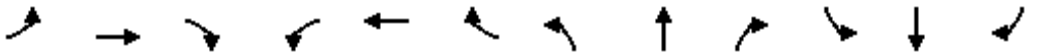
Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	12.3
HCM LOS	B

Lane



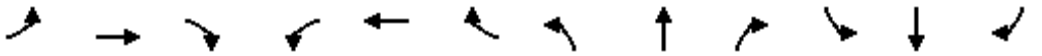
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	88	0	0	104	29	309	1	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.17	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	602	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	128	90	0	0	106	30	315	1	123	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	24	0	0	104	0	0	0
Lane Group Flow (vph)	128	90	0	0	106	6	157	159	19	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	24.0	38.4			10.5	10.5	8.8	8.8	8.8			
Effective Green, g (s)	24.0	38.4			10.5	10.5	8.8	8.8	8.8			
Actuated g/C Ratio	0.43	0.69			0.19	0.19	0.16	0.16	0.16			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	259	1286			668	298	266	266	250			
v/s Ratio Prot		0.05			c0.03							
v/s Ratio Perm	c0.21					0.00	0.09	0.09	0.01			
v/c Ratio	0.49	0.07			0.16	0.02	0.59	0.60	0.08			
Uniform Delay, d1	11.4	2.8			18.9	18.4	21.7	21.8	19.9			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.5	0.0			0.2	0.0	2.9	3.0	0.1			
Delay (s)	12.0	2.8			19.0	18.4	24.6	24.8	20.0			
Level of Service	B	A			B	B	C	C	C			
Approach Delay (s)		8.2			18.9			23.4			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	55.6	Sum of lost time (s)	12.3
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



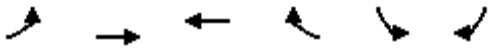
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	196	167	58	370	0	0	0	0	18	0	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1770	2787
Flt Permitted		1.00	1.00	0.69	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	1285	3539						1770	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	202	172	60	381	0	0	0	0	19	0	90
RTOR Reduction (vph)	0	0	119	0	0	0	0	0	0	0	0	82
Lane Group Flow (vph)	0	202	53	60	381	0	0	0	0	0	19	8
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		9.1	9.1	5.8	17.5						2.7	2.7
Effective Green, g (s)		9.1	9.1	5.8	17.5						2.7	2.7
Actuated g/C Ratio		0.31	0.31	0.20	0.59						0.09	0.09
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		1091	488	252	2099						162	255
v/s Ratio Prot		0.06			c0.11							
v/s Ratio Perm			0.03	c0.05							0.01	0.00
v/c Ratio		0.19	0.11	0.24	0.18						0.12	0.03
Uniform Delay, d1		7.5	7.3	10.0	2.7						12.3	12.2
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.1	0.1	0.2	0.1						0.1	0.0
Delay (s)		7.6	7.4	10.2	2.8						12.4	12.2
Level of Service		A	A	B	A						B	B
Approach Delay (s)		7.5			3.8			0.0			12.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	29.5	Sum of lost time (s)	11.9
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



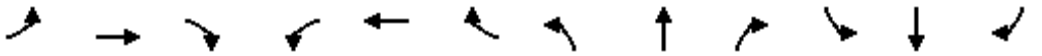
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	190	47	114	313	31	63	18	139	33	19	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4935		1770	5017		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4935		1770	5017		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	9	196	48	118	323	32	65	19	143	34	20	12
RTOR Reduction (vph)	0	29	0	0	6	0	0	0	128	0	0	11
Lane Group Flow (vph)	9	215	0	118	349	0	65	19	15	34	20	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.3	17.6		6.5	23.8		4.5	4.5	4.5	2.3	2.3	2.3
Effective Green, g (s)	1.3	17.6		6.5	23.8		4.5	4.5	4.5	2.3	2.3	2.3
Actuated g/C Ratio	0.03	0.40		0.15	0.54		0.10	0.10	0.10	0.05	0.05	0.05
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	52	1978		262	2719		351	190	162	92	97	82
v/s Ratio Prot	0.01	0.04		c0.07	c0.07		c0.02	0.01		c0.02	0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.17	0.11		0.45	0.13		0.19	0.10	0.09	0.37	0.21	0.01
Uniform Delay, d1	20.8	8.2		17.1	4.9		18.0	17.9	17.8	20.1	19.9	19.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0		1.2	0.0		0.1	0.1	0.1	0.9	0.4	0.0
Delay (s)	24.1	8.3		18.3	5.0		18.1	17.9	17.9	21.0	20.3	19.7
Level of Service	C	A		B	A		B	B	B	C	C	B
Approach Delay (s)		8.8			8.3			18.0			20.6	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	43.9	Sum of lost time (s)	13.0
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



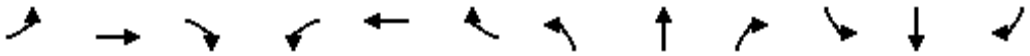
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	225	409	2	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.63	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1183	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	234	426	2	2	2
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	234	426	1	2	1
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	6.3	6.3	15.8	15.8	0.7	20.0
Effective Green, g (s)	6.3	6.3	15.8	15.8	0.7	20.0
Actuated g/C Ratio	0.19	0.19	0.47	0.47	0.02	0.60
Clearance Time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5	2.0	3.5
Lane Grp Cap (vph)	221	663	1664	744	71	942
v/s Ratio Prot		c0.07	c0.12			
v/s Ratio Perm	0.00			0.00	c0.00	0.00
v/c Ratio	0.00	0.35	0.26	0.00	0.03	0.00
Uniform Delay, d1	11.1	11.9	5.4	4.7	16.1	2.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1	0.1	0.0	0.1	0.0
Delay (s)	11.1	12.0	5.5	4.7	16.2	2.8
Level of Service	B	B	A	A	B	A
Approach Delay (s)		12.0	5.5		9.5	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	33.6	Sum of lost time (s)	10.8
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	219	0	1	407	2	0	0	0	5	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	1770	3539		1770	3539	1583				1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00				1.00	1.00	1.00
Satd. Flow (perm)	1770	3539		1770	3539	1583				1770	1770	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	226	0	1	420	2	0	0	0	5	0	2
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	0	2
Lane Group Flow (vph)	1	226	0	1	420	1	0	0	0	2	3	0
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.5	11.3		0.9	11.7	11.7				0.5	0.5	0.5
Effective Green, g (s)	0.5	11.3		0.9	11.7	11.7				0.5	0.5	0.5
Actuated g/C Ratio	0.02	0.46		0.04	0.47	0.47				0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0				2.0	2.0	2.0
Lane Grp Cap (vph)	35	1619		64	1676	749				35	35	32
v/s Ratio Prot	c0.00	0.06		0.00	c0.12							
v/s Ratio Perm						0.00				0.00	c0.00	0.00
v/c Ratio	0.03	0.14		0.02	0.25	0.00				0.06	0.09	0.00
Uniform Delay, d1	11.9	3.9		11.5	3.9	3.4				11.9	11.9	11.9
Progression Factor	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.0	0.1	0.0				0.2	0.4	0.0
Delay (s)	12.0	3.9		11.5	4.0	3.4				12.1	12.3	11.9
Level of Service	B	A		B	A	A				B	B	B
Approach Delay (s)		4.0			4.0			0.0			12.1	
Approach LOS		A			A			A			B	

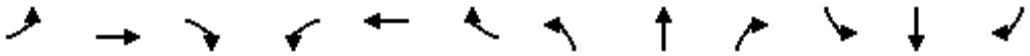
Intersection Summary			
HCM 2000 Control Delay	4.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	24.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	135	3	56	180	3	3	1	40	2	2	3
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
Hourly flow rate (vph)	4	152	3	63	202	3	3	1	45	2	2	3

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	80	79	164	104	49	8
Volume Left (vph)	4	0	63	0	3	2
Volume Right (vph)	0	3	0	3	45	3
Hadj (s)	0.06	0.00	0.23	0.01	-0.50	-0.17
Departure Headway (s)	4.9	4.9	5.0	4.8	4.4	4.7
Degree Utilization, x	0.11	0.11	0.23	0.14	0.06	0.01
Capacity (veh/h)	717	721	703	736	762	692
Control Delay (s)	7.3	7.2	8.3	7.3	7.6	7.8
Approach Delay (s)	7.3		7.9		7.6	7.8
Approach LOS	A		A		A	A

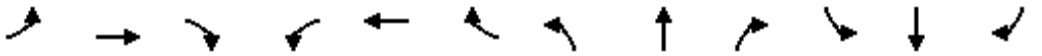
Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	75	7	30	137	13	5	6	16	20	2	21
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
Hourly flow rate (vph)	30	90	8	36	165	16	6	7	19	24	2	25

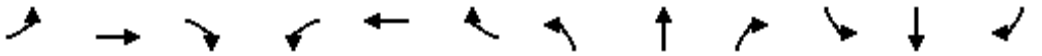
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	75	54	119	98	33	52
Volume Left (vph)	30	0	36	0	6	24
Volume Right (vph)	0	8	0	16	19	25
Hadj (s)	0.23	-0.08	0.19	-0.08	-0.28	-0.17
Departure Headway (s)	5.1	4.8	5.0	4.7	4.5	4.6
Degree Utilization, x	0.11	0.07	0.16	0.13	0.04	0.07
Capacity (veh/h)	687	725	698	739	748	731
Control Delay (s)	7.5	7.0	7.8	7.2	7.7	7.9
Approach Delay (s)	7.3		7.5		7.7	7.9
Approach LOS	A		A		A	A

Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	23.8%	ICU Level of Service	A	
Analysis Period (min)	15			



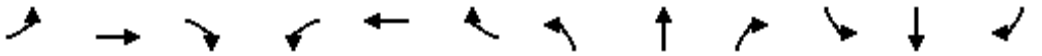
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	19	0	0	12	4	607	1	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3414		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3414		1681	1686	1583			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	106	20	0	0	13	4	653	1	11	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	6	0	0	0
Lane Group Flow (vph)	106	20	0	0	13	0	326	328	5	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	9.5	14.4			1.4		20.7	20.7	20.7			
Effective Green, g (s)	9.5	14.4			1.4		20.7	20.7	20.7			
Actuated g/C Ratio	0.22	0.33			0.03		0.48	0.48	0.48			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	389	1179			110		805	807	758			
v/s Ratio Prot	c0.06	0.01			c0.00							
v/s Ratio Perm							0.19	0.19	0.00			
v/c Ratio	0.27	0.02			0.12		0.40	0.41	0.01			
Uniform Delay, d1	14.0	9.7			20.3		7.3	7.3	5.9			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.3	0.0			0.2		0.3	0.3	0.0			
Delay (s)	14.3	9.7			20.5		7.6	7.6	5.9			
Level of Service	B	A			C		A	A	A			
Approach Delay (s)		13.5			20.5			7.6			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	43.2	Sum of lost time (s)	11.6
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



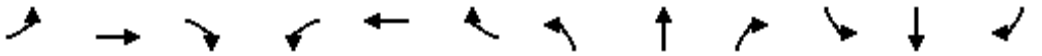
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	114	313	9	601	0	0	0	0	8	1	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1702	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1702	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	123	337	10	646	0	0	0	0	9	1	71
RTOR Reduction (vph)	0	0	189	0	0	0	0	0	0	0	0	57
Lane Group Flow (vph)	0	123	148	10	646	0	0	0	0	5	5	14
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Effective Green, g (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Actuated g/C Ratio		0.44	0.44	0.03	0.56					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1553	695	51	1996					323	327	304
v/s Ratio Prot		0.03		0.01	c0.18							
v/s Ratio Perm			0.09							0.00	0.00	c0.01
v/c Ratio		0.08	0.21	0.20	0.32					0.02	0.02	0.04
Uniform Delay, d1		5.1	5.4	14.8	3.6					10.2	10.2	10.3
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.2	0.7	0.1					0.0	0.0	0.0
Delay (s)		5.1	5.6	15.5	3.8					10.2	10.2	10.3
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		5.5			3.9			0.0			10.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	31.2	Sum of lost time (s)	10.6
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



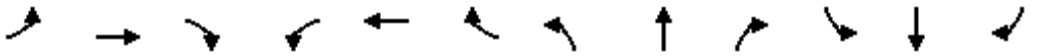
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	289	5	18	504	126	7	9	19	105	16	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3531		1770	3433		1770	1863	1583	1770	1678	
Flt Permitted	0.95	1.00		0.95	1.00		0.72	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3531		1770	3433		1346	1863	1583	1399	1678	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	41	318	5	20	554	138	8	10	21	115	18	35
RTOR Reduction (vph)	0	1	0	0	18	0	0	0	17	0	28	0
Lane Group Flow (vph)	41	322	0	20	674	0	8	10	4	115	25	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	1.9	15.5		0.8	14.4		6.5	6.5	6.5	6.5	6.5	
Effective Green, g (s)	1.9	15.5		0.8	14.4		6.5	6.5	6.5	6.5	6.5	
Actuated g/C Ratio	0.06	0.47		0.02	0.43		0.20	0.20	0.20	0.20	0.20	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	100	1643		42	1484		262	363	308	273	327	
v/s Ratio Prot	c0.02	0.09		0.01	c0.20			0.01			0.01	
v/s Ratio Perm							0.01		0.00	c0.08		
v/c Ratio	0.41	0.20		0.48	0.45		0.03	0.03	0.01	0.42	0.08	
Uniform Delay, d1	15.2	5.2		16.0	6.7		10.8	10.8	10.8	11.8	10.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1		3.1	0.2		0.0	0.0	0.0	0.4	0.0	
Delay (s)	16.2	5.3		19.1	6.9		10.9	10.9	10.8	12.1	11.0	
Level of Service	B	A		B	A		B	B	B	B	B	
Approach Delay (s)		6.5			7.2			10.8			11.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	33.3	Sum of lost time (s)	10.5
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



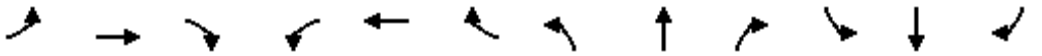
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	218	0	52	389	107	33	62	21	61	55	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	117	227	0	54	405	111	34	65	22	64	57	82
RTOR Reduction (vph)	0	0	0	0	0	86	0	0	18	0	0	64
Lane Group Flow (vph)	117	227	0	54	405	25	34	65	4	64	57	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.9	11.1		3.7	9.9	9.9	2.1	8.5	8.5	2.9	9.3	9.3
Effective Green, g (s)	4.9	11.1		3.7	9.9	9.9	2.1	8.5	8.5	2.9	9.3	9.3
Actuated g/C Ratio	0.11	0.26		0.09	0.23	0.23	0.05	0.20	0.20	0.07	0.22	0.22
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	389	909		151	811	362	86	696	311	230	401	340
v/s Ratio Prot	c0.03	0.06		0.03	c0.11		c0.02	0.02		0.02	c0.03	
v/s Ratio Perm						0.02			0.00			0.01
v/c Ratio	0.30	0.25		0.36	0.50	0.07	0.40	0.09	0.01	0.28	0.14	0.05
Uniform Delay, d1	17.6	12.7		18.6	14.5	13.0	19.9	14.2	14.0	19.2	13.7	13.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1		1.1	0.2	0.0	1.1	0.0	0.0	0.2	0.1	0.0
Delay (s)	17.7	12.8		19.7	14.7	13.1	21.0	14.2	14.0	19.4	13.8	13.5
Level of Service	B	B		B	B	B	C	B	B	B	B	B
Approach Delay (s)		14.5			14.8			16.1			15.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	43.2	Sum of lost time (s)	17.0
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



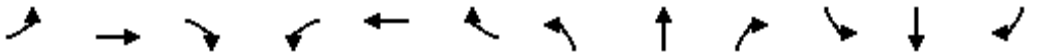
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	97	10	93	131	244	21	151	112	166	133	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3526	1583	1610	3367	1583	1770	1863	1583	1610	3312	
Flt Permitted		0.74	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2622	1583	1610	3367	1583	1770	1863	1583	1610	3312	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	9	113	12	108	152	284	24	176	130	193	155	13
RTOR Reduction (vph)	0	0	11	0	0	242	0	0	106	0	3	0
Lane Group Flow (vph)	0	122	1	84	176	42	24	176	24	118	240	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		4.0	4.0	5.8	5.8	5.8	7.4	7.4	7.4	8.3	8.3	
Effective Green, g (s)		4.0	4.0	5.8	5.8	5.8	7.4	7.4	7.4	8.3	8.3	
Actuated g/C Ratio		0.10	0.10	0.15	0.15	0.15	0.19	0.19	0.19	0.21	0.21	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		265	160	236	494	232	331	349	296	338	695	
v/s Ratio Prot				0.05	c0.05		0.01	c0.09		c0.07	0.07	
v/s Ratio Perm		c0.05	0.00			0.03			0.02			
v/c Ratio		0.46	0.01	0.36	0.36	0.18	0.07	0.50	0.08	0.35	0.35	
Uniform Delay, d1		16.7	16.0	15.2	15.2	14.8	13.2	14.4	13.2	13.3	13.3	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.0	0.3	0.2	0.1	0.0	0.4	0.0	0.2	0.1	
Delay (s)		17.2	16.0	15.5	15.3	14.9	13.3	14.8	13.3	13.5	13.4	
Level of Service		B	B	B	B	B	B	B	B	B	B	
Approach Delay (s)		17.1			15.1			14.1			13.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	39.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



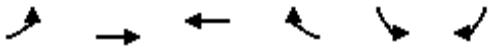
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	228	11	11	305	70	5	27	8	59	50	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1850		1770	1863	1583	1770	1801		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.72	1.00		0.73	1.00	1.00
Satd. Flow (perm)	1770	1850		1770	1863	1583	1332	1801		1356	1863	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	46	292	14	14	391	90	6	35	10	76	64	44
RTOR Reduction (vph)	0	2	0	0	0	60	0	7	0	0	0	32
Lane Group Flow (vph)	46	304	0	14	391	30	6	38	0	76	64	12
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	3.0	13.9		1.3	12.2	12.2	9.8	9.8		9.8	9.8	9.8
Effective Green, g (s)	3.0	13.9		1.3	12.2	12.2	9.8	9.8		9.8	9.8	9.8
Actuated g/C Ratio	0.08	0.38		0.04	0.33	0.33	0.26	0.26		0.26	0.26	0.26
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	143	695		62	614	521	352	477		359	493	419
v/s Ratio Prot	c0.03	0.16		0.01	c0.21			0.02			0.03	
v/s Ratio Perm						0.02	0.00			c0.06		0.01
v/c Ratio	0.32	0.44		0.23	0.64	0.06	0.02	0.08		0.21	0.13	0.03
Uniform Delay, d1	16.0	8.6		17.4	10.5	8.5	10.0	10.2		10.6	10.4	10.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.3		1.3	1.9	0.0	0.0	0.1		0.2	0.1	0.0
Delay (s)	17.0	8.9		18.7	12.4	8.5	10.1	10.3		10.8	10.4	10.1
Level of Service	B	A		B	B	A	B	B		B	B	B
Approach Delay (s)		10.0			11.9			10.2			10.5	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	37.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	265	0	1	321	15	0	0	1	6	0	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539		1770	3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	
Satd. Flow (perm)	1770	3539		1770	3539	1583		1611		1863	1583	
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	75	335	0	1	406	19	0	0	1	8	0	109
RTOR Reduction (vph)	0	0	0	0	0	10	0	1	0	0	99	0
Lane Group Flow (vph)	75	335	0	1	406	9	0	0	0	8	10	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	2.4	16.1		0.8	14.5	14.5		2.8		2.8	2.8	
Effective Green, g (s)	2.4	16.1		0.8	14.5	14.5		2.8		2.8	2.8	
Actuated g/C Ratio	0.08	0.53		0.03	0.48	0.48		0.09		0.09	0.09	
Clearance Time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	141	1892		47	1704	762		149		173	147	
v/s Ratio Prot	c0.04	0.09		0.00	c0.11			0.00			c0.01	
v/s Ratio Perm						0.01				0.00		
v/c Ratio	0.53	0.18		0.02	0.24	0.01		0.00		0.05	0.07	
Uniform Delay, d1	13.3	3.6		14.3	4.6	4.1		12.4		12.4	12.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	1.9	0.0		0.1	0.1	0.0		0.0		0.0	0.1	
Delay (s)	15.2	3.6		14.3	4.6	4.1		12.4		12.5	12.5	
Level of Service	B	A		B	A	A		B		B	B	
Approach Delay (s)		5.8			4.6			12.4			12.5	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	30.1	Sum of lost time (s)	10.4
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	70	237	315	40	29	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3479		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3479		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	75	255	339	43	31	125
RTOR Reduction (vph)	0	0	9	0	0	107
Lane Group Flow (vph)	75	255	373	0	31	18
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	6.0	19.2	10.2		4.3	4.3
Effective Green, g (s)	6.0	19.2	10.2		4.3	4.3
Actuated g/C Ratio	0.20	0.64	0.34		0.14	0.14
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	354	2264	1182		253	226
v/s Ratio Prot	c0.04	c0.07	c0.11		c0.02	
v/s Ratio Perm						0.01
v/c Ratio	0.21	0.11	0.32		0.12	0.08
Uniform Delay, d1	10.0	2.1	7.3		11.2	11.1
Progression Factor	0.93	1.92	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.0	0.2		0.1	0.1
Delay (s)	9.4	4.0	7.5		11.3	11.2
Level of Service	A	A	A		B	B
Approach Delay (s)		5.2	7.5		11.2	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	30.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	223	12	157	264	17	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3511		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3511		1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	253	14	178	300	19	122
RTOR Reduction (vph)	4	0	0	0	0	105
Lane Group Flow (vph)	263	0	178	300	19	17
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	8.6		7.6	19.2	4.3	4.3
Effective Green, g (s)	8.6		7.6	19.2	4.3	4.3
Actuated g/C Ratio	0.29		0.25	0.64	0.14	0.14
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1006		448	2264	253	226
v/s Ratio Prot	c0.07		c0.10	c0.08	0.01	c0.01
v/s Ratio Perm						
v/c Ratio	0.26		0.40	0.13	0.08	0.08
Uniform Delay, d1	8.3		9.3	2.1	11.1	11.1
Progression Factor	1.00		1.20	0.85	1.00	1.00
Incremental Delay, d2	0.1		0.2	0.0	0.0	0.1
Delay (s)	8.4		11.4	1.8	11.2	11.2
Level of Service	A		B	A	B	B
Approach Delay (s)	8.4			5.4	11.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	30.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	148	16	69	128	8	26
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	166	18	78	144	9	29

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	184	78	144	9	29
Volume Left (vph)	0	78	0	9	0
Volume Right (vph)	18	0	0	0	29
Hadj (s)	-0.02	0.53	0.03	0.53	-0.67
Departure Headway (s)	4.6	5.3	4.8	6.0	4.8
Degree Utilization, x	0.24	0.11	0.19	0.01	0.04
Capacity (veh/h)	769	666	739	562	694
Control Delay (s)	9.0	7.7	7.7	7.9	6.8
Approach Delay (s)	9.0	7.7		7.0	
Approach LOS	A	A		A	

Intersection Summary			
Delay	8.2		
Level of Service	A		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	2	132	23	0	150	236	17	0	26	4	82
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	145	25	0	165	259	19	0	29	4	90
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	9.4	10	9.3
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	87%	0%	100%	0%	0%	100%	0%	0%	36%
Vol Thru, %	13%	0%	0%	100%	66%	0%	100%	82%	29%
Vol Right, %	0%	100%	0%	0%	34%	0%	0%	18%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	82	2	88	67	150	157	96	14
LT Vol	26	0	2	0	0	150	0	0	5
Through Vol	4	0	0	88	44	0	157	79	4
RT Vol	0	82	0	0	23	0	0	17	5
Lane Flow Rate	33	90	2	97	74	165	173	105	15
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.06	0.135	0.004	0.156	0.114	0.267	0.256	0.152	0.027
Departure Headway (Hd)	6.545	5.413	6.328	5.825	5.584	5.831	5.329	5.204	6.392
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	543	655	561	610	635	612	669	683	563
Service Time	4.338	3.207	4.121	3.618	3.376	3.607	3.104	2.979	4.092
HCM Lane V/C Ratio	0.061	0.137	0.004	0.159	0.117	0.27	0.259	0.154	0.027
HCM Control Delay	9.8	9.1	9.1	9.7	9.1	10.7	10	8.9	9.3
HCM Lane LOS	A	A	A	A	A	B	A	A	A
HCM 95th-tile Q	0.2	0.5	0	0.5	0.4	1.1	1	0.5	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	5	4	5
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	4	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.3
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	20	92	2	0	4	144	31	0	3	4	6
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	105	2	0	5	164	35	0	3	5	7
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	8.8	8.9	8.2
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	4	6	20	92	2	4	144	31	46	15
LT Vol	3	0	0	20	0	0	4	0	0	46	0
Through Vol	0	4	0	0	92	0	0	144	0	0	15
RT Vol	0	0	6	0	0	2	0	0	31	0	0
Lane Flow Rate	3	5	7	23	105	2	5	164	35	52	17
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.006	0.007	0.009	0.036	0.151	0.003	0.007	0.231	0.043	0.086	0.026
Departure Headway (Hd)	6.077	5.577	4.877	5.71	5.21	4.51	5.585	5.085	4.385	5.933	5.433
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	588	641	732	628	689	793	642	707	817	604	659
Service Time	3.821	3.321	2.621	3.44	2.94	2.24	3.312	2.812	2.112	3.668	3.168
HCM Lane V/C Ratio	0.005	0.008	0.01	0.037	0.152	0.003	0.008	0.232	0.043	0.086	0.026
HCM Control Delay	8.9	8.4	7.7	8.7	8.9	7.3	8.4	9.3	7.3	9.2	8.3
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0.1	0.5	0	0	0.9	0.1	0.3	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	46	15	13
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	17	15
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	8.7
HCM LOS	A

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	167	18	0	9	233	22	0	33	3	16
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	190	20	0	10	265	25	0	37	3	18
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	9.3	8.9	9.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	63%	100%	0%	0%	100%	0%	0%	45%
Vol Thru, %	6%	0%	100%	0%	0%	100%	78%	25%
Vol Right, %	31%	0%	0%	100%	0%	0%	22%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	7	167	18	9	155	100	20
LT Vol	33	7	0	0	9	0	0	9
Through Vol	3	0	167	0	0	155	78	5
RT Vol	16	0	0	18	0	0	22	6
Lane Flow Rate	59	8	190	20	10	177	113	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.095	0.012	0.265	0.025	0.016	0.243	0.151	0.036
Departure Headway (Hd)	5.797	5.534	5.032	4.329	5.458	4.956	4.801	5.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	618	647	714	827	657	725	748	620
Service Time	3.537	3.262	2.759	2.056	3.182	2.68	2.525	3.512
HCM Lane V/C Ratio	0.095	0.012	0.266	0.024	0.015	0.244	0.151	0.037
HCM Control Delay	9.1	8.3	9.6	7.2	8.3	9.3	8.4	8.7
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0	1.1	0.1	0	0.9	0.5	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	9	5	6
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	10	6	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	8.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	32	59	17	0	33	33	35	0	3	53	16
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	35	65	19	0	36	36	38	0	3	58	18
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	9	8.8	8.7
HCM LOS	A	A	A

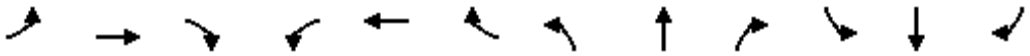
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	78%	0%	49%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	22%	0%	51%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	53	16	32	76	33	68	53	102	24
LT Vol	3	0	0	32	0	33	0	53	0	0
Through Vol	0	53	0	0	59	0	33	0	102	0
RT Vol	0	0	16	0	17	0	35	0	0	24
Lane Flow Rate	3	58	18	35	84	36	75	58	112	26
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.006	0.091	0.024	0.059	0.124	0.061	0.107	0.095	0.167	0.034
Departure Headway (Hd)	6.122	5.618	4.914	6.008	5.351	6.029	5.168	5.881	5.378	4.673
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	582	634	723	594	666	591	689	607	664	761
Service Time	3.89	3.386	2.681	3.77	3.114	3.793	2.932	3.641	3.138	2.433
HCM Lane V/C Ratio	0.005	0.091	0.025	0.059	0.126	0.061	0.109	0.096	0.169	0.034
HCM Control Delay	8.9	9	7.8	9.2	8.9	9.2	8.6	9.3	9.2	7.6
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.1	0.2	0.4	0.2	0.4	0.3	0.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	53	102	24
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	58	112	26
Number of Lanes	0	1	1	1

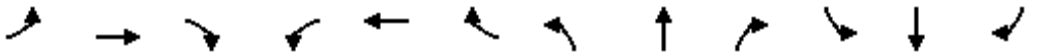
Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9
HCM LOS	A

Lane



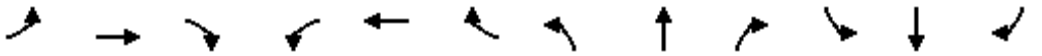
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	181	0	0	251	36	564	3	133	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	448	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	197	0	0	273	39	613	3	145	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	33	0	0	65	0	0	0
Lane Group Flow (vph)	190	197	0	0	273	6	306	310	80	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	32.3	46.8			10.6	10.6	16.5	16.5	16.5			
Effective Green, g (s)	32.3	46.8			10.6	10.6	16.5	16.5	16.5			
Actuated g/C Ratio	0.45	0.65			0.15	0.15	0.23	0.23	0.23			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	201	1216			523	234	386	387	364			
v/s Ratio Prot		0.11			c0.08							
v/s Ratio Perm	c0.42					0.00	0.18	0.18	0.05			
v/c Ratio	0.95	0.16			0.52	0.02	0.79	0.80	0.22			
Uniform Delay, d1	18.9	4.8			28.2	26.1	26.0	26.1	22.4			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	47.3	0.1			1.2	0.1	10.3	11.0	0.2			
Delay (s)	66.1	4.9			29.4	26.2	36.3	37.1	22.6			
Level of Service	E	A			C	C	D	D	C			
Approach Delay (s)		35.0			29.0			34.0			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	12.3
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



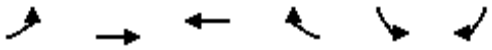
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	323	372	103	700	0	0	0	0	44	4	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1781	2787
Flt Permitted		1.00	1.00	0.27	1.00						0.96	1.00
Satd. Flow (perm)		3539	1583	497	3539						1781	2787
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	347	400	111	753	0	0	0	0	47	4	332
RTOR Reduction (vph)	0	0	305	0	0	0	0	0	0	0	0	276
Lane Group Flow (vph)	0	347	95	111	753	0	0	0	0	0	51	56
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		10.2	10.2	15.0	27.8						6.0	6.0
Effective Green, g (s)		10.2	10.2	15.0	27.8						6.0	6.0
Actuated g/C Ratio		0.24	0.24	0.35	0.65						0.14	0.14
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		837	374	172	2282						247	387
v/s Ratio Prot		c0.10			0.21							
v/s Ratio Perm			0.06	c0.22							0.03	0.02
v/c Ratio		0.41	0.25	0.65	0.33						0.21	0.14
Uniform Delay, d1		13.9	13.4	11.8	3.4						16.4	16.3
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.5	0.5	6.1	0.1						0.2	0.1
Delay (s)		14.4	13.8	17.9	3.6						16.6	16.4
Level of Service		B	B	B	A						B	B
Approach Delay (s)		14.1			5.4			0.0			16.4	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



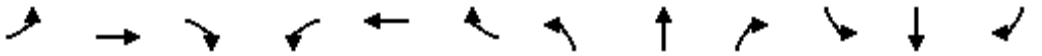
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	330	85	196	712	34	118	32	257	75	39	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4930		1770	5050		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4930		1770	5050		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	359	92	213	774	37	128	35	279	82	42	15
RTOR Reduction (vph)	0	36	0	0	3	0	0	0	252	0	0	14
Lane Group Flow (vph)	22	415	0	213	808	0	128	35	27	82	42	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.7	17.7		16.0	33.0		5.4	5.4	5.4	4.7	4.7	4.7
Effective Green, g (s)	1.7	17.7		16.0	33.0		5.4	5.4	5.4	4.7	4.7	4.7
Actuated g/C Ratio	0.03	0.31		0.28	0.58		0.10	0.10	0.10	0.08	0.08	0.08
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	52	1536		498	2933		326	177	150	146	154	130
v/s Ratio Prot	0.01	0.08		c0.12	c0.16		c0.04	0.02		c0.05	0.02	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.42	0.27		0.43	0.28		0.39	0.20	0.18	0.56	0.27	0.01
Uniform Delay, d1	27.1	14.7		16.7	5.9		24.2	23.7	23.7	25.1	24.4	23.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.2	0.1		0.6	0.1		0.3	0.2	0.2	2.9	0.4	0.0
Delay (s)	38.3	14.8		17.3	6.0		24.4	23.9	23.9	28.0	24.8	23.9
Level of Service	D	B		B	A		C	C	C	C	C	C
Approach Delay (s)		15.9			8.3			24.0			26.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



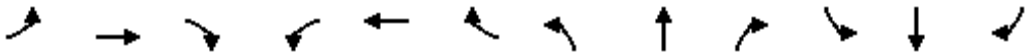
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	437	860	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3		4.3
Lane Util. Factor	1.00	0.95	0.95	1.00		1.00
Frt	1.00	1.00	1.00	0.85		0.85
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	1770	3539	3539	1583		1583
Flt Permitted	0.39	1.00	1.00	1.00		1.00
Satd. Flow (perm)	723	3539	3539	1583		1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1	480	945	1	0	1
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	480	945	0	0	0
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	10.3	10.3	16.2	16.2		16.2
Effective Green, g (s)	10.3	10.3	16.2	16.2		16.2
Actuated g/C Ratio	0.30	0.30	0.48	0.48		0.48
Clearance Time (s)	3.0	3.0	4.3	4.3		4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5		3.5
Lane Grp Cap (vph)	220	1078	1696	758		758
v/s Ratio Prot		c0.14	c0.27			
v/s Ratio Perm	0.00			0.00		0.00
v/c Ratio	0.00	0.45	0.56	0.00		0.00
Uniform Delay, d1	8.2	9.5	6.3	4.6		4.6
Progression Factor	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.0	0.1	0.4	0.0		0.0
Delay (s)	8.2	9.6	6.7	4.6		4.6
Level of Service	A	A	A	A		A
Approach Delay (s)		9.6	6.7		4.6	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	33.8	Sum of lost time (s)	10.8
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	406	1	5	818	1	1	0	2	11	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.95	1.00
Satd. Flow (prot)	1770	3538		1770	3539	1583		1667		1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	1.00
Satd. Flow (perm)	1770	3538		1770	3539	1583		1695		1770	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1	437	1	5	880	1	1	0	2	12	0	6
RTOR Reduction (vph)	0	0	0	0	0	1	0	3	0	0	0	6
Lane Group Flow (vph)	1	438	0	5	880	0	0	0	0	6	6	0
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.5	11.9		0.8	12.2	12.2		0.5		0.5	0.5	0.5
Effective Green, g (s)	0.5	11.9		0.8	12.2	12.2		0.5		0.5	0.5	0.5
Actuated g/C Ratio	0.02	0.47		0.03	0.48	0.48		0.02		0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	35	1670		56	1713	766		33		35	35	31
v/s Ratio Prot	0.00	0.12		c0.00	c0.25							
v/s Ratio Perm						0.00		0.00		c0.00	0.00	0.00
v/c Ratio	0.03	0.26		0.09	0.51	0.00		0.00		0.17	0.17	0.00
Uniform Delay, d1	12.1	4.0		11.8	4.5	3.4		12.1		12.1	12.1	12.1
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.3	0.3	0.0		0.0		0.8	0.8	0.0
Delay (s)	12.2	4.1		12.1	4.8	3.4		12.1		13.0	13.0	12.1
Level of Service	B	A		B	A	A		B		B	B	B
Approach Delay (s)		4.1			4.9			12.1			12.7	
Approach LOS		A			A			B			B	

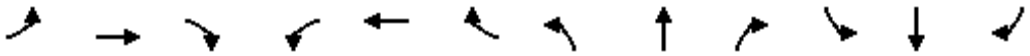
Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	25.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	264	9	97	542	5	28	0	60	8	0	5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	11	314	11	115	645	6	33	0	71	10	0	6

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	168	168	438	329	105	15
Volume Left (vph)	11	0	115	0	33	10
Volume Right (vph)	0	11	0	6	71	6
Hadj (s)	0.07	-0.01	0.17	0.02	-0.31	-0.07
Departure Headway (s)	5.8	5.7	5.4	5.3	5.8	6.2
Degree Utilization, x	0.27	0.27	0.66	0.48	0.17	0.03
Capacity (veh/h)	592	607	654	671	578	515
Control Delay (s)	9.7	9.6	17.1	11.9	9.9	9.4
Approach Delay (s)	9.7		14.8		9.9	9.4
Approach LOS	A		B		A	A

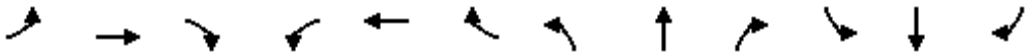
Intersection Summary				
Delay	12.9			
Level of Service	B			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	161	12	54	485	21	7	6	22	36	0	31
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
Hourly flow rate (vph)	77	194	14	65	584	25	8	7	27	43	0	37

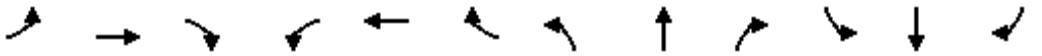
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	174	111	357	317	42	81
Volume Left (vph)	77	0	65	0	8	43
Volume Right (vph)	0	14	0	25	27	37
Hadj (s)	0.26	-0.06	0.13	-0.02	-0.30	-0.14
Departure Headway (s)	5.9	5.5	5.3	5.2	5.7	5.8
Degree Utilization, x	0.28	0.17	0.53	0.46	0.07	0.13
Capacity (veh/h)	587	623	662	683	567	565
Control Delay (s)	10.0	8.5	12.9	11.2	9.1	9.6
Approach Delay (s)	9.4		12.1		9.1	9.6
Approach LOS	A		B		A	A

Intersection Summary					
Delay	11.1				
Level of Service	B				
Intersection Capacity Utilization	41.2%	ICU Level of Service		A	
Analysis Period (min)	15				



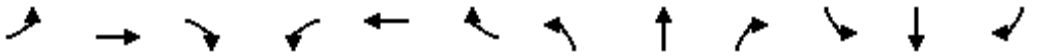
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	18	0	0	32	3	993	3	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.99		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3494		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3494		1681	1686	1583			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	105	18	0	0	32	3	1003	3	15	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	7	0	0	0
Lane Group Flow (vph)	105	18	0	0	32	0	501	505	8	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	9.1	15.5			2.9		28.5	28.5	28.5			
Effective Green, g (s)	9.1	15.5			2.9		28.5	28.5	28.5			
Actuated g/C Ratio	0.17	0.30			0.06		0.55	0.55	0.55			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	309	1052			194		919	922	865			
v/s Ratio Prot	c0.06	0.01			c0.01							
v/s Ratio Perm							0.30	0.30	0.01			
v/c Ratio	0.34	0.02			0.17		0.55	0.55	0.01			
Uniform Delay, d1	18.9	12.9			23.4		7.6	7.6	5.4			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.5	0.0			0.1		0.7	0.7	0.0			
Delay (s)	19.3	12.9			23.6		8.3	8.3	5.4			
Level of Service	B	B			C		A	A	A			
Approach Delay (s)		18.4			23.6			8.2			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	11.6
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



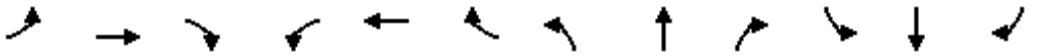
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	122	556	21	1007	0	0	0	0	3	5	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1770	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	127	579	22	1049	0	0	0	0	3	5	115
RTOR Reduction (vph)	0	0	317	0	0	0	0	0	0	0	0	93
Lane Group Flow (vph)	0	127	262	22	1049	0	0	0	0	3	5	22
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		14.6	14.6	1.0	18.6					6.1	6.1	6.1
Effective Green, g (s)		14.6	14.6	1.0	18.6					6.1	6.1	6.1
Actuated g/C Ratio		0.45	0.45	0.03	0.58					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1599	715	54	2037					317	334	298
v/s Ratio Prot		0.04		0.01	c0.30							
v/s Ratio Perm			0.17							0.00	0.00	c0.01
v/c Ratio		0.08	0.37	0.41	0.51					0.01	0.01	0.07
Uniform Delay, d1		5.0	5.8	15.4	4.1					10.6	10.7	10.8
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.4	1.8	0.3					0.0	0.0	0.1
Delay (s)		5.1	6.2	17.2	4.4					10.7	10.7	10.9
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		6.0			4.7			0.0			10.8	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	32.3	Sum of lost time (s)	10.6
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



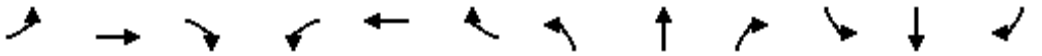
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	418	3	30	840	206	8	14	19	196	28	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3536		1770	3435		1770	1863	1583	1770	1680	
Flt Permitted	0.95	1.00		0.95	1.00		0.70	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3536		1770	3435		1308	1863	1583	1393	1680	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	440	3	32	884	217	8	15	20	206	29	55
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	15	0	41	0
Lane Group Flow (vph)	67	443	0	32	1084	0	8	15	5	206	43	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	5.7	29.7		2.2	26.2		14.8	14.8	14.8	14.8	14.8	
Effective Green, g (s)	5.7	29.7		2.2	26.2		14.8	14.8	14.8	14.8	14.8	
Actuated g/C Ratio	0.10	0.52		0.04	0.46		0.26	0.26	0.26	0.26	0.26	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	176	1836		68	1573		338	482	409	360	434	
v/s Ratio Prot	c0.04	0.13		c0.02	c0.32			0.01			0.03	
v/s Ratio Perm							0.01		0.00	c0.15		
v/c Ratio	0.38	0.24		0.47	0.69		0.02	0.03	0.01	0.57	0.10	
Uniform Delay, d1	24.1	7.6		26.9	12.3		15.8	15.8	15.8	18.4	16.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	0.1		1.9	1.3		0.0	0.0	0.0	1.4	0.0	
Delay (s)	24.6	7.6		28.8	13.6		15.8	15.9	15.8	19.8	16.2	
Level of Service	C	A		C	B		B	B	B	B	B	
Approach Delay (s)		9.9			14.0			15.8			18.8	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	57.2	Sum of lost time (s)	10.5
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



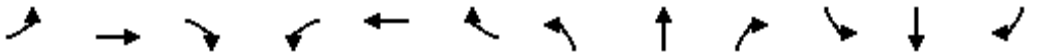
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	168	367	0	71	649	167	55	115	40	114	125	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	173	378	0	73	669	172	57	119	41	118	129	144
RTOR Reduction (vph)	0	0	0	0	0	126	0	0	34	0	0	112
Lane Group Flow (vph)	173	378	0	73	669	46	57	119	7	118	129	32
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	8.1	17.1		6.6	15.6	15.6	4.3	10.4	10.4	6.9	13.0	13.0
Effective Green, g (s)	8.1	17.1		6.6	15.6	15.6	4.3	10.4	10.4	6.9	13.0	13.0
Actuated g/C Ratio	0.14	0.29		0.11	0.27	0.27	0.07	0.18	0.18	0.12	0.22	0.22
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	479	1043		201	951	425	131	634	283	408	417	354
v/s Ratio Prot	c0.05	0.11		0.04	c0.19		c0.03	0.03		0.03	c0.07	
v/s Ratio Perm						0.03			0.00			0.02
v/c Ratio	0.36	0.36		0.36	0.70	0.11	0.44	0.19	0.03	0.29	0.31	0.09
Uniform Delay, d1	22.6	16.1		23.8	19.1	16.0	25.7	20.2	19.6	23.3	18.8	17.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1		0.8	1.9	0.0	0.8	0.1	0.0	0.1	0.2	0.0
Delay (s)	22.8	16.2		24.6	21.1	16.0	26.5	20.3	19.6	23.5	18.9	17.9
Level of Service	C	B		C	C	B	C	C	B	C	B	B
Approach Delay (s)		18.3			20.4			21.8			19.9	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



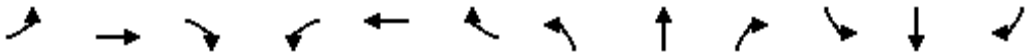
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	150	25	142	201	486	49	271	147	288	188	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3520	1583	1610	3368	1583	1770	1863	1583	1610	3309	
Flt Permitted		0.61	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2172	1583	1610	3368	1583	1770	1863	1583	1610	3309	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	160	27	151	214	517	52	288	156	306	200	11
RTOR Reduction (vph)	0	0	23	0	0	431	0	0	120	0	2	0
Lane Group Flow (vph)	0	180	4	118	247	86	52	288	36	168	347	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		7.9	7.9	9.3	9.3	9.3	12.9	12.9	12.9	11.8	11.8	
Effective Green, g (s)		7.9	7.9	9.3	9.3	9.3	12.9	12.9	12.9	11.8	11.8	
Actuated g/C Ratio		0.14	0.14	0.17	0.17	0.17	0.23	0.23	0.23	0.21	0.21	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		306	223	267	560	263	408	429	365	339	698	
v/s Ratio Prot				0.07	c0.07		0.03	c0.15		0.10	c0.10	
v/s Ratio Perm		c0.08	0.00			0.05			0.02			
v/c Ratio		0.59	0.02	0.44	0.44	0.33	0.13	0.67	0.10	0.50	0.50	
Uniform Delay, d1		22.5	20.7	21.0	21.0	20.5	17.0	19.6	16.9	19.4	19.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.9	0.0	0.4	0.2	0.3	0.1	3.2	0.0	0.4	0.2	
Delay (s)		24.3	20.7	21.4	21.2	20.8	17.1	22.8	17.0	19.8	19.6	
Level of Service		C	C	C	C	C	B	C	B	B	B	
Approach Delay (s)		23.9			21.0			20.4			19.7	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



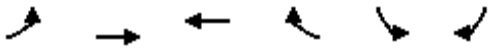
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	350	28	33	562	132	42	52	8	100	61	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1842		1770	1863	1583	1770	1825		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.71	1.00	1.00
Satd. Flow (perm)	1770	1842		1770	1863	1583	1329	1825		1330	1863	1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	68	385	31	36	618	145	46	57	9	110	67	87
RTOR Reduction (vph)	0	4	0	0	0	83	0	7	0	0	0	68
Lane Group Flow (vph)	68	412	0	36	618	62	46	59	0	110	67	19
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	5.0	22.3		3.0	20.3	20.3	10.2	10.2		10.2	10.2	10.2
Effective Green, g (s)	5.0	22.3		3.0	20.3	20.3	10.2	10.2		10.2	10.2	10.2
Actuated g/C Ratio	0.11	0.47		0.06	0.43	0.43	0.21	0.21		0.21	0.21	0.21
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	186	864		111	796	676	285	391		285	400	339
v/s Ratio Prot	c0.04	0.22		0.02	c0.33			0.03			0.04	
v/s Ratio Perm						0.04	0.03			c0.08		0.01
v/c Ratio	0.37	0.48		0.32	0.78	0.09	0.16	0.15		0.39	0.17	0.06
Uniform Delay, d1	19.8	8.6		21.3	11.7	8.1	15.2	15.1		16.0	15.2	14.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3		1.2	4.6	0.0	0.2	0.1		0.6	0.1	0.0
Delay (s)	20.7	8.9		22.5	16.2	8.1	15.4	15.3		16.6	15.3	14.9
Level of Service	C	A		C	B	A	B	B		B	B	B
Approach Delay (s)		10.6			15.1			15.3			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	47.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	388	0	0	629	23	0	0	1	19	0	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00			1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00		1.00		0.77	1.00	
Satd. Flow (perm)	1770	3539			3539	1583		1611		1433	1583	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	78	396	0	0	642	23	0	0	1	19	0	182
RTOR Reduction (vph)	0	0	0	0	0	14	0	1	0	0	153	0
Lane Group Flow (vph)	78	396	0	0	642	9	0	0	0	19	29	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	3.9	19.8			12.6	12.6		5.2		5.2	5.2	
Effective Green, g (s)	3.9	19.8			12.6	12.6		5.2		5.2	5.2	
Actuated g/C Ratio	0.12	0.62			0.39	0.39		0.16		0.16	0.16	
Clearance Time (s)	3.3	3.8			3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0			3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	215	2182			1389	621		260		232	256	
v/s Ratio Prot	c0.04	0.11			c0.18			0.00			c0.02	
v/s Ratio Perm						0.01				0.01		
v/c Ratio	0.36	0.18			0.46	0.01		0.00		0.08	0.12	
Uniform Delay, d1	13.0	2.7			7.2	6.0		11.3		11.4	11.5	
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.0			0.2	0.0		0.0		0.1	0.1	
Delay (s)	13.3	2.7			7.5	6.0		11.3		11.5	11.6	
Level of Service	B	A			A	A		B		B	B	
Approach Delay (s)		4.4			7.4			11.3			11.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	32.1	Sum of lost time (s)	10.4
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	100	416	627	54	67	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3497		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3497		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	108	447	674	58	72	181
RTOR Reduction (vph)	0	0	6	0	0	151
Lane Group Flow (vph)	108	447	726	0	72	30
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	7.8	25.3	14.5		6.2	6.2
Effective Green, g (s)	7.8	25.3	14.5		6.2	6.2
Actuated g/C Ratio	0.21	0.67	0.38		0.16	0.16
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	363	2356	1334		288	258
v/s Ratio Prot	c0.06	c0.13	c0.21		c0.04	
v/s Ratio Perm						0.02
v/c Ratio	0.30	0.19	0.54		0.25	0.11
Uniform Delay, d1	12.8	2.4	9.2		13.9	13.6
Progression Factor	1.08	0.84	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.0	0.5		0.2	0.1
Delay (s)	13.9	2.1	9.6		14.0	13.6
Level of Service	B	A	A		B	B
Approach Delay (s)		4.4	9.6		13.7	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	38.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	350	24	186	605	108	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505		1770	3539	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	376	26	200	651	116	173
RTOR Reduction (vph)	5	0	0	0	0	145
Lane Group Flow (vph)	397	0	200	651	116	28
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	11.7		10.6	25.3	6.2	6.2
Effective Green, g (s)	11.7		10.6	25.3	6.2	6.2
Actuated g/C Ratio	0.31		0.28	0.67	0.16	0.16
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1079		493	2356	288	258
v/s Ratio Prot	c0.11		c0.11	c0.18	c0.07	0.02
v/s Ratio Perm						
v/c Ratio	0.37		0.41	0.28	0.40	0.11
Uniform Delay, d1	10.3		11.1	2.6	14.2	13.5
Progression Factor	1.00		1.45	0.77	1.00	1.00
Incremental Delay, d2	0.2		0.2	0.0	0.3	0.1
Delay (s)	10.5		16.4	2.0	14.6	13.6
Level of Service	B		B	A	B	B
Approach Delay (s)	10.5			5.4	14.0	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	38.0	Sum of lost time (s)	9.5
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	219	14	109	462	42	53
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	249	16	124	525	48	60

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	265	124	525	48	60
Volume Left (vph)	0	124	0	48	0
Volume Right (vph)	16	0	0	0	60
Hadj (s)	0.00	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.3	5.7	5.2	7.2	6.0
Degree Utilization, x	0.39	0.19	0.75	0.09	0.10
Capacity (veh/h)	647	621	683	464	549
Control Delay (s)	11.8	8.8	20.8	9.7	8.4
Approach Delay (s)	11.8	18.5		9.0	
Approach LOS	B	C		A	

Intersection Summary			
Delay	15.8		
Level of Service	C		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	278	55	0	214	595	14	0	41	9	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	302	60	0	233	647	15	0	45	10	118
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	14	20.3	12.4
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	82%	0%	100%	0%	0%	100%	0%	0%	50%
Vol Thru, %	18%	0%	0%	100%	63%	0%	100%	93%	15%
Vol Right, %	0%	100%	0%	0%	37%	0%	0%	7%	35%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	109	7	185	148	214	397	212	26
LT Vol	41	0	7	0	0	214	0	0	13
Through Vol	9	0	0	185	93	0	397	198	4
RT Vol	0	109	0	0	55	0	0	14	9
Lane Flow Rate	54	118	8	201	161	233	431	231	28
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.128	0.242	0.016	0.405	0.311	0.443	0.761	0.404	0.067
Departure Headway (Hd)	8.472	7.354	7.859	7.351	7.087	6.861	6.355	6.308	8.549
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	426	492	458	494	510	521	565	565	421
Service Time	6.174	5.056	5.559	5.051	4.787	4.652	4.145	4.099	6.259
HCM Lane V/C Ratio	0.127	0.24	0.017	0.407	0.316	0.447	0.763	0.409	0.067
HCM Control Delay	12.4	12.4	10.7	15	13	15.1	26.8	13.4	11.9
HCM Lane LOS	B	B	B	B	B	C	D	B	B
HCM 95th-tile Q	0.4	0.9	0	1.9	1.3	2.2	6.8	1.9	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	13	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	14	4	10
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	11.9
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	27.2
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	24	184	16	0	12	469	65	0	52	6	10
Peak Hour Factor	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	214	19	0	14	545	76	0	60	7	12
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	13.3	38.1	11.5
HCM LOS	B	E	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	6	10	24	184	16	12	469	65	82	16
LT Vol	52	0	0	24	0	0	12	0	0	82	0
Through Vol	0	6	0	0	184	0	0	469	0	0	16
RT Vol	0	0	10	0	0	16	0	0	65	0	0
Lane Flow Rate	60	7	12	28	214	19	14	545	76	95	19
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.134	0.014	0.022	0.056	0.401	0.031	0.025	0.913	0.112	0.207	0.038
Departure Headway (Hd)	7.978	7.478	6.778	7.255	6.755	6.055	6.528	6.028	5.328	7.822	7.322
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	447	476	525	492	531	588	547	600	670	457	487
Service Time	5.763	5.263	4.563	5.024	4.524	3.824	4.28	3.78	3.08	5.599	5.099
HCM Lane V/C Ratio	0.134	0.015	0.023	0.057	0.403	0.032	0.026	0.908	0.113	0.208	0.039
HCM Control Delay	12	10.4	9.7	10.5	14	9	9.4	42.9	8.8	12.6	10.4
HCM Lane LOS	B	B	A	B	B	A	A	E	A	B	B
HCM 95th-tile Q	0.5	0	0.1	0.2	1.9	0.1	0.1	11.4	0.4	0.8	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	82	16	20
Peak Hour Factor	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	95	19	23
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	11.8
HCM LOS	B

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	3	269	27	0	31	601	28	0	59	7	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	292	29	0	34	653	30	0	64	8	17
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	13	14.6	11.3
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	72%	100%	0%	0%	100%	0%	0%	79%
Vol Thru, %	9%	0%	100%	0%	0%	100%	88%	9%
Vol Right, %	20%	0%	0%	100%	0%	0%	12%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	3	269	27	31	401	228	33
LT Vol	59	3	0	0	31	0	0	26
Through Vol	7	0	269	0	0	401	200	3
RT Vol	16	0	0	27	0	0	28	4
Lane Flow Rate	89	3	292	29	34	436	248	36
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.176	0.006	0.471	0.042	0.054	0.639	0.358	0.073
Departure Headway (Hd)	7.106	6.308	5.804	5.097	5.896	5.392	5.305	7.344
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	569	623	705	611	675	683	489
Service Time	4.822	4.023	3.518	2.811	3.596	3.092	3.005	5.064
HCM Lane V/C Ratio	0.176	0.005	0.469	0.041	0.056	0.646	0.363	0.074
HCM Control Delay	11.3	9.1	13.6	8	8.9	17.1	10.9	10.6
HCM Lane LOS	B	A	B	A	A	C	B	B
HCM 95th-tile Q	0.6	0	2.5	0.1	0.2	4.6	1.6	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	26	3	4
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	28	3	4
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.6
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	34
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	50	59	20	0	36	107	320	0	32	157	40
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	60	71	24	0	43	129	386	0	39	189	48
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	13.8	62.4	16
HCM LOS	B	F	C

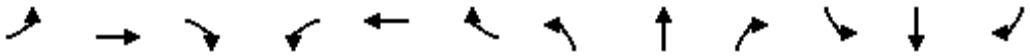
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	75%	0%	25%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	25%	0%	75%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	157	40	50	79	36	427	63	168	116
LT Vol	32	0	0	50	0	36	0	63	0	0
Through Vol	0	157	0	0	59	0	107	0	168	0
RT Vol	0	0	40	0	20	0	320	0	0	116
Lane Flow Rate	39	189	48	60	95	43	514	76	202	140
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.097	0.448	0.106	0.156	0.228	0.098	1	0.183	0.46	0.294
Departure Headway (Hd)	9.021	8.524	7.817	9.32	8.63	8.146	7.114	8.684	8.187	7.577
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	400	426	461	389	419	439	509	416	443	484
Service Time	6.709	6.212	5.517	6.993	6.322	5.91	4.877	6.374	5.877	5.182
HCM Lane V/C Ratio	0.098	0.444	0.104	0.154	0.227	0.098	1.01	0.183	0.456	0.289
HCM Control Delay	12.7	17.9	11.4	13.7	13.8	11.8	66.7	13.3	17.7	13.3
HCM Lane LOS	B	C	B	B	B	B	F	B	C	B
HCM 95th-tile Q	0.3	2.3	0.4	0.5	0.9	0.3	13.7	0.7	2.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	63	168	116
Peak Hour Factor	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	76	202	140
Number of Lanes	0	1	1	1

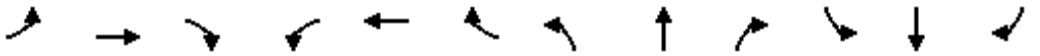
Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	15.4
HCM LOS	C

Lane



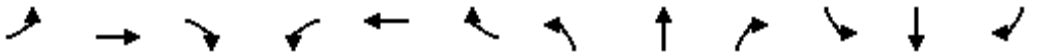
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	248	109	0	0	106	29	314	1	121	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Lane Util. Factor	0.97	1.00			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	1863			3539	1583	1681	1686	1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	450	1863			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	253	111	0	0	108	30	320	1	123	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	105	0	0	0
Lane Group Flow (vph)	253	111	0	0	108	5	160	161	18	0	0	0
Turn Type	custom	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	5					6	8		8			
Actuated Green, G (s)	32.1	46.0			10.0	10.0	9.2	9.2	9.2			
Effective Green, g (s)	32.1	46.0			10.0	10.0	9.2	9.2	9.2			
Actuated g/C Ratio	0.50	0.72			0.16	0.16	0.14	0.14	0.14			
Clearance Time (s)	3.5	4.9			5.3	5.3	3.5	3.5	3.5			
Vehicle Extension (s)	2.0	4.0			4.0	4.0	2.5	2.5	2.5			
Lane Grp Cap (vph)	227	1347			556	248	243	243	228			
v/s Ratio Prot		0.06			c0.03							
v/s Ratio Perm	c0.56					0.00	0.10	0.10	0.01			
v/c Ratio	1.11	0.08			0.19	0.02	0.66	0.66	0.08			
Uniform Delay, d1	15.8	2.6			23.3	22.7	25.7	25.7	23.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	93.9	0.0			0.2	0.0	5.6	6.0	0.1			
Delay (s)	109.6	2.6			23.5	22.7	31.4	31.7	23.6			
Level of Service	F	A			C	C	C	C	C			
Approach Delay (s)		77.0			23.4			29.4			0.0	
Approach LOS		E			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	63.6	Sum of lost time (s)	12.3
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



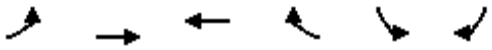
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	340	229	58	377	0	0	0	0	18	0	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	0.88
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1770	2787
Flt Permitted		1.00	1.00	0.60	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	1112	3539						1770	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	351	236	60	389	0	0	0	0	19	0	100
RTOR Reduction (vph)	0	0	147	0	0	0	0	0	0	0	0	88
Lane Group Flow (vph)	0	351	89	60	389	0	0	0	0	0	19	12
Turn Type		NA	Perm	custom	NA					Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2	1						4		4
Actuated Green, G (s)		13.9	13.9	6.7	23.2						4.4	4.4
Effective Green, g (s)		13.9	13.9	6.7	23.2						4.4	4.4
Actuated g/C Ratio		0.38	0.38	0.18	0.63						0.12	0.12
Clearance Time (s)		4.9	4.9	3.0	5.3						4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0						2.0	2.0
Lane Grp Cap (vph)		1333	596	201	2225						211	332
v/s Ratio Prot		c0.10			0.11							
v/s Ratio Perm			0.06	c0.05							0.01	0.00
v/c Ratio		0.26	0.15	0.30	0.17						0.09	0.04
Uniform Delay, d1		8.0	7.6	13.1	2.9						14.5	14.4
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.1	0.2	0.3	0.1						0.1	0.0
Delay (s)		8.1	7.8	13.4	2.9						14.5	14.4
Level of Service		A	A	B	A						B	B
Approach Delay (s)		8.0			4.3			0.0			14.4	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	36.9	Sum of lost time (s)	11.9
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



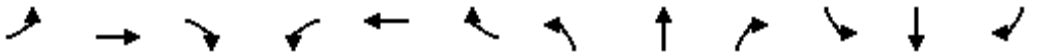
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	334	47	114	325	31	63	18	139	33	19	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4992		1770	5019		3433	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	4992		1770	5019		3433	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	9	344	48	118	335	32	65	19	143	34	20	12
RTOR Reduction (vph)	0	13	0	0	6	0	0	0	128	0	0	11
Lane Group Flow (vph)	9	379	0	118	361	0	65	19	15	34	20	1
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases									8			7
Actuated Green, G (s)	1.3	17.6		6.6	23.9		4.5	4.5	4.5	2.3	2.3	2.3
Effective Green, g (s)	1.3	17.6		6.6	23.9		4.5	4.5	4.5	2.3	2.3	2.3
Actuated g/C Ratio	0.03	0.40		0.15	0.54		0.10	0.10	0.10	0.05	0.05	0.05
Clearance Time (s)	3.0	4.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	5.0	4.0		3.0	4.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	52	1996		265	2726		351	190	161	92	97	82
v/s Ratio Prot	0.01	c0.08		c0.07	0.07		c0.02	0.01		c0.02	0.01	
v/s Ratio Perm									0.01			0.00
v/c Ratio	0.17	0.19		0.45	0.13		0.19	0.10	0.09	0.37	0.21	0.01
Uniform Delay, d1	20.8	8.6		17.0	4.9		18.1	17.9	17.9	20.1	20.0	19.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.1		1.2	0.0		0.1	0.1	0.1	0.9	0.4	0.0
Delay (s)	24.1	8.6		18.2	5.0		18.2	18.0	18.0	21.1	20.4	19.8
Level of Service	C	A		B	A		B	B	B	C	C	B
Approach Delay (s)		9.0			8.2			18.0			20.6	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	44.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



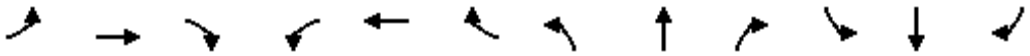
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1	369	421	2	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.52	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	968	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	384	439	2	2	2
RTOR Reduction (vph)	0	0	0	1	0	1
Lane Group Flow (vph)	1	384	439	1	2	1
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		4	6			
Permitted Phases	4			6	5	2
Actuated Green, G (s)	7.7	7.7	15.3	15.3	0.7	19.5
Effective Green, g (s)	7.7	7.7	15.3	15.3	0.7	19.5
Actuated g/C Ratio	0.22	0.22	0.44	0.44	0.02	0.57
Clearance Time (s)	3.0	3.0	4.3	4.3	3.5	4.3
Vehicle Extension (s)	2.0	2.0	3.5	3.5	2.0	3.5
Lane Grp Cap (vph)	216	789	1569	702	69	894
v/s Ratio Prot		c0.11	c0.12			
v/s Ratio Perm	0.00			0.00	c0.00	0.00
v/c Ratio	0.00	0.49	0.28	0.00	0.03	0.00
Uniform Delay, d1	10.4	11.7	6.1	5.3	16.6	3.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.2	0.1	0.0	0.1	0.0
Delay (s)	10.4	11.9	6.2	5.3	16.6	3.3
Level of Service	B	B	A	A	B	A
Approach Delay (s)		11.8	6.2		9.9	
Approach LOS		B	A		A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	34.5	Sum of lost time (s)	10.8
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	363	0	1	419	2	0	0	0	5	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00				0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	1770	3539		1770	3539	1583				1681	1681	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00				1.00	1.00	1.00
Satd. Flow (perm)	1770	3539		1770	3539	1583				1770	1770	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	374	0	1	432	2	0	0	0	5	0	2
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	0	0	2
Lane Group Flow (vph)	1	374	0	1	432	1	0	0	0	2	3	0
Turn Type	Prot	NA		Prot	NA	Perm				Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	0.4	8.6		0.8	9.0	9.0				0.4	0.4	0.4
Effective Green, g (s)	0.4	8.6		0.8	9.0	9.0				0.4	0.4	0.4
Actuated g/C Ratio	0.02	0.39		0.04	0.41	0.41				0.02	0.02	0.02
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0				2.0	2.0	2.0
Lane Grp Cap (vph)	32	1396		64	1461	653				32	32	29
v/s Ratio Prot	c0.00	0.11		0.00	c0.12							
v/s Ratio Perm						0.00				0.00	c0.00	0.00
v/c Ratio	0.03	0.27		0.02	0.30	0.00				0.06	0.09	0.00
Uniform Delay, d1	10.5	4.5		10.1	4.3	3.8				10.5	10.5	10.5
Progression Factor	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		0.0	0.2	0.0				0.3	0.5	0.0
Delay (s)	10.7	4.6		10.2	4.4	3.8				10.8	11.0	10.5
Level of Service	B	A		B	A	A				B	B	B
Approach Delay (s)		4.6			4.4			0.0			10.8	
Approach LOS		A			A			A			B	

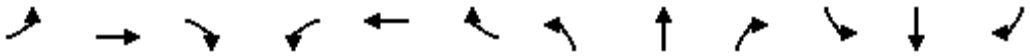
Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	21.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	279	24	56	192	3	5	1	40	2	2	3
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
Hourly flow rate (vph)	4	313	27	63	216	3	6	1	45	2	2	3

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	161	184	171	111	52	8
Volume Left (vph)	4	0	63	0	6	2
Volume Right (vph)	0	27	0	3	45	3
Hadj (s)	0.05	-0.07	0.22	0.01	-0.47	-0.17
Departure Headway (s)	4.9	4.8	5.2	5.0	4.8	5.1
Degree Utilization, x	0.22	0.25	0.24	0.15	0.07	0.01
Capacity (veh/h)	715	729	678	707	685	626
Control Delay (s)	8.1	8.2	8.6	7.7	8.1	8.2
Approach Delay (s)	8.2		8.2		8.1	8.2
Approach LOS	A		A		A	A

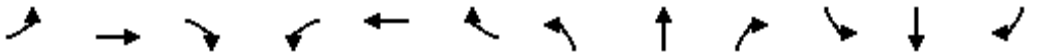
Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	29.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	280	7	30	154	13	5	6	16	20	2	21
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
Hourly flow rate (vph)	30	337	8	36	186	16	6	7	19	24	2	25

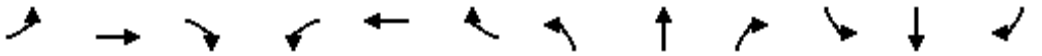
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	199	177	129	108	33	52
Volume Left (vph)	30	0	36	0	6	24
Volume Right (vph)	0	8	0	16	19	25
Hadj (s)	0.11	0.00	0.17	-0.07	-0.28	-0.17
Departure Headway (s)	5.1	4.9	5.2	5.0	5.0	5.1
Degree Utilization, x	0.28	0.24	0.19	0.15	0.05	0.07
Capacity (veh/h)	699	711	663	696	649	639
Control Delay (s)	8.8	8.3	8.2	7.7	8.3	8.5
Approach Delay (s)	8.6		8.0		8.3	8.5
Approach LOS	A		A		A	A

Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	29.6%	ICU Level of Service	A	
Analysis Period (min)	15			



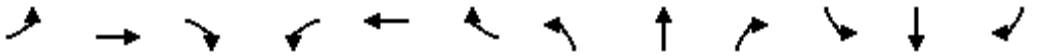
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	19	0	0	12	4	612	1	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95	1.00			
Frt	1.00	1.00			0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			3414		1681	1686	1583			
Flt Permitted	0.95	1.00			1.00		0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			3414		1681	1686	1583			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	106	20	0	0	13	4	658	1	11	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	6	0	0	0
Lane Group Flow (vph)	106	20	0	0	13	0	329	330	5	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	1	6			2			4				
Permitted Phases							4		4			
Actuated Green, G (s)	9.5	14.4			1.4		20.8	20.8	20.8			
Effective Green, g (s)	9.5	14.4			1.4		20.8	20.8	20.8			
Actuated g/C Ratio	0.22	0.33			0.03		0.48	0.48	0.48			
Clearance Time (s)	3.5	3.6			3.6		4.5	4.5	4.5			
Vehicle Extension (s)	2.5	2.0			2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)	388	1176			110		807	809	760			
v/s Ratio Prot	c0.06	0.01			c0.00							
v/s Ratio Perm							0.20	0.20	0.00			
v/c Ratio	0.27	0.02			0.12		0.41	0.41	0.01			
Uniform Delay, d1	14.0	9.7			20.4		7.3	7.3	5.9			
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2	0.3	0.0			0.2		0.3	0.3	0.0			
Delay (s)	14.3	9.7			20.5		7.6	7.6	5.9			
Level of Service	B	A			C		A	A	A			
Approach Delay (s)		13.6			20.5			7.6			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	43.3	Sum of lost time (s)	11.6
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



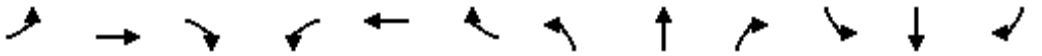
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	114	375	9	606	0	0	0	0	8	1	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3539	1583	1770	3539					1681	1702	1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3539	1583	1770	3539					1681	1702	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	123	403	10	652	0	0	0	0	9	1	71
RTOR Reduction (vph)	0	0	226	0	0	0	0	0	0	0	0	57
Lane Group Flow (vph)	0	123	177	10	652	0	0	0	0	5	5	14
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		6		5	2						4	
Permitted Phases			6							4		4
Actuated Green, G (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Effective Green, g (s)		13.7	13.7	0.9	17.6					6.0	6.0	6.0
Actuated g/C Ratio		0.44	0.44	0.03	0.56					0.19	0.19	0.19
Clearance Time (s)		3.6	3.6	3.0	3.6					4.0	4.0	4.0
Vehicle Extension (s)		4.0	4.0	2.0	4.0					2.5	2.5	2.5
Lane Grp Cap (vph)		1553	695	51	1996					323	327	304
v/s Ratio Prot		0.03		0.01	c0.18							
v/s Ratio Perm			0.11							0.00	0.00	c0.01
v/c Ratio		0.08	0.25	0.20	0.33					0.02	0.02	0.04
Uniform Delay, d1		5.1	5.5	14.8	3.6					10.2	10.2	10.3
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0	0.3	0.7	0.1					0.0	0.0	0.0
Delay (s)		5.1	5.8	15.5	3.8					10.2	10.2	10.3
Level of Service		A	A	B	A					B	B	B
Approach Delay (s)		5.6			3.9			0.0			10.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	31.2	Sum of lost time (s)	10.6
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



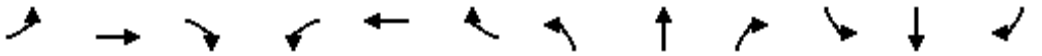
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	351	5	18	509	126	7	9	19	105	16	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3532		1770	3434		1770	1863	1583	1770	1678	
Flt Permitted	0.95	1.00		0.95	1.00		0.72	1.00	1.00	0.75	1.00	
Satd. Flow (perm)	1770	3532		1770	3434		1346	1863	1583	1399	1678	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	41	386	5	20	559	138	8	10	21	115	18	35
RTOR Reduction (vph)	0	1	0	0	18	0	0	0	17	0	28	0
Lane Group Flow (vph)	41	390	0	20	679	0	8	10	4	115	25	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8		8	4		
Actuated Green, G (s)	1.9	15.6		0.8	14.5		6.5	6.5	6.5	6.5	6.5	
Effective Green, g (s)	1.9	15.6		0.8	14.5		6.5	6.5	6.5	6.5	6.5	
Actuated g/C Ratio	0.06	0.47		0.02	0.43		0.19	0.19	0.19	0.19	0.19	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	100	1649		42	1490		261	362	308	272	326	
v/s Ratio Prot	c0.02	0.11		0.01	c0.20			0.01			0.01	
v/s Ratio Perm							0.01		0.00	c0.08		
v/c Ratio	0.41	0.24		0.48	0.46		0.03	0.03	0.01	0.42	0.08	
Uniform Delay, d1	15.2	5.3		16.1	6.7		10.9	10.9	10.9	11.8	11.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.1		3.1	0.2		0.0	0.0	0.0	0.4	0.0	
Delay (s)	16.2	5.4		19.2	6.9		10.9	10.9	10.9	12.2	11.0	
Level of Service	B	A		B	A		B	B	B	B	B	
Approach Delay (s)		6.4			7.2			10.9			11.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	33.4	Sum of lost time (s)	10.5
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



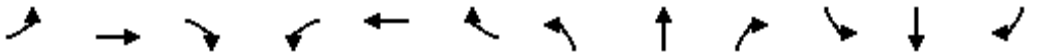
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	133	280	0	52	394	107	33	62	21	61	55	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	139	292	0	54	410	111	34	65	22	64	57	84
RTOR Reduction (vph)	0	0	0	0	0	85	0	0	18	0	0	66
Lane Group Flow (vph)	139	292	0	54	410	26	34	65	4	64	57	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	5.1	11.5		3.7	10.1	10.1	2.1	8.5	8.5	2.9	9.3	9.3
Effective Green, g (s)	5.1	11.5		3.7	10.1	10.1	2.1	8.5	8.5	2.9	9.3	9.3
Actuated g/C Ratio	0.12	0.26		0.08	0.23	0.23	0.05	0.19	0.19	0.07	0.21	0.21
Clearance Time (s)	5.0	4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0		2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	401	933		150	819	366	85	689	308	228	397	337
v/s Ratio Prot	c0.04	0.08		0.03	c0.12		c0.02	0.02		0.02	c0.03	
v/s Ratio Perm						0.02			0.00			0.01
v/c Ratio	0.35	0.31		0.36	0.50	0.07	0.40	0.09	0.01	0.28	0.14	0.05
Uniform Delay, d1	17.7	12.9		18.8	14.6	13.1	20.1	14.4	14.2	19.4	13.9	13.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1		1.1	0.2	0.0	1.1	0.0	0.0	0.2	0.1	0.0
Delay (s)	17.9	13.0		19.9	14.7	13.1	21.3	14.4	14.2	19.6	14.0	13.7
Level of Service	B	B		B	B	B	C	B	B	B	B	B
Approach Delay (s)		14.5			14.9			16.3			15.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	43.6	Sum of lost time (s)	17.0
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



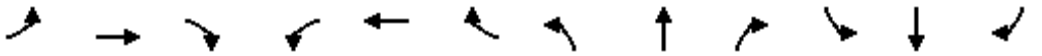
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	97	10	93	131	251	21	151	112	248	133	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Util. Factor		0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.91	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (prot)		3526	1583	1610	3367	1583	1770	1863	1583	1610	3294	
Flt Permitted		0.73	1.00	0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.98	
Satd. Flow (perm)		2599	1583	1610	3367	1583	1770	1863	1583	1610	3294	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	9	113	12	108	152	292	24	176	130	288	155	13
RTOR Reduction (vph)	0	0	11	0	0	249	0	0	106	0	2	0
Lane Group Flow (vph)	0	122	1	84	176	43	24	176	24	150	304	0
Turn Type	Perm	NA	Perm	Split	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases		3		4	4		2	2		1	1	
Permitted Phases	3		3			4			2			
Actuated Green, G (s)		4.1	4.1	6.0	6.0	6.0	7.6	7.6	7.6	9.5	9.5	
Effective Green, g (s)		4.1	4.1	6.0	6.0	6.0	7.6	7.6	7.6	9.5	9.5	
Actuated g/C Ratio		0.10	0.10	0.15	0.15	0.15	0.18	0.18	0.18	0.23	0.23	
Clearance Time (s)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		258	157	234	490	230	326	343	292	371	759	
v/s Ratio Prot				0.05	c0.05		0.01	c0.09		c0.09	0.09	
v/s Ratio Perm		c0.05	0.00			0.03			0.02			
v/c Ratio		0.47	0.01	0.36	0.36	0.18	0.07	0.51	0.08	0.40	0.40	
Uniform Delay, d1		17.5	16.7	15.9	15.9	15.5	13.9	15.1	13.9	13.4	13.4	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.0	0.3	0.2	0.1	0.0	0.5	0.0	0.3	0.1	
Delay (s)		18.0	16.7	16.2	16.0	15.6	13.9	15.7	14.0	13.7	13.6	
Level of Service		B	B	B	B	B	B	B	B	B	B	
Approach Delay (s)		17.9			15.8			14.9			13.6	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	41.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



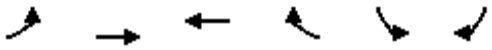
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	310	32	11	312	70	7	27	8	59	50	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1837		1770	1863	1583	1770	1801		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.72	1.00		0.73	1.00	1.00
Satd. Flow (perm)	1770	1837		1770	1863	1583	1332	1801		1356	1863	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	73	397	41	14	400	90	9	35	10	76	64	46
RTOR Reduction (vph)	0	5	0	0	0	60	0	8	0	0	0	35
Lane Group Flow (vph)	73	433	0	14	400	30	9	37	0	76	64	11
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	5.0	17.1		1.4	13.5	13.5	9.8	9.8		9.8	9.8	9.8
Effective Green, g (s)	5.0	17.1		1.4	13.5	13.5	9.8	9.8		9.8	9.8	9.8
Actuated g/C Ratio	0.12	0.42		0.03	0.33	0.33	0.24	0.24		0.24	0.24	0.24
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5		3.5	3.5	3.5
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	219	779		61	624	530	323	437		329	453	384
v/s Ratio Prot	c0.04	c0.24		0.01	0.21			0.02			0.03	
v/s Ratio Perm						0.02	0.01			c0.06		0.01
v/c Ratio	0.33	0.56		0.23	0.64	0.06	0.03	0.09		0.23	0.14	0.03
Uniform Delay, d1	16.1	8.7		18.9	11.3	9.1	11.6	11.8		12.2	12.0	11.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.7		1.4	2.0	0.0	0.0	0.1		0.3	0.1	0.0
Delay (s)	16.8	9.4		20.3	13.3	9.1	11.6	11.8		12.5	12.1	11.6
Level of Service	B	A		C	B	A	B	B		B	B	B
Approach Delay (s)		10.5			12.8			11.8			12.1	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	388	0	1	331	15	0	0	1	6	0	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.86		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539		1770	3539	1583		1611		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		1.00		1.00	1.00	
Satd. Flow (perm)	1770	3539		1770	3539	1583		1611		1863	1583	
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	75	491	0	1	419	19	0	0	1	8	0	109
RTOR Reduction (vph)	0	0	0	0	0	10	0	1	0	0	99	0
Lane Group Flow (vph)	75	491	0	1	419	9	0	0	0	8	10	0
Turn Type	Prot	NA		Prot	NA	Perm		NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		
Actuated Green, G (s)	2.4	16.6		0.8	15.0	15.0		2.8		2.8	2.8	
Effective Green, g (s)	2.4	16.6		0.8	15.0	15.0		2.8		2.8	2.8	
Actuated g/C Ratio	0.08	0.54		0.03	0.49	0.49		0.09		0.09	0.09	
Clearance Time (s)	3.3	3.8		3.3	3.8	3.8		3.3		3.3	3.3	
Vehicle Extension (s)	2.0	3.0		2.0	3.0	3.0		2.0		2.0	2.0	
Lane Grp Cap (vph)	138	1919		46	1734	775		147		170	144	
v/s Ratio Prot	c0.04	c0.14		0.00	0.12			0.00			c0.01	
v/s Ratio Perm						0.01				0.00		
v/c Ratio	0.54	0.26		0.02	0.24	0.01		0.00		0.05	0.07	
Uniform Delay, d1	13.6	3.7		14.5	4.5	4.0		12.6		12.7	12.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.1		0.1	0.1	0.0		0.0		0.0	0.1	
Delay (s)	15.9	3.8		14.6	4.6	4.0		12.6		12.7	12.8	
Level of Service	B	A		B	A	A		B		B	B	
Approach Delay (s)		5.4			4.6			12.6			12.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	30.6	Sum of lost time (s)	10.4
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	70	360	325	40	29	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.5		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3481		1770	1583
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3481		1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	75	387	349	43	31	125
RTOR Reduction (vph)	0	0	9	0	0	108
Lane Group Flow (vph)	75	387	383	0	31	17
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	5 6	6		8	
Permitted Phases						8
Actuated Green, G (s)	6.5	21.8	12.3		4.4	4.4
Effective Green, g (s)	6.5	21.8	12.3		4.4	4.4
Actuated g/C Ratio	0.20	0.67	0.38		0.13	0.13
Clearance Time (s)	3.0		3.5		3.0	3.0
Vehicle Extension (s)	2.0		3.0		2.0	2.0
Lane Grp Cap (vph)	351	2359	1309		238	213
v/s Ratio Prot	c0.04	c0.11	c0.11		c0.02	
v/s Ratio Perm						0.01
v/c Ratio	0.21	0.16	0.29		0.13	0.08
Uniform Delay, d1	11.0	2.0	7.2		12.5	12.4
Progression Factor	0.98	1.34	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.0	0.1		0.1	0.1
Delay (s)	10.9	2.7	7.3		12.6	12.4
Level of Service	B	A	A		B	B
Approach Delay (s)		4.1	7.3		12.5	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	32.7	Sum of lost time (s)	9.5
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	346	94	157	274	24	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5		3.0	3.0	3.0	3.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3426		1770	3539	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3426		1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	393	107	178	311	27	122
RTOR Reduction (vph)	24	0	0	0	0	106
Lane Group Flow (vph)	476	0	178	311	27	16
Turn Type	NA		Prot	NA	Prot	Prot
Protected Phases	2		1	1 2	4	4
Permitted Phases						
Actuated Green, G (s)	10.5		8.3	21.8	4.4	4.4
Effective Green, g (s)	10.5		8.3	21.8	4.4	4.4
Actuated g/C Ratio	0.32		0.25	0.67	0.13	0.13
Clearance Time (s)	3.5		3.0		3.0	3.0
Vehicle Extension (s)	3.0		2.0		2.0	2.0
Lane Grp Cap (vph)	1100		449	2359	238	213
v/s Ratio Prot	c0.14		c0.10	c0.09	c0.02	0.01
v/s Ratio Perm						
v/c Ratio	0.43		0.40	0.13	0.11	0.08
Uniform Delay, d1	8.8		10.1	2.0	12.4	12.4
Progression Factor	1.00		1.25	0.85	1.00	1.00
Incremental Delay, d2	0.3		0.2	0.0	0.1	0.1
Delay (s)	9.0		12.9	1.7	12.5	12.4
Level of Service	A		B	A	B	B
Approach Delay (s)	9.0			5.8	12.4	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	32.7	Sum of lost time (s)	9.5
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	353	37	69	145	10	26
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	397	42	78	163	11	29

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	438	78	163	11	29
Volume Left (vph)	0	78	0	11	0
Volume Right (vph)	42	0	0	0	29
Hadj (s)	-0.02	0.53	0.03	0.53	-0.67
Departure Headway (s)	4.7	5.5	5.0	6.6	5.4
Degree Utilization, x	0.57	0.12	0.23	0.02	0.04
Capacity (veh/h)	764	639	704	494	594
Control Delay (s)	13.6	8.0	8.2	8.5	7.4
Approach Delay (s)	13.6	8.2		7.7	
Approach LOS	B	A		A	

Intersection Summary			
Delay	11.4		
Level of Service	B		
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	2	276	23	0	150	248	17	0	26	4	82
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	303	25	0	165	273	19	0	29	4	90
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	3
HCM Control Delay	11.2	10.8	10
HCM LOS	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	87%	0%	100%	0%	0%	100%	0%	0%	36%
Vol Thru, %	13%	0%	0%	100%	80%	0%	100%	83%	29%
Vol Right, %	0%	100%	0%	0%	20%	0%	0%	17%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	82	2	184	115	150	165	100	14
LT Vol	26	0	2	0	0	150	0	0	5
Through Vol	4	0	0	184	92	0	165	83	4
RT Vol	0	82	0	0	23	0	0	17	5
Lane Flow Rate	33	90	2	202	126	165	182	110	15
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.065	0.15	0.004	0.339	0.207	0.289	0.293	0.173	0.03
Departure Headway (Hd)	7.143	6.008	6.533	6.029	5.888	6.302	5.798	5.678	6.918
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	501	597	548	596	610	570	620	632	517
Service Time	4.887	3.752	4.265	3.762	3.621	4.031	3.528	3.408	4.668
HCM Lane V/C Ratio	0.066	0.151	0.004	0.339	0.207	0.289	0.294	0.174	0.029
HCM Control Delay	10.4	9.8	9.3	11.8	10.2	11.6	10.9	9.6	9.9
HCM Lane LOS	B	A	A	B	B	B	B	A	A
HCM 95th-tile Q	0.2	0.5	0	1.5	0.8	1.2	1.2	0.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	5	4	5
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	5	4	5
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.9
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	20	256	43	0	4	157	31	0	6	4	6
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	291	49	0	5	178	35	0	7	5	7
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11.2	10	9
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	4	6	20	256	43	4	157	31	46	15
LT Vol	6	0	0	20	0	0	4	0	0	46	0
Through Vol	0	4	0	0	256	0	0	157	0	0	15
RT Vol	0	0	6	0	0	43	0	0	31	0	0
Lane Flow Rate	7	5	7	23	291	49	5	178	35	52	17
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.013	0.008	0.011	0.037	0.428	0.062	0.008	0.275	0.047	0.095	0.029
Departure Headway (Hd)	6.799	6.299	5.599	5.796	5.296	4.596	6.054	5.554	4.854	6.551	6.051
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	572	643	615	678	774	588	642	732	543	587
Service Time	4.499	3.999	3.299	3.556	3.056	2.356	3.824	3.324	2.624	4.341	3.841
HCM Lane V/C Ratio	0.013	0.009	0.011	0.037	0.429	0.063	0.009	0.277	0.048	0.096	0.029
HCM Control Delay	9.6	9	8.4	8.8	12	7.7	8.9	10.4	7.9	10	9
HCM Lane LOS	A	A	A	A	B	A	A	B	A	A	A
HCM 95th-tile Q	0	0	0	0.1	2.1	0.2	0	1.1	0.1	0.3	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	46	15	13
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	52	17	15
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.5
HCM LOS	A

Lane	SBLn3

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	7	372	18	0	9	250	22	0	33	3	16
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	423	20	0	10	284	25	0	37	3	18
Number of Lanes	0	1	1	1	0	1	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	3
HCM Control Delay	14.6	9.4	9.9
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	63%	100%	0%	0%	100%	0%	0%	45%
Vol Thru, %	6%	0%	100%	0%	0%	100%	79%	25%
Vol Right, %	31%	0%	0%	100%	0%	0%	21%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	7	372	18	9	167	105	20
LT Vol	33	7	0	0	9	0	0	9
Through Vol	3	0	372	0	0	167	83	5
RT Vol	16	0	0	18	0	0	22	6
Lane Flow Rate	59	8	423	20	10	189	120	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.104	0.012	0.596	0.025	0.016	0.272	0.167	0.04
Departure Headway (Hd)	6.346	5.576	5.074	4.371	5.668	5.165	5.018	6.337
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	561	640	710	816	630	693	712	560
Service Time	4.126	3.322	2.82	2.116	3.417	2.914	2.767	4.126
HCM Lane V/C Ratio	0.105	0.013	0.596	0.025	0.016	0.273	0.169	0.041
HCM Control Delay	9.9	8.4	15.1	7.2	8.5	9.9	8.8	9.4
HCM Lane LOS	A	A	C	A	A	A	A	A
HCM 95th-tile Q	0.3	0	4	0.1	0	1.1	0.6	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	9	5	6
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	10	6	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.4
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	32	59	17	0	33	33	53	0	3	56	16
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	35	65	19	0	36	36	58	0	3	62	18
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	2
HCM Control Delay	9.3	9.1	9
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	78%	0%	38%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	22%	0%	62%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	56	16	32	76	33	86	74	143	24
LT Vol	3	0	0	32	0	33	0	74	0	0
Through Vol	0	56	0	0	59	0	33	0	143	0
RT Vol	0	0	16	0	17	0	53	0	0	24
Lane Flow Rate	3	62	18	35	84	36	95	81	157	26
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.006	0.1	0.025	0.061	0.13	0.063	0.139	0.135	0.238	0.035
Departure Headway (Hd)	6.33	5.826	5.121	6.242	5.585	6.229	5.297	5.959	5.455	4.751
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	560	609	690	569	636	570	670	598	652	746
Service Time	4.13	3.625	2.919	4.033	3.376	4.016	3.085	3.739	3.236	2.531
HCM Lane V/C Ratio	0.005	0.102	0.026	0.062	0.132	0.063	0.142	0.135	0.241	0.035
HCM Control Delay	9.2	9.3	8.1	9.4	9.2	9.4	9	9.7	10	7.7
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.1	0.2	0.4	0.2	0.5	0.5	0.9	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	74	143	24
Peak Hour Factor	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	81	157	26
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.7
HCM LOS	A

Lane

Appendix C
Trip Generation Memorandum

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MEMORANDUM

DATE: July 13, 2016

TO: Leslie Benjamin
Novato Unified School District

FROM: Josh Pilachowski, DKS Associates
Elizabeth Theocharides, DKS Associates

SUBJECT: Trip Generation Estimates for San Marin High School Stadium Improvements TIS P 16094-000

Introduction

The purpose of this memorandum is to provide a methodology and trip generation for the addition of stadium lighting to San Marin High School (SMHS), allowing for evening sports events. The school is part of Novato Unified School District (NUSD) and is located in the City of Novato.

Methodology

Information on trip generation rates for high school sports stadiums is not readily available. The Institute of Transportation Engineers (ITE) *Trip Generation Manual*, an industry standard reference for trip generation, does not contain trip generation rates for a comparable land use. The trip generation characteristics for such high school facilities are likely to be fairly specific to each community, reflecting the level of interest in high school sports, demographics, and the transportation network among other factors.

Ideally, trip generation rates would be determined by observing a number of events at the facilities in question. In the absence of local data, an online search of similar studies was conducted to identify potentially relevant trip generation characteristics for high school sports facilities. Recently, a DEIR for the addition of stadium lighting for five high schools in San Mateo Union High School District was completed which based trip generation on bleacher capacity and vehicle occupancy rates. Additionally, a traffic impact study for a high school sports complex in the Santa Ana Unified School District in southern California explicitly reported trip generation rates. Several other studies estimated trip generation for similar facilities using assumptions about event attendance, auto mode share, and vehicle occupancy. Our recommended approach for the SMHS Stadium Improvements study is to calculate a trip generation rate per stadium seat using locally-appropriate assumptions and compare the resulting rates to those found in the literature.

Table 1 summarizes the range of trip generation characteristics identified in the literature search. A list of references is provided at the end of this memorandum.

Table 2 lists the assumptions underlying the calculation of trip generation rates for this study. These assumptions are intended to reflect a regularly occurring event with high attendance levels such as a Friday night football game. The resulting rate, 0.31 vehicle trips per stadium seat, falls within the range of rates seen and implied in the literature (between 0.17 and 0.36). Based on input from NUSD, the calculation makes the assumption that the San Marin High School bleachers are 60 percent full. Also based on NUSD input, we have assumed that the split between home school and visitor attendees is 70/30 and used higher vehicle occupancy for visitors. Finally, we have assumed that about ten percent of attendees from the home school are dropped off, generating both a trip in and out of the parking lot but that all visitor vehicles stay and park. Note that the trip generation rate does not separately account for additional trips by staff and

athletes, which would not be included in the trip generation rate per seat. We are assuming that the majority of home team athletes and staff will arrive before the study period and the away team athletes and staff will arrive on a relatively small number of buses.

Table 1 - Trip Generation Characteristics from Other Studies

Characteristic	Range	
Study hour trips per stadium seat	0.17	0.36
Percent of seats filled	75%	100%
Additional attendees	0	100
Auto mode share	93%	100%
Vehicle occupancy	2.5	3.0

Sources: See list of references.

Table 2 - Calculation of Trip Generation Rate for SMHS

Additional attendees	0
Home/visitor split	70/30
Auto mode share	0.97
Vehicle occupancy (home)	3
Vehicle occupancy (visitor)	5
Percent drop off	0.1
Percent stay and park	0.9
Trips in	0.28
Trips out	0.02
Total trips per occupied stadium seat	**0.31**

Trip Generation Estimates

Table 3 shows the number of vehicle trips expected to be generated by the project during the pre-game peak hour between 6:00 PM and 8:00 PM for a football game or event starting at 7:00 PM. These estimates use the trip generation rate shown in **Table 2**. Post-game trip generation would then have the same number of trips but reverse the directionality.

Table 3 - Trip Generation Estimates

2015-2016 Enrollment[1]	Bleacher Capacity	Percent Occupied	Peak Hour Trips		
			In	Out	Total
1076	2400	60%	410	33	442

[1]Source: California Department of Education Educational Demographics Unit

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