Appendix D

TIA and Transportation Analysis Update

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1766 El Camino Real Mixed-Use Development

Transportation Impact Analysis

Prepared for:

ICF

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Table of Contents

Executive Summary i
1. Introduction 1
2. Existing Conditions 10
3. Background Conditions 19
4. Project Conditions 22
5. Cumulative Conditions 32
6. Other Transportation Issues 37
7. CMP Compliance 49

Appendices

Appendix A Volume Summary
Appendix B Level of Service Calculations
Appendix C Peak-Hour Signal Warrant Analysis

List of Tables

Table ES-1 Intersection Level of Service Summary iii
Table 1 Signalized Intersection Level of Service Definitions Based on Average Control Delay 6
Table 2 Unsignalized Intersection Level of Service Definitions Based on Average Delay 7
Table 3 Existing Transit Services 14
Table 4 Existing Intersection Levels of Service 18
Table 5 Background Intersection Levels of Service 21
Table 6 Project Trip Generation Estimates 24
Table 7 Existing Plus Project Intersection Levels of Service 30
Table 8 Background Plus Project Intersection Levels of Service 31
Table 9 Cumulative plus Project Levels of Service 36
Table 10 Queuing Analysis Summary 38
Table 11 Parking Requirement 48
Table 12 Freeway Segment Capacity Evaluation 49
Table 13 Summary of C/CAG Trip Credits 50

List of Figures

Figure 1 Site Location and Study Intersections 2
Figure 2 Site Plan 3
Figure 3 Existing Bicycle Facilities 12
Figure 4 Existing Transit Services 15
Figure 5 Existing Lane Configurations 16
Figure 6 Existing Traffic Volumes 17
Figure 7 Background Traffic Volumes 20
Figure 8 Project Trip Distribution Pattern 26
Figure 9 Net Project Trip Assignment 27
Figure 10 Existing Plus Project Traffic Volumes 28
Figure 11 Existing Plus Project Traffic Volumes 29
Figure 12 Cumulative No-Project Traffic Volumes 33
Figure 13 Cumulative Plus Project Traffic Volumes 34

Figure 14 Gross Project Trips at Driveways 41
Figure 15 Parking Garage Plan - Level B1 44
Figure 16 Parking Garage Plan - Level B2 45

Executive Summary

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed residential development at 1766 El Camino Real in Burlingame, California. The project proposes to develop the 1.70-acre site with 60 residential units, 7,588 square feet of retail space, 148,057 square feet of office space, and a below-grade parking garage. Vehicle access to the proposed surface parking spaces and below-grade parking garage would be provided via the existing driveways (a full-access driveway on California Drive and a right-turn-only driveway on the El Camino Real frontage road). Because the El Camino Real frontage road is northbound only and can only be accessed via northbound El Camino Real, the driveway on the frontage road would be limited to right turn movements to and from the site. Additionally, a full-access driveway on Trousdale Drive would provide access to a passenger loading area for the residential use.

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame, the City of Millbrae, and the City/County Association of Governments (C/CAG) of San Mateo County Congestion Management Program (CMP). The study includes an analysis of AM and PM peak-hour traffic conditions during weekday commute periods at 14 study intersections in the vicinity of the project site. Potential impacts to pedestrians, bicycles, and transit were also considered.

Based on trip generation rates recommended by the Institute of Transportation Engineers (ITE), it is estimated that the proposed project would generate 1,545 new daily trips, with 150 net trips during the AM peak hour and 169 net trips during the PM peak hour. The trip estimates account for the trip credits for the existing uses on-site and the trip reduction resulting from the proposed mixed of uses.

The results of the intersection level of service analysis under existing, background, and cumulative conditions, with and without the project, are summarized in Table ES-1. The results determined that under all scenarios with and without the project, most of the study intersections would operate in accordance with local standards during both AM and PM peak hours. The El Camino Real/Millbrae Avenue and California Avenue/Broadway intersections would operate at a substandard level of service. However, the addition of project trips would not have a significant impact on traffic operations at the intersections.

The Project ‘s transportation impact on vehicles miles traveled (VMT) was evaluated based on the CEQA Guidelines published by Governor’s Office of Planning and Research (OPR). According to CEQA Guidelines, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. The project is located within a half mile of the Millbrae Station, which is a major transit stop. Therefore, the project is expected to have a less-than-significant impact on vehicles miles travelled.

This report also makes the following conclusions and recommendations for the project:

- Based on the estimated peak-hour volumes and the level of service analysis at the California Avenue/Trousdale Drive intersection, the eastbound movement delay on Trousdale Drive can be improved by installation of all-way stop signs or a traffic signal at the intersection. Because the level of service deficiency would occur under cumulative conditions, the project should pay a pro-rated share of the cost of the intersection improvement. It should be noted that due to the regional shelter-in-place orders, new traffic counts and field observations cannot be conducted to identify whether there are traffic operational issues at the intersection. Therefore, the need for intersection improvement or modification of traffic control at the intersection should be evaluated further when actual traffic counts and field observations can be made.
- At the driveway on the El Camino Real frontage road, the project should provide a 20-foot long flat area between the sidewalk and the parking garage access ramp so exiting vehicles can see pedestrians on the sidewalk.
- Signs prohibiting parking during garbage pickup hours should be placed adjacent to the proposed staging areas on Trousdale Drive and the El Camino Real frontage road. The trash bins should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak-hour traffic conditions.
- To encourage bicycling by employees, it is recommended the project provide secured bicycle parking for employees within the building or provide convenient access for employees to access the bicycle parking room for the residential use.
- The project should provide at least 3 short-term bicycle spaces for residential guests in bicycle racks. To encourage bicycling by retail patrons and office visitors, it is recommended the project provide additional bicycle racks at several locations near entrances of the building.
- The project should encourage employees or residents to use the stacked spaces, thus allowing non-mechanical parking spaces within the garage to be available to retail customers. The project should also designate some non-mechanical parking spaces in the upper level of the parking garage for retail customers.
- The project requires City approval for any reduction in on-site vehicle parking spaces with a TDM plan that would achieve an alternative transportation mode share of 25 percent or greater.

Table ES-1
Intersection Level of Service Summary

				Existing					Background					Cumulative (2040)				
				No Project		With Project			No Project		With Project			No Project		With Project		
#	Intersection	LOS Standard	Peak Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Delay (sec)	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Delay (sec)	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Delay (sec)
1	US 101 NB Ramps & Millbrae Ave	D	AM	9.1	A	9.2	A	0.1	10.6	B	10.7	B	0.1	11.2	B	11.3	B	0.1
			PM	6.2	A	6.3	A	0.1	7.0	A	7.0	A	0.0	7.0	A	7.0	A	0.0
2	US 101 SB Ramps & Millbrae Ave	D	AM	11.6	B	11.9	B	0.3	14.0	B	14.3	B	0.3	14.6	B	15.0	B	0.4
			PM	8.7	A	8.8	A	0.1	10.5	B	10.7	B	0.2	11.8	B	12.1	B	0.3
3	Rollins Rd & Millbrae Ave	D	AM	20.4	C	20.5	C	0.1	35.2	D	35.2	D	0.0	35.2	D	35.2	D	0.0
			PM	27.0	C	27.1	C	0.1	42.9	D	43.2	D	0.3	43.3	D	43.7	D	0.4
4	El Camino Real & Millbrae Ave (CMP)	E	AM	75.4	E	75.5	E	0.1	**101.6**	**F**	**101.9**	**F**	0.3	**119.9**	**F**	**>120**	**F**	0.5
			PM	74.8	E	75.4	E	0.6	**92.0**	**F**	**95.8**	**F**	3.8	**102.8**	**F**	**106.5**	**F**	3.7
5	California Dr & Murchison Dr[1]	None	AM	14.5	B	15.2	C	-	16.0	C	16.8	C	-	17.0	C	18.0	C	-
			PM	17.4	C	18.8	C	-	22.6	C	25.4	D	-	22.6	C	25.4	D	-
6	El Camino Real & Murchison Dr	D	AM	21.2	C	22.0	C	0.8	25.1	C	26.1	C	1.0	26.5	C	27.6	C	1.1
			PM	25.4	C	26.9	C	1.5	31.1	C	33.5	C	2.4	31.8	C	34.1	C	2.3
7	California Dr & Trousdale Dr[1, 2]	None	AM	25.8	D	30.9	D	-	27.0	D	32.5	D	-	38.6	E	50.0	E	-
			PM	29.2	D	34.5	D	-	33.9	D	41.3	E	-	46.1	E	58.2	F	-
8	El Camino Real & Trousdale Dr	D	AM	20.5	C	21.2	C	0.7	21.3	C	22.0	C	0.7	24.5	C	25.6	C	1.1
			PM	23.0	C	24.6	C	1.6	24.8	C	26.5	C	1.7	32.5	C	35.1	D	2.6
9	El Camino Real & Broadway (CMP)[3]	E	AM	13.6	B	13.6	B	0.0	14.9	B	14.9	B	0.0	17.7	B	18.1	B	0.4
			PM	12.4	B	12.5	B	0.1	13.5	B	13.6	B	0.1	27.1	C	28.9	C	1.8
10	California Drive & Broadway[4]	D	AM	51.9	D	53.8	D	1.9	55.0	D	56.7	E	1.7	39.6	D	40.3	D	0.7
			PM	51.0	D	51.7	D	0.7	**85.3**	**F**	**86.6**	**F**	1.3	50.6	D	51.6	D	1.0
11	Rollins Road & Broadway	D	AM	21.1	C	21.1	C	0.0	24.8	C	24.8	C	0.0	25.4	C	25.4	C	0.0
			PM	20.4	C	20.5	C	0.1	23.8	C	24.0	C	0.2	25.1	C	25.2	C	0.1
12	US 101 SB Ramps & Broadway[3]	D	AM	28.6	B	29.1	B	0.5	33.5	B	34.2	B	0.7	33.5	B	34.2	B	0.7
			PM	23.1	B	23.3	B	0.2	24.4	B	24.5	B	0.1	41.4	C	42.2	C	0.8
13	Old Bayshore Hwy & Broadway	D	AM	14.9	B	14.9	B	0.0	19.2	B	19.2	B	0.0	20.3	C	20.3	C	0.0
			PM	18.3	B	18.4	B	0.1	21.5	C	21.6	C	0.1	28.0	C	28.3	C	0.3
14	Old Bayshore Hwy & US 101 NB Ramps	D	AM	21.3	C	21.5	C	0.2	25.6	C	25.9	C	0.3	25.6	C	25.9	C	0.3
			PM	19.2	B	19.2	B	0.0	23.2	C	23.3	C	0.1	23.6	C	23.8	C	0.2

Notes:
1. Denotes a two-way stop-controlled intersection. Worst leg delay is reported.
2. Recent counts were not available. Volumes were extrapolated from nearby intersections.
3. HCM 2000 average delay is reported.
4. Traffic signal improvement is assumed to account for the Caltrain grade separation project
Bold indicates a substandard level of service.

1. Introduction

This report presents the results of the transportation impact analysis (TIA) conducted for the proposed mixed-use development at 1766 El Camino Real in Burlingame, California. The project site is located at the southeast corner of the El Camino Real and Trousdale Drive intersection (see Figure 1) and is located within the North Burlingame Mixed-Use (NBMU) Zoning District in Burlingame. The project proposes to develop the 1.70-acre site with 60 residential units, 7,588 square feet of retail space, 148,057 square feet of office space, and a below-grade parking garage. The site is currently developed with a mixed-use building with 23,500 square feet of office space and 9,500 square feet of museum space with a surface parking lot. The existing buildings would be demolished as part of the project. Vehicles access to the proposed surface parking spaces and below-grade parking garage would be provided via the existing driveways (a full-access driveway on California Drive and a right-turn-only driveway on the El Camino Real frontage road) (see Figure 2). Because the El Camino Real frontage road is northbound only and can only be accessed via northbound El Camino Real, the driveway on the frontage road would be limited to right turn movements to and from the site. Additionally, a full-access driveway on Trousdale Drive would provide access to a passenger loading area for the residential use.

Scope of Study

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Burlingame, the City of Millbrae, and the San Mateo City/County Association of Governments (C/CAG) of San Mateo County. C/CAG is a Joint Powers Authority that plans, funds and delivers transportation programs and projects in San Mateo County. C/CAG administers the San Mateo County Congestion Management Program (CMP).

The study analyzes the traffic impacts of the project on the key intersections in the vicinity of the site during the weekday AM and PM peak hours of commute traffic. A signal warrant analysis was prepared to determine the need for signalization at the unsignalized study intersections. An analysis of vehicle queuing, site access and on-site circulation, parking, and transit, bicycle, and pedestrian access is also included. Given that the project is expected to generate more than 100 peak hour trips, a C/CAG trip reduction analysis and a freeway segment capacity evaluation were prepared. Additionally, the study also includes a vehicle miles traveled (VMT) analysis.

Traffic conditions were evaluated for the following 14 intersection in the vicinity of the project site (see Figure1). The study intersections include 12 signalized intersections and two unsignalized intersections. Two of the signalized intersections are designated as CMP intersections.

Figure 1
Site Location and Study Intersections

NORTH
Not to Scale

Figure 2
Site Plan

NORTH
Not to Scale

Millbrae Intersections

1. US 101 Northbound Ramps and Millbrae Avenue
2. US 101 Southbound Ramps and Millbrae Avenue
3. Rollins Road and Millbrae Avenue
4. El Camino Real and Millbrae Avenue (CMP)

Burlingame Intersections

5. California Drive and Murchison Drive (unsignalized)
6. El Camino Real and Murchison Drive
7. California Drive and Trousdale Drive (unsignalized)
8. El Camino Real and Trousdale Drive
9. El Camino Real and Broadway (CMP)
10. California Drive and Broadway
11. Rollins Road and Broadway
12. US 101 Southbound Ramps and Broadway
13. Old Bayshore Highway and Broadway
14. Old Bayshore Highway and US 101 Northbound Ramps

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. It is during these periods that the most congested traffic conditions occur on the roadways.

Intersection traffic conditions were evaluated for the following scenarios:

- ***Existing Conditions.*** Existing traffic volumes at study intersections were estimated based on available traffic counts conducted for local traffic studies, EIRs, and the 2019 CMP monitoring report. Due to Covid-19 and regional shelter-in-place orders, new traffic counts cannot be collected for the study. Therefore, a growth rate of 1% per year was applied to the traffic counts that are more than two years old to estimate the traffic volumes for existing conditions. Traffic volumes for the study intersections without available count data were extrapolated from the traffic volumes of the adjacent study intersections. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the *2010 Highway Capacity Manual* methodology.
- ***Existing Plus Project Conditions.*** Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- ***Background Conditions*.** Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area. The approved project trips and/or approved project information were obtained from the Cities of Burlingame and Millbrae.
- ***Background Plus Project Conditions.*** Background plus project traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the project. Project Conditions were evaluated relative to background conditions to determine potential project impacts.
- ***Cumulative Conditions.*** Cumulative traffic volumes represent traffic growth through the year 2040. Cumulative traffic volumes were obtained from the 2040 Burlingame General Plan. Study intersections not included in the general plan were estimated based on the closest nearby

intersection. Cumulative plus project conditions were evaluated relative to cumulative conditions to determine potential project impacts.

Methodology

This section presents the methods used to determine traffic conditions at the study intersections and the traffic impacts of the project. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from local traffic studies and EIRs and the City of Burlingame. The following data were collected from these sources.

- Peak-hour intersection turning-movement volumes
- Lane configurations
- Intersection signal timing and phasing
- List of approved projects

Intersection Level of Service Methodologies and Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

Signalized Intersections

The Cities of Burlingame and Millbrae evaluate level of service at signalized intersections based on the *Highway Capacity Manual (HCM) 2010* level of service methodology. The 2010 HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. Table 1 presents the level of service definitions and the correlation between delay and level of service for signalized intersections. This study utilizes Synchro software to determine intersection levels of service based on the HCM method

Traffic operations at the study intersections were evaluated against the standards of the applicable municipality, while the two CMP intersections were evaluated against the standards of the C/CAG CMP. While the City of Burlingame does not have a Council-adopted level of service threshold, a standard of LOS D or better has typically been applied in local traffic studies and EIRs. The City of Millbrae seeks to maintain LOS D for signalized intersections, except for CMP intersections where LOS E is acceptable. The C/CAG has developed a LOS standard of E for CMP intersections on El Camino Real (SR 82). Therefore, for the study, the LOS E standard is applied to the El Camino Real/Millbrae Avenue and El Camino Real/Broadway CMP intersections, while the LOS D standard is applied to the remaining signalized study intersections.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though some vehicles may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010), p.10-16.

Unsignalized Intersections

The study evaluated two unsignalized study intersections in the City of Burlingame. Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays, and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

Levels of service for unsignalized intersections were analyzed using Synchro software based on the 2010 HCM methodology for unsignalized intersection. The 2010 HCM method evaluates unsignalized intersections on the basis of average stopped delay for all-way stop controlled intersections, and for the worst-case approach for two-way stop-controlled intersections. Table 2 shows the correlation between delay and level of service for unsignalized intersections.

The City of Burlingame does not have a formally-adopted level of service standard for unsignalized intersections.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Delay Per Vehicle (Sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p17-2.

Traffic Signal Warrant

The level of service analysis for unsignalized intersections was supplemented with an assessment of the need for installation of a traffic signal, known as a signal warrant analysis. The need for signalization of unsignalized intersections in an urban or suburban context is typically assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CA MUTCD), Part 4, Highway Traffic Signals. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak-hour volumes are, or would be, sufficiently high to justify installation of a traffic signal. Additional analysis is recommended and may include unsignalized level of service analysis and/or operational analysis such as evaluating vehicle queuing and delay. Other types of traffic control devices, signage, or geometric changes may be preferable based on existing field conditions.

Intersection Vehicle Queuing

The analysis of intersection operations is typically supplemented with a vehicle queuing analysis at study intersections where the project would add a substantial number of vehicle trips to the left-turn movements. The analysis provides a basis for estimating future left-turn pocket storage requirements at the study intersections. The analysis is based on the 95th percentile queue length calculated by the Synchro software.

The 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about one cycle during the peak hour for a signal with a 120-second cycle length). Therefore, left-turn storage pocket designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the “design queue length.”

VMT Analysis

Per California Senate Bill 743, the California Natural Resources Agency, with assistance from the Governor’s Office of Planning and Research (OPR), adopted new CEQA guidelines in December 2018. The new guidelines state that automobile delay, as measured by level of service (LOS), will no longer

constitute a significant environmental impact under CEQA, and that VMT is considered the most appropriate metric to evaluate a project's transportation impacts. Local agencies have until July 2020 to adopt the new policy that establishes the thresholds and procedures for evaluating transportation impacts based on VMT. Burlingame has not yet adopted any thresholds or guidelines related to VMT. Therefore, an evaluation of VMT for this project is presented for informational purposes only to aid decision makers during this transition period from LOS to VMT. It is not intended to provide any indication of the transportation impacts of the project under SB 743. The VMT evaluation is presented based on the OPR's CEQA Guidelines and Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018).

Significant Impact Criteria

Intersection Impact Criteria

The City of Burlingame does not have any Council-adopted definitions of significant traffic impacts. The following standards typically have been used in traffic studies and EIRs. The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of Burlingame if for any peak-hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better to an unacceptable LOS E or F with the addition of project trips; or
2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes the average delay at the intersection to increase by five (5) or more seconds.

The City of Millbrae defines a significant impact at study intersections if any of the following happen with the addition of project trips:

1. Cause an intersection degrades from an acceptable LOS D or better to an unacceptable LOS E or F; or
2. Increase the average delay at a signalized intersection operating at an unacceptable level (LOS E or F) by five (5) or more seconds.

A significant impact typically is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

CMP Signalized Intersection Impact Criteria

At a CMP signalized intersection in the County of San Mateo, a project is determined to create a significant adverse impact on traffic conditions if, during either the AM or PM peak hour:

1. The level of service at the intersection degrades from an acceptable LOS E or better to an unacceptable LOS F with the addition of project trips; or
2. The level of service at the intersection is an unacceptable LOS F under cumulative with project conditions and the addition of project trips causes the average delay at the intersection to increase by four (4) or more seconds

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to "no project" conditions or better.

CMP Roadway Impact and Compliance

As the Congestion Management Agency (CMA) for San Mateo County, C/CAG is responsible for maintaining the performance and standards of the CMP roadway network. Per C/CAG technical guidelines, all new developments projected to add 100 or more net peak-hour trips are required to implement transportation demand management (TDM) measures in accordance with the C/CAG TDM checklist that would reduce project impacts. Additionally, a freeway segment level of service analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. In the vicinity of the project site, roadway facilities that are part of the CMP network include US 101 and El Camino Real.

Report Organization

This report has a total of seven chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian and bicycle facilities. Chapter 3 presents the intersection levels of service under background conditions with the addition of traffic from approved developments in the Cities of Burlingame and Millbrae. Chapter 4 describes the method used to estimate project traffic, the intersection operations under existing plus project conditions and background pus project conditions, and potential project impacts on the roadway network. Chapter 5 presents the intersection levels of service under the cumulative plus project conditions, utilizing estimated traffic volumes from the City of Burlingame 2040 General Plan. Chapter 6 presents the VMT analysis and analysis of other transportation-related issues, including vehicle queuing analysis at selected intersections, traffic operations at unsignalized intersections, site access and on-site circulation, parking, and potential impacts on bicycle, pedestrian, and transit facilities. Chapter 7 shows the project's compliance with the C/CAG TDM checklist.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via US 101. Local access to the site is provided on El Camino Real (SR 82), Millbrae Avenue, Broadway, California Drive, and Trousdale Drive. These roadways are described below. Although all streets in the study area run at a diagonal compared to the ordinal directions, for the purposes of this study, US 101 and all parallel streets are considered to run north-south, and cross streets are considered to run east-west.

US 101 is a north/south, eight-lane freeway in the vicinity of the site. US 101 extends northward through San Francisco and southward through San Jose. Access to and from the project study area is provided via a full interchange at Millbrae Avenue, northbound ramps at Old Bayshore Highway, and southbound ramps at Broadway.

El Camino Real (SR 82) is a north/south arterial that extends northward to San Francisco, and southward to San Jose. In the project vicinity, El Camino Real has six lanes north of Dufferin Avenue, with left turn lanes at signalized intersections. South of Dufferin Avenue, El Camino Real is narrowed to four lanes. The posted speed limit in the project area is 35 mph. In the project area, a northbound frontage road on El Camino Real runs along the project frontage and extends between Murchison Drive and Dufferin Avenue. Sidewalks are present along the east side of the frontage road and at the corners of the Trousdale Drive/ El Camino Real intersection in the project area. On-street parking is permitted on both sides of the frontage road along the project frontage. The frontage road provides direct access to the project's parking garage via an existing right-turn only driveway and a proposed passenger loading area along the project frontage.

Millbrae Avenue is an east/west arterial that extends westward from Old Bayshore Highway to Vallejo Drive and I-280, where it terminates. Millbrae Avenue connects the western residential areas of the City of Millbrae to the regional roadways, El Camino Real and US 101. Millbrae has six lanes between El Camino Real and US 101, with a median that provides left-turn pockets at the major intersections. The posted speed limit in the project area is 35 mph. Although there are sidewalks on both sides of Millbrae Avenue, the sidewalk on the north side terminates at the Chevron gas station, located just east of Millbrae Station. Access to the project site from Millbrae Avenue is provided via El Camino Real.

Broadway is an east/west arterial that extends westward from Old Bayshore Highway to Roosevelt Elementary School, where it terminates. In the project vicinity, Broadway has six lanes, with multiple left

turn lanes at major intersections. The posted speed limit in the project area is 35 mph. There are sidewalks on both sides of Broadway, with the exception of the south side on the overpass over US 101. Access to the project site from Broadway is provided via El Camino Real and California Drive.

California Drive is a north/south arterial that extends southward from Linden Avenue in Millbrae to Peninsula Avenue, where it becomes San Mateo Drive in San Mateo. In the project area, California Drive has two lanes with bike lanes on both sides of the street and sidewalks along the west side of the street. The posted speed limit in the project area is 35 mph. California Drive provides direct access to the site via an existing full-access driveway.

Trousdale Drive an east/west arterial that extends westward from California Drive to I-280. Trousdale Drive has four lanes west of El Camino Real and two lanes east of El Camino Real. The posted speed limit on Trousdale Drive west of El Camino Real is 35 mph. There are sidewalks on both sides of the street and on-street parking is permitted on both sides of the street between El Camino Real and California Drive. Trousdale Drive provides access to the project's proposed residential passenger loading area.

Existing Pedestrian Facilites

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, sidewalks exist along both sides of Trousdale Drive, the west side of California Drive along the project frontage, and the east side of the El Camino Real frontage road along the project frontage. Crosswalks with pedestrian signal heads and push buttons are provided on the east, south, and west legs of the El Camino Real/Trousdale Drive intersection and all approaches of the El Camino Real/Murchison Drive and El Camino Real/Millbrae Avenue intersections within walking distance of the site. Within a typical walking distance (a half mile or 10 minutes), continuous pedestrian facilities are present between the site and the surrounding land uses, including the Millbrae Station and bus stops in the area.

Existing Bicycle Facilites

Bicycle facilities in the vicinity of the project site include bike/pedestrian paths, bike lanes, and bike routes. Bike/pedestrian paths (Class I facilities) are off-street paths with exclusive right-of-way for non-motorized transportation used for commuting as well as recreation. Bike lanes (Class II facilities) are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes (Class III) are existing rights-of-way that accommodate bicycles but are not separate from the existing travel lanes. The existing bicycle facilities within the study area are described below and are shown on Figure 3.

North-South bicycle connections in the study area consist of a bike lane/bike route along California Drive, from Burlingame Avenue to Linden Avenue where bicycle riders can access the Millbrae Station. Between Broadway and Murchison Drive, there are bike lanes on both sides of California Drive. A bike route also exists on El Camino Real, north of Millbrae Avenue. The bike lane/route along California Drive provides a connection to the project site from transit facilities and other points on interest in the area.

Figure 3
Existing Bicycle Facilities

NORTH
Not to Scale

East-West bicycle connections in the study area consist of a bike route along Broadway, from Carolan Avenue to where Broadway becomes Airport Boulevard. It begins as a bike route at Carolan Avenue and connects to the bike/pedestrian bridge over US 101 to Airport Boulevard. From Airport Boulevard, bicycle riders can connect to a bicycle/pedestrian path (the San Francisco Bay Trail) or a bike lane/bike route on Airport Way. The City also designated Trousdale Drive between Magnolia Avenue and Ashton Avenue and Rosedale Avenue/Ray Drive between California Drive and Devereux Drive as bike routes.

Existing Transit Services

Existing public transit services in the study area are provided by the San Mateo County Transit District (SamTrans), San Mateo County's Transportation Demand Management Agency (commute.org), Caltrain, and Bay Area Rapid Transit (BART). SamTrans operates bus services in San Mateo County; commute.org provides free fixed-route shuttle services between the Caltrain/Bart stations and corporate campuses or major employment areas during weekday commute hours; Caltrain provides commuter rail service along the San Francisco Peninsula, through the South Bay to San Jose and Gilroy; BART provides commuter rail service between the San Francisco Peninsula, Berkeley, Oakland, Fremont, Walnut Creek, Dublin/Pleasanton, and other cities in the East Bay.

The nearest bus stops are located on El Camino Real at the Trousdale Drive intersection, approximately 350 feet from the project site, which is served by SamTrans Routes ECR and 397. The project site is also within walking distance (0.5 mile) of the Millbrae multimodal transit station (Millbrae Station). The station is served by Caltrain baby bullet, limited, and local lines, BART Richmond-Millbrae line (Red) and Millbrae-SFO-Antioch line (Purple/Yellow), three SamTrans bus routes (ECR, 397, SFO), three shuttle routes (NB, BAY, NFC) operated by commute.org, and one shuttle route (MB) operated by Caltrain. The transit service routes that run through the study area and the bus/shuttle stops near the project site are summarized in Table 3 and shown on Figure 4.

Existing Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were obtained from field observations (see Figure 5).

Existing peak-hour traffic volumes (see Table 6) at study intersections were estimated based on available traffic counts conducted for local traffic studies, EIRs, and the 2019 CMP monitoring report for the CMP intersections. Peak-hour traffic counts for ten study intersections were collected within two years, which are typically considered as recent traffic counts that can be used directly for a traffic study. Four of the study intersections do not have recent traffic counts. Due to Covid-19 and regional shelter-in-place orders, new traffic counts cannot be collected for these intersections. Therefore, a growth rate of 1% per year was applied to these traffic counts to estimate the existing traffic volumes. There are no traffic count data available for the California Drive/Trousdale Drive intersection. Therefore, the existing traffic volumes at the intersection were estimated based on the traffic volumes of the adjacent study intersections (California Drive/Murchison Drive and El Camino Real/Trousdale Drive). Traffic count dates and sources and the adjustment applied to the study intersections are summarized in Appendix A.

Table 3
Existing Transit Services

Transit Route	Route Description	Headway [1]	Nearest Stop and Distance to Project Site
SamTrans Bus Services			
SamTrans ECR	Daly City BART - Palo Alto Transit Center	15 mins	El Camino Real at Trousdale Drive, 350 feet
SamTrans 397	Palo Alto Transit Center - San Francisco	60 mins[2]	El Camino Real at Trousdale Drive, 350 feet
SamTrans SFO	Millbrae Station - San Francisco International Airport (SFO)	30 mins	Millbrae Station West Plaza, 2,300 feet
Shuttle Services[3]			
Millbrae/Broadway (MB)	Millbrae Station - Broadway Caltrain Station	30 mins	Millbrae Station West Plaza, 2,300 feet
North Burlingame (NB)	Millbrae Station - Burlingame Easton Neighborhood	30 mins	Mills-Peninsula Health Services at 1501 Trousdale Drive, 1,100 feet
Burlingame-Bayside Shuttle (Bay)	Millbrae Station - Airport Boulevard/Bay View Place Intersection	30 mins	Millbrae Station East Plaza, 3,000 feet
North Foster City Shuttle (NFC)	Millbrae Station - North Foster City business parks	30 mins	Millbrae Station East Plaza, 3,000 feet
Commuter Rail Services			
Caltrain	San Francisco - Gilroy	25 mins	Millbrae Station, 2,600 feet
Caltrain "Baby Bullet"	San Francisco - San Jose Tamien	30 mins	Millbrae Station, 2,600 feet
BART (Red)	Richmond - Millbrae	15 mins	Millbrae Station, 2,600 feet
BART (Purple/Yellow)	Millbrae - SFO - Antioch	15 mins	Millbrae Station, 2,600 feet

Notes:
These were services available before Covid-19 and shelter-in-place orders.
1. Approximate headways during peak commute periods on weekdays.
2. Route 397 is a limited overnight service, operating from 12:30 AM - 6:30 AM.
3. Shuttles run during weekday commute hours and is open to the general public and free to riders.

Figure 4
Existing Transit Services

NORTH
Not to Scale

Figure 5
Existing Intersection Lane Geometry

NORTH
Not to Scale

LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 6
Existing Traffic Volumes

NORTH
Not to Scale

Existing Intersection Levels of Service

The results of the level of service analysis show that all of the study intersections operate at an acceptable level of service during both AM and PM peak hours (see Table 4). The intersection levels of service calculation sheets are included in Appendix B.

Table 4
Existing Intersection Levels of Service

#	Intersection	LOS Standard	Peak Hour	Count Date	Avg. Delay (sec)	LOS
1	US 101 NB Ramps & Millbrae Ave	D	AM	04/15/19	9.1	A
			PM	04/15/19	6.2	A
2	US 101 SB Ramps & Millbrae Ave	D	AM	02/12/19	11.6	B
			PM	02/12/19	8.7	A
3	Rollins Rd & Millbrae Ave	D	AM	02/12/19	20.4	C
			PM	02/12/19	27.0	C
4	El Camino Real & Millbrae Ave (CMP)	E	AM	02/12/19	75.4	E
			PM	02/12/19	74.8	E
5	California Dr & Murchison Dr[1, 4]	None	AM	03/19/14	14.5	B
			PM	03/19/14	17.4	C
6	El Camino Real & Murchison Dr[4]	D	AM	04/05/16	21.2	C
			PM	04/05/16	25.4	C
7	California Dr & Trousdale Dr[1, 2]	None	AM	N/A	25.8	D
			PM	N/A	29.2	D
8	El Camino Real & Trousdale Dr	D	AM	02/12/19	20.5	C
			PM	02/12/19	23.0	C
9	El Camino Real & Broadway (CMP)[3]	E	AM	04/15/19	13.6	B
			PM	04/15/19	12.4	B
10	California Drive & Broadway[4]	D	AM	05/30/18	51.9	D
			PM	05/30/18	51.0	D
11	Rollins Road & Broadway	D	AM	02/12/19	21.1	C
			PM	02/12/19	20.4	C
12	US 101 SB Ramps & Broadway[3]	D	AM	01/09/20	28.6	B
			PM	01/09/20	23.1	B
13	Old Bayshore Hwy & Broadway	D	AM	01/09/20	14.9	B
			PM	01/09/20	18.3	B
14	Old Bayshore Hwy & US 101 NB Ramps	D	AM	01/09/20	21.3	C
			PM	01/09/20	19.2	B

Notes:
1. Denotes a two-way stop-controlled intersection. Worst leg delay is reported.
2. Recent counts were not available. Counts were extrapolated from nearby intersections.
3. HCM 2000 average delay is reported.
4. Recent counts were not available. Existing volumes were increased by applying a growth rate of 1% per year.

3. Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion/occupation of the proposed project. Traffic volumes for background conditions comprise volumes from existing traffic volumes plus traffic generated by approved but not yet constructed developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Roadway Network and Traffic Volumes Under Background Conditions

The roadway network under project conditions would be the same as the existing roadway network. It is anticipated that the proposed Peninsula Corridor Electrification Project (PCEP), which is a key component of the Caltrain Modernization program, would be completed (projected to be operational between 2020 and 2021) under background conditions. Electrification is expected to help accommodate the increase in system ridership through much improved system operations.

Traffic volumes for background conditions include the completion of approved major developments in the vicinity of the project site, such as the 1499 Bayshore Hotel, the Carolan Avenue Residential Project, the 300 Airport Boulevard Project, the 1095 Rollin Road residential development, the Adrian Court Residential Development and the Serra Station and Gateway Developments at the Millbrae Station. Trips associated with the approved developments were obtained from the project traffic studies. Since the Serra Station and Gateway Developments do not have a traffic study, the estimated number of project trips were assigned to the roadway network based on the trip distribution found in the Millbrae Station Area Specific Plan (MSASP) EIR. Background peak-hour traffic volumes are shown on Figure 7. The approved trips and traffic volumes for all components of traffic are tabulated in Appendix A.

Background Intersection Levels of Service

The results of the intersection level of service analysis (see Table 5) show that the El Camino Real/Millbrae Avenue intersection would operate at an unacceptable LOS F during the AM and PM peak hours, and the California Avenue/Broadway intersection would operate at an unacceptable LOS F during the PM peak hour, as a result of approved projects in the area. All other signalized study intersections would operate at an acceptable level of service during both the AM and PM peak hours of traffic under background conditions. The level of service calculation sheets are included in Appendix B.

LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 7
Background Traffic Volumes

NORTH
Not to Scale

Table 5
Background Intersection Levels of Service

#	Intersection	LOS Standard	Peak Hour	Existing Avg. Delay (sec)	Existing LOS	Background Avg. Delay (sec)	Background LOS
1	US 101 NB Ramps & Millbrae Ave	D	AM	9.1	A	10.6	B
			PM	6.2	A	7.0	A
2	US 101 SB Ramps & Millbrae Ave	D	AM	11.6	B	14.0	B
			PM	8.7	A	10.5	B
3	Rollins Rd & Millbrae Ave	D	AM	20.4	C	35.2	D
			PM	27.0	C	42.9	D
4	El Camino Real & Millbrae Ave (CMP)	E	AM	75.4	E	**101.6**	**F**
			PM	74.8	E	**92.0**	**F**
5	California Dr & Murchison Dr[1]	None	AM	14.5	B	16.0	C
			PM	17.4	C	22.6	C
6	El Camino Real & Murchison Dr	D	AM	21.2	C	25.1	C
			PM	25.4	C	31.1	C
7	California Dr & Trousdale Dr[1, 2]	None	AM	25.8	D	27.0	D
			PM	29.2	D	33.9	D
8	El Camino Real & Trousdale Dr	D	AM	20.5	C	21.3	C
			PM	23.0	C	24.8	C
9	El Camino Real & Broadway (CMP)[3]	E	AM	13.6	B	14.9	B
			PM	12.4	B	13.5	B
10	California Drive & Broadway	D	AM	51.9	D	55.0	D
			PM	51.0	D	**85.3**	**F**
11	Rollins Road & Broadway	D	AM	21.1	C	24.8	C
			PM	20.4	C	23.8	C
12	US 101 SB Ramps & Broadway[3]	D	AM	28.6	B	33.5	B
			PM	23.1	B	24.4	B
13	Old Bayshore Hwy & Broadway	D	AM	14.9	B	19.2	B
			PM	18.3	B	21.5	C
14	Old Bayshore Hwy & US 101 NB Ramps	D	AM	21.3	C	25.6	C
			PM	19.2	B	23.2	C

Notes:
1. Denotes a two-way stop-controlled intersection. Worst leg delay is reported.
2. Recent counts were not available. Counts were extrapolated from nearby intersections.
3. HCM 2000 average delay is reported.
Bold indicates a substandard level of service.

4. Project Conditions

This chapter describes traffic conditions with the project and includes: (1) the method by which project traffic is estimated, (2) intersection levels of service under existing plus project conditions and background plus project conditions, and (3) potential impacts of the project traffic on roadway network. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. Background plus project conditions predict a realistic traffic condition that would occur as approved developments get built and occupied when the project is complete. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Roadway Network Under Project Conditions

The roadway network under project conditions would be the same as the existing roadway network because the project would not alter the existing intersection lane configurations.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the project site is estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic that can be expected to be generated by many types of land uses. The data are published in *Trip Generation Manual, 10th Edition,* by the Institute of Transportation Engineers (ITE). The magnitude of traffic added to the roadway system by a new development is estimated by multiplying the applicable trip generation rates by the size and use of the development. The rates published for Multifamily Housing (Low-Rise) (Land Use 220), General Office Building (Land Use 710), and Shopping Center (Land Use 820) were used to estimate the trips generated by the proposed project. The “Low-Rise Multifamily Housing” category refers to apartments, townhouses, and condominiums located within the same building that have one or two levels. Most of the proposed residential units would be located on the top two floors (6th and 7th floors) of the project building with four units on the ground level. Therefore, it is reasonable

to use this ITE category for the proposed residential units. The “General Office Building” category refers to a general office building with a mix of tenants including professional services, insurance companies, and investment brokers, and tenant services. Since specific uses of the proposed office space are unknown, it is reasonable to use this ITE category for the office space. The “Shopping Center” category refers to an integrated group of commercial establishments. This category includes the trip data for a wide scale of retail uses, from neighborhood centers to regional centers. Since specific uses of the proposed retail spaces are unknown, it is reasonable to use the trip rates for shopping centers for the retail space.

Because the project would provide commercial and residential mixed-use on-site, it is expected some residents and office employees would patronize the retail businesses, and some residents would work in the offices on site, which would result in the internalization of some project trips. It is also expected some residents and office employees would utilize the transit services near the site. Therefore, trip reductions were applied based on the EPA's MXD model (mixed-use trip generation model). The MXD model accounts for employment and transit services in the project area and the mix of uses on the site to estimate the applicable trip reduction. Based on the model, trip reduction rates of 17%, 13%, and 15% were applied to daily, AM peak-hour, and PM peak-hour trips.

Because the project would replace the existing uses on the site, trips associated with the existing uses were subtracted from the gross project traffic to derive the net project trips. The majority of the existing building space (23,500 square feet) is used as office space with 9,500 square feet being used as art museum space. The rates published for General Office Building (Land Use 710) and Museum (Land Use 580) were used to estimate the trips that are generated by the existing uses.

After applying the trip reduction and existing trip credits, Table 6 shows that the project would generate 1,545 new daily trips, with 150 net trips (111 in and 39 out) occurring during the AM peak hour and 169 net trips (49 in and 120 out) occurring during the PM peak hour.

Table 6
Project Trip Generation Estimates

			Daily		AM Peak Hour				PM Peak Hour			
					Pk-Hr	Trips			Pk-Hr	Trips		
Land Use	Size		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Land Use												
Apartments[1]	60	DU	7.32	439	0.46	6	22	28	0.56	21	13	34
Retail[2]	7,588	s.f.	37.75	286	0.94	4	3	7	3.81	14	15	29
Office[3]	148,057	s.f.	9.74	1,442	1.16	148	24	172	1.15	27	143	170
- Mixed-Use Trip Reduction[4]				*-368*		*-21*	*-6*	*-27*		*-9*	*-26*	*-35*
Gross Project Trips				**1,799**		**137**	**43**	**180**		**53**	**145**	**198**
Existing Land Use												
Art Museum[5]	9,500	s.f.	--[5]	-25	0.28	-3	0	-3	0.18	0	-2	-2
Office[3]	23,500	s.f.	9.74	-229	1.16	-23	-4	-27	1.15	-4	-23	-27
Net Project Trips				**1,545**		**111**	**39**	**150**		**49**	**120**	**169**

Notes:
All trip rates are from ITE Trip Generation Manual, 10th Edition, 2017.
1. Average trip rates for Multifamily Housing Low-Rise (Land Use 220), expressed in trips per dwelling unit (DU).
2. Average trip rates for Shopping Center (Land Use 820), expressed in trips per 1,000 square feet (s.f.) of gross floor area (GFA).
3. Average trip rates for General Office Building (Land Use 710), expressed in trips per 1,000 s.f. of GFA.
4. Trip reduction rates of 17%, 13%, and 15% were applied to daily, AM peak-hour, and PM peak-hour trips, based on the EPA's MXD model (mixed-use trip generation model) to account for internal mixed-use trips in the project area.
5. Peak-hour trip rates for Museum (Land Use 580), expressed in trips per 1,000 s.f. of GFA. Daily trips were estimated by multiplying the average peak-hour trips by ten.

Trip Distribution and Assignment

The trip distribution patterns for the proposed residential, office, and retail uses were estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses (see Figure 8).

The peak-hour trips generated by the project were assigned to the roadway system based on the directions of approach and departure, the roadway network connections, and the locations of project driveways (see Figure 9). Because the proposed driveway on the El Camino Real frontage road can only be accessed in the northbound direction, a majority of the project traffic would access the site via the existing full-access driveway on California Drive.

Traffic Volumes Under Project Conditions

Project trips, as represented in the above project trip assignment, were added to existing and background traffic volumes to obtain existing plus project traffic volumes (see Figure 10) and background plus project traffic volumes (see Figure 11).

Existing Plus Project Intersection Levels of Service

The results of the intersection level of service analysis (see Table 7) show that all of the study intersections would continue to operate at an acceptable level of service during both the AM and PM peak hours under existing plus project conditions. The intersection level of service calculation sheets are included in Appendix B.

Background Plus Project Intersection Levels of Service

The results of the intersection level of service analysis (see Table 8) show that that the El Camino Real/Millbrae Avenue intersection would operate at an unacceptable LOS F during the AM and PM peak hours, and the California Avenue/Broadway intersection would operate at an unacceptable LOS F during the PM peak hour under background conditions with and without the project. However, since the project would not increase the average delay by 4 or more seconds at the El Camino Real/Millbrae Avenue intersection and by 5 or more seconds at the California Avenue/Broadway intersection, the project is not considered to have a significant impact at these intersections. All other study intersections would continue to operate at acceptable levels of service.

Figure 8
Project Trip Distribution Pattern

NORTH
Not to Scale

LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 9
Net Project Trip Assignment

NORTH
Not to Scale

LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 10
Existing Plus Project Traffic Volumes

NORTH
Not to Scale

LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 11
Background Plus Project Traffic Volumes

NORTH
Not to Scale

Table 7
Existing Plus Project Intersection Levels of Service

#	Intersection	LOS Standard	Peak Hour	Existing Conditions: No Project Avg. Delay (sec)	No Project LOS	With Project Avg. Delay (sec)	With Project LOS	Increase in Delay (sec)
1	US 101 NB Ramps & Millbrae Ave	D	AM	9.1	A	9.2	A	0.1
			PM	6.2	A	6.3	A	0.1
2	US 101 SB Ramps & Millbrae Ave	D	AM	11.6	B	11.9	B	0.3
			PM	8.7	A	8.8	A	0.1
3	Rollins Rd & Millbrae Ave	D	AM	20.4	C	20.5	C	0.1
			PM	27.0	C	27.1	C	0.1
4	El Camino Real & Millbrae Ave (CMP)	E	AM	75.4	E	75.5	E	0.1
			PM	74.8	E	75.4	E	0.6
5	California Dr & Murchison Dr[1]	None	AM	14.5	B	15.2	C	-
			PM	17.4	C	18.8	C	-
6	El Camino Real & Murchison Dr	D	AM	21.2	C	22.0	C	0.8
			PM	25.4	C	26.9	C	1.5
7	California Dr & Trousdale Dr[1, 2]	None	AM	25.8	D	30.9	D	-
			PM	29.2	D	34.5	D	-
8	El Camino Real & Trousdale Dr	D	AM	20.5	C	21.2	C	0.7
			PM	23.0	C	24.6	C	1.6
9	El Camino Real & Broadway (CMP)[3]	E	AM	13.6	B	13.6	B	0.0
			PM	12.4	B	12.5	B	0.1
10	California Drive & Broadway	D	AM	51.9	D	53.8	D	1.9
			PM	51.0	D	51.7	D	0.7
11	Rollins Road & Broadway	D	AM	21.1	C	21.1	C	0.0
			PM	20.4	C	20.5	C	0.1
12	US 101 SB Ramps & Broadway[3]	D	AM	28.6	B	29.1	B	0.5
			PM	23.1	B	23.3	B	0.2
13	Old Bayshore Hwy & Broadway	D	AM	14.9	B	14.9	B	0.0
			PM	18.3	B	18.4	B	0.1
14	Old Bayshore Hwy & US 101 NB Ramps	D	AM	21.3	C	21.5	C	0.2
			PM	19.2	B	19.2	B	0.0

Notes:
1. Denotes a two-way stop-controlled intersection. Worst leg delay is reported.
2. Recent counts were not available. Counts were extrapolated from nearby intersections.
3. HCM 2000 average delay is reported.
Bold indicates a substandard level of service.

Table 8
Background Plus Project Intersection Levels of Service

#	Intersection	LOS Standard	Peak Hour	Background Conditions: No Project Avg. Delay (sec)	No Project LOS	With Project Avg. Delay (sec)	With Project LOS	Increase in Delay (sec)
1	US 101 NB Ramps & Millbrae Ave	D	AM	10.6	B	10.7	B	0.1
			PM	7.0	A	7.0	A	0.0
2	US 101 SB Ramps & Millbrae Ave	D	AM	14.0	B	14.3	B	0.3
			PM	10.5	B	10.7	B	0.2
3	Rollins Rd & Millbrae Ave	D	AM	35.2	D	35.2	D	0.0
			PM	42.9	D	43.2	D	0.3
4	El Camino Real & Millbrae Ave (CMP)	E	AM	**101.6**	**F**	**101.9**	**F**	0.3
			PM	**92.0**	**F**	**95.8**	**F**	3.8
5	California Dr & Murchison Dr[1]	None	AM	16.0	C	16.8	C	-
			PM	22.6	C	25.4	D	-
6	El Camino Real & Murchison Dr	D	AM	25.1	C	26.1	C	1.0
			PM	31.1	C	33.5	C	2.4
7	California Dr & Trousdale Dr[1, 2]	None	AM	27.0	D	32.5	D	-
			PM	33.9	D	41.3	E	-
8	El Camino Real & Trousdale Dr	D	AM	21.3	C	22.0	C	0.7
			PM	24.8	C	26.5	C	1.7
9	El Camino Real & Broadway (CMP)[3]	E	AM	14.9	B	14.9	B	0.0
			PM	13.5	B	13.6	B	0.1
10	California Drive & Broadway	D	AM	55.0	D	56.7	E	1.7
			PM	**85.3**	**F**	**86.6**	**F**	1.3
11	Rollins Road & Broadway	D	AM	24.8	C	24.8	C	0.0
			PM	23.8	C	24.0	C	0.2
12	US 101 SB Ramps & Broadway[3]	D	AM	33.5	B	34.2	B	0.7
			PM	24.4	B	24.5	B	0.1
13	Old Bayshore Hwy & Broadway	D	AM	19.2	B	19.2	B	0.0
			PM	21.5	C	21.6	C	0.1
14	Old Bayshore Hwy & US 101 NB Ramps	D	AM	25.6	C	25.9	C	0.3
			PM	23.2	C	23.3	C	0.1

Notes:
1. Denotes a two-way stop-controlled intersection. Worst leg delay is reported.
2. Recent counts were not available. Counts were extrapolated from nearby intersections.
3. HCM 2000 average delay is reported.
Bold indicates a substandard level of service.

5. Cumulative Conditions

This chapter describes the roadway traffic operations under cumulative conditions and cumulative plus project conditions. Cumulative conditions represent future traffic conditions with expected growth in the area. The expected future traffic volumes were obtained from the City of Burlingame 2040 General Plan forecasts.

Roadway Network and Traffic Volumes Under Cumulative Conditions

The intersection lane configurations under cumulative conditions were assumed to be the same as described under background conditions. It is anticipated that the proposed Broadway grade separation project for the Caltrain tracks would be completed (projected to be constructed between 2023 and 2026, dependent on future funding allocations) under cumulative conditions. The grade separation would not affect the lane configuration at the California Avenue/Broadway intersection, but is expected to improve the intersection operations. It was assumed that with the grade separation project, the eastbound and westbound phases on Broadway would be modified from split phases to protected phases with a shorter cycle length.

Cumulative traffic volumes were taken from the 2040 General Plan traffic study and adjusted by comparing to existing and background volumes. For intersections in which the General Plan 2040 volumes are lower than existing volumes, the volume increases from existing to cumulative conditions of the General Plan study were added to the existing traffic volumes of this study to derive the cumulative traffic volumes. For intersections in which the General Plan 2040 volumes are lower than background volumes, the background volumes were applied to cumulative conditions. For intersections not included in the 2040 General Plan, the cumulative volumes were estimated by using the volumes at the closest intersections. The intersections of California Drive/Murchison Drive, El Camino Real/Murchison Drive, and California Drive/Trousdale Drive are included in the 2040 General Plan. Based on the existing and cumulative volumes at the El Camino Real/Trousdale Drive intersection, the estimation for intersections not included in the 2040 General Plan utilized a growth factor of 1.19 and 1.17 for the AM and PM peak hours, respectively. Figure 12 shows the traffic volumes under cumulative no project conditions. Figure 13 shows the traffic volumes under cumulative plus project conditions.

LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 12
Cumulative No-Project Traffic Volumes

NORTH
Not to Scale

LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 13
Cumulative Plus Project Traffic Volumes

NORTH
Not to Scale

Cumulative Intersection Levels of Service

The level of service results for the study intersections under cumulative conditions without and with the project are summarized in Table 9. The results show that the El Camino Real/Millbrae Avenue intersection would operate at an unacceptable LOS F during the AM and PM peak hours under both no-project and with-project conditions. However, since the project would not increase the average delay by 4 or more seconds, the project is not considered to have a significant impact at this intersection.

With the Broadway grade separation, the traffic operations at the California Avenue/Broadway intersection would be improved from an unacceptable LOS F in the PM peak hour under background conditions to an acceptable LOS D under cumulative conditions. All other study intersections would continue to operate at acceptable levels of service.

Table 9
Cumulative plus Project Levels of Service

#	Intersection	LOS Standard	Peak Hour	Cumulative Conditions: No Project Avg. Delay (sec)	No Project LOS		With Project Avg. Delay (sec)	With Project LOS	Increase in Delay (sec)
1	US 101 NB Ramps & Millbrae Ave	D	AM	11.2	B	0	11.3	B	0.1
			PM	7.0	A	0	7.0	A	0.0
2	US 101 SB Ramps & Millbrae Ave	D	AM	14.6	B	0	15.0	B	0.4
			PM	11.8	B	0	12.1	B	0.3
3	Rollins Rd & Millbrae Ave	D	AM	35.2	D	0	35.2	D	0.0
			PM	43.3	D	0	43.7	D	0.4
4	El Camino Real & Millbrae Ave (CMP)	E	AM	**119.9**	**F**	**0**	**>120**	**F**	0.5
			PM	**102.8**	**F**	**0**	**106.5**	**F**	3.7
5	California Dr & Murchison Dr[1]	None	AM	17.0	C	0	18.0	C	-
			PM	22.6	C	0	25.4	D	-
6	El Camino Real & Murchison Dr	D	AM	26.5	C	0	27.6	C	1.1
			PM	31.8	C	0	34.1	C	2.3
7	California Dr & Trousdale Dr[1, 2]	None	AM	38.6	E	0	50.0	E	-
			PM	46.1	E	0	58.2	F	-
8	El Camino Real & Trousdale Dr	D	AM	24.5	C	0	25.6	C	1.1
			PM	32.5	C	0	35.1	D	2.6
9	El Camino Real & Broadway (CMP)[3]	E	AM	17.7	B	0	18.1	B	0.4
			PM	27.1	C	0	28.9	C	1.8
10	California Drive & Broadway[4]	D	AM	39.6	D	0	40.3	D	0.7
			PM	50.6	D	0	51.6	D	1.0
11	Rollins Road & Broadway	D	AM	25.4	C	0	25.4	C	0.0
			PM	25.1	C	0	25.2	C	0.1
12	US 101 SB Ramps & Broadway[3]	D	AM	33.5	B	0	34.2	B	0.7
			PM	41.4	C	0	42.2	C	0.8
13	Old Bayshore Hwy & Broadway	D	AM	20.3	C	0	20.3	C	0.0
			PM	28.0	C	0	28.3	C	0.3
14	Old Bayshore Hwy & US 101 NB Ramps	D	AM	25.6	C	0	25.9	C	0.3
			PM	23.6	C	0	23.8	C	0.2

Notes:
1. Denotes a two-way stop-controlled intersection. Worst leg delay is reported.
2. Recent counts were not available. Volumes were extrapolated from nearby intersections.
3. HCM 2000 average delay is reported.
4. Traffic signal improvement is assumed to account for the Caltrain grade separation project on Broadway.
Bold indicates a substandard level of service.

6. Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Vehicle miles traveled (VMT)
- Intersection vehicle queuing
- Traffic operations at unsignalized intersections
- Site access and circulation
- Potential effects to pedestrians, bicycles, and transit facilities
- Parking

The analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by traffic engineering professionals. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the effects of added project traffic.

VMT Analysis

The CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within a half mile of an existing major transit stop or an existing stop along a high quality transit corridor will have a less-than-significant impact on VMT. The project is located within a half mile of the Millbrae Station, which is a major transit stop. Therefore, the project is expected to have a less-than-significant impact on VMT.

Intersection Vehicle Queuing

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis for left-turn lanes and stop-controlled approaches at intersections where the project would add a substantial number of trips to the left-turn movements or stop-controlled approaches (see Table 10). This analysis provides a basis for estimating future storage requirements at the intersections under existing and background conditions. Vehicle queues were estimated using Synchro software, described in Chapter 1. The following movements were selected for evaluation:

- Left turn from westbound Millbrae Avenue to southbound El Camino Real
- Left turn from southbound El Camino Real to eastbound Murchison Drive
- Left turn from southbound El Camino Real to eastbound Trousdale Drive
- Left turn from southbound California Avenue to eastbound Broadway

Table 10
Queuing Analysis Summary

Intersection	El Camino Real/ Millbrea	El Camino Real/ Murchison	El Camino Real/ Trousdale		California/ Broadway	California/ Murchison		California/ Trousdale		
Movement	WB LT	SB LT	SB LT	SB LT	SB LT	EB RT	NB LT	EB RT	EB RT	NB LT
Peak Hour Period	AM	AM	AM	PM	PM	AM	PM	AM	PM	PM
Existing										
Lanes	2	1	1	1	2	1	1	1	1	1
Volume (vph)	359	196	115	74	309	251	131	304	211	198
Volume (vphpl)	180	196	115	74	155	251	131	304	211	198
95th% Queue[1] (veh/ln)	6	8	6	5	9	1	0	2	1	1
95th% Queue[2] (ft/ln)	150	200	150	125	225	25	0	50	25	25
Storage (ft/ ln)	300	125	350	350	225	125[3]	125	125[3]	125[3]	300
Adequate (Y/N)	Y	***N***	Y	Y	Y	Y	Y	Y	Y	Y
Existing Plus Project										
Lanes	2	1	1	1	2	1	1	1	1	1
Volume (vph)	388	216	141	87	331	271	153	347	232	218
Volume (vphpl)	194	216	141	87	166	271	153	347	232	218
95th% Queue[1] (veh/ln)	6	9	7	6	10	1	0	3	1	1
95th% Queue[2] (ft/ln)	150	225	175	150	250	25	0	75	25	25
Storage (ft/ ln)	300	125	350	350	225	125[3]	125	125[3]	125[3]	300
Adequate (Y/N)	Y	***N***	Y	Y	***N***	Y	Y	Y	Y	Y
Background										
Lanes	2	1	1	1	2	1	1	1	1	1
Volume (vph)	443	239	115	74	395	256	137	304	211	198
Volume (vphpl)	222	239	115	74	198	256	137	304	211	198
95th% Queue[1] (veh/ln)	8	12	6	5	12	1	0	2	1	1
95th% Queue[2] (ft/ln)	200	300	150	125	300	25	0	50	25	25
Storage (ft/ ln)	300	125	350	350	225	125[3]	125	125[3]	125[3]	300
Adequate (Y/N)	Y	***N***	Y	Y	***N***	Y	Y	Y	Y	Y
Background Plus Project										
Lanes	2	1	1	1	2	1	1	1	1	1
Volume (vph)	472	259	141	87	417	276	159	347	278	218
Volume (vphpl)	236	259	141	87	209	276	159	347	232	218
95th% Queue[1] (veh/ln)	8	13	8	6	12	1	0	3	1	1
95th% Queue[2] (ft/ln)	200	325	200	150	300	25	0	75	25	25
Storage (ft/ ln)	300	125	350	350	225	125[3]	125	125[3]	125[3]	300
Adequate (Y/N)	Y	***N***	Y	Y	***N***	Y	Y	Y	Y	Y

Notes:
NB = northbound; SB = southbound; EB = eastbound; WB = westbound.
LT = left turn movement; RT = right turn movement.
1. Assumes One Vehicle Queued per 25 feet.
2. Value taken from Synchro 10 software. Value rounded to the nearest 25 feet.
3. Distance to the nearest driveway.

- Right turn from eastbound Murchison Drive to southbound California Avenue
- Left turn from northbound California Avenue to westbound Murchison Drive
- Right turn eastbound Trousdale Drive to southbound California Avenue
- Left turn from northbound California Avenue to westbound Trousdale Drive

Locations where the estimated 95th percentile queues would be exceeded the available storage capacity for the movement are discussed below.

El Camino Real and Murchison Drive

Under all scenarios, the left-turn movement from southbound El Camino Real to eastbound Murchison Drive was calculated to have insufficient storage during the AM peak hour. The existing left-turn pocket can accommodate approximately 5 vehicles, while the estimated 95th percentile queue is 8 and 12 vehicles under existing and background conditions, respectively. During the AM peak hour, the project would add 20 trips to the southbound left-turn movement and is expected to increase the 95th percentile queue by one vehicle. However, inbound project traffic would have a choice to use Murchison Drive or Trousdale Drive. If the southbound left-turn vehicle queue at the El Camino Real/Murchison Drive intersection were long, the project traffic could turn at Trousdale Drive instead. Therefore, the project is expected to have a minimal effect on traffic operations at Murchison Drive.

California Avenue and Broadway

The dual storage pockets for the left-turn movement from southbound California Avenue to eastbound Broadway extend to Rhinette Avenue and can accommodate approximately 9 vehicles per lane. The estimated 95th percentile queues are 9 and 12 vehicles under existing and background conditions, respectively. During the PM peak hour, the project would add 22 trips to the southbound left-turn movement and is expected to increase the 95th percentile queue by one vehicle per lane. The resulting queue length would exceed the available storage by approximately one vehicle under existing plus project conditions and by 3 vehicles under background plus project conditions. Excess left-turn vehicles would queue in the southbound through lane with the southbound traffic. There is a Keep Clear pavement marking at Rhinette Avenue to prevent blockage. The 95th percentile queue only occurs on 5 percent of the signal cycles (about one cycle in the peak hour for the intersection with a 145-second cycle length), and the 95th percentile queue only occurs for a very brief period at the end of the signal cycle (an estimated 5 to 10 seconds). Therefore, the project is expected to have a minimal effect on traffic operations at this location.

Traffic Operations at Unsignalized Intersections

The study evaluates two unsignalized intersections: California Avenue/Murchison Drive and California Avenue/Trousdale Drive. Both intersections are two-way stop controlled with stop signs on Murchison Drive and Trousdale Drive.

Based on the level of service analysis results, the California Avenue/Murchison Drive intersection would operate at LOS C or better under all study scenarios. The queueing analysis shows no vehicle queueing issues under project scenarios. Therefore, the project traffic would not result in the need for intersection improvement or modification of traffic control at the intersection.

Based on the level of service analysis results, the California Avenue/Trousdale Drive intersection would operate at LOS E or better under existing and background conditions without vehicle queueing issues. However, the eastbound movement on Trousdale Drive would experience some delay with LOS F during the PM peak hour under cumulative conditions. In conjunction with the level of service analysis, a signal warrant analysis was conducted based on the Peak Hour Volume Warrant (Warrant 3) described in the California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD), Part 4, Highway Traffic Signals. The results of the peak-hour signal warrant checks indicate that both AM and PM peak-hour volumes at the intersection meet the peak-hour signal warrant under all scenarios, both with and without the project traffic. The peak-hour signal warrant sheets are contained in Appendix C. It should be noted that the peak-hour volume signal warrant analysis simply provides an indication whether vehicular peak-hour volumes are, or would be, sufficiently high to justify installation of a traffic signal. Additional analysis may include operational analysis such as evaluating vehicle queuing and delay.

Based on the estimated peak-hour volumes the California Avenue/Trousdale Drive intersection, the eastbound movement delay on Trousdale Drive can be improved by installation of all-way stop signs or a traffic signal at the intersection, both of which would improve the intersection level of service to LOS C or better. Because the level of service deficiency is estimated to occur under cumulative conditions, the project should pay a pro-rated share of the cost of the intersection improvement. It should be noted that due to Covid-19 and regional shelter-in-place orders, new traffic counts cannot be collected, and traffic volumes at the intersection were estimated from the traffic volumes of the adjacent study intersections. Additionally, field observations cannot be conducted to identify whether there are traffic operational issues at the intersection. Therefore, although both AM and PM peak-hour estimated volumes at the intersection meet the peak-hour signal warrant, the need for intersection improvement or modification of traffic control at the intersection should be evaluated further with actual traffic counts and field observations in the future when volumes return to pre-Covid levels.

Site Access and Circulation

The site access and on-site circulation evaluation is based on the October 28, 2019 site plan prepared by Architecture International. Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, geometric design, sight distance, and operations (e.g., vehicle queuing and delay). On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Site Access

Vehicles access to the surface parking spaces and below-grade parking garage would be provided via the existing full-access driveway on California Drive and the existing right-turn-only driveway on the El Camino Real frontage road (see Figure 2). The driveway on California Drive currently provides access to surface parking spaces along both sides of the driveway aisle and on the site. With the project, the driveway would also provide access to surface parking spaces along both sides of the driveway aisle, which then would lead to the proposed below-grade parking garage. The driveway on the El Camino Real frontage road would provide direct access to the parking garage. Additionally, a full-access driveway on Trousdale Drive would provide access to a passenger loading area for the residential use.

Project Driveway Design

The California Avenue and frontage road driveways measure 24 feet in width and the Trousdale Drive driveway measure 20 feet in width. The City of Burlingame Zoning Code requires a minimum of either two 12-foot driveways or one 18-foot driveway for parking areas of more than 30 vehicle spaces. Therefore, the proposed driveways meet the City's minimum width requirement for two-way driveways.

The project driveways must provide adequate access and stacking space for vehicles entering the site to avoid backups onto the sidewalks and streets. The driveways on the El Camino Real frontage road and Trousdale Drive would provide enough stacking space for approximately five inbound vehicles. Typically, a minimum distance of 50 feet, the equivalent of two vehicles, measured from the face of the curb provides adequate stacking space at driveways. These two driveways provide adequate inbound stacking space for vehicles entering the site.

The California Avenue driveway is shown to have approximately 25 feet of vehicle stacking space between the face of the curb and the first 90-degree parking stalls. This would provide room for one inbound vehicle if there is a vehicle backing out of the first parking stalls. Given the estimated 113 inbound trips in the AM peak hour (see Figure 14) at the driveway, that calculates to about one inbound trip every 32 seconds, the probability of two or more inbound vehicles entering the parking garage at the same time would likely be low. Therefore, the inbound stacking space at the driveway is expected to be adequate.

LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 14
Gross Project Trips at Driveways

NORTH
Not to Scale

Sight Distance at Project Driveways

The proposed driveway locations were evaluated to determine if the sight distance at each driveway would be adequate. Adequate sight distance reduces the likelihood of a collision at driveways and provides drivers with the ability to locate sufficient gaps in traffic to exit a driveway. Sight distance of a driveway is evaluated based on the stopping sight distance recommended by Caltrain for a given design speed.

For the driveways on California Avenue, which has a posted speed limit of 35 mph, the Caltrans stopping sight distance is 300 feet (based on a design speed of 40 mph). Thus, a driver must be able to see 300 feet on both directions of California Avenue to locate a sufficient gap to turn out of the driveway. Since there is no posted speed limit on Trousdale Drive and the El Camino Real frontage road along the project frontage, it was assumed that the speed limit is 25 mph. Therefore, these driveways require a stopping sight distance of 200 feet, based on a design speed of 30 mph.

According to the site plan, the landscape plan shows street trees would be added along the project frontage on Trousdale Drive and the El Camino Real frontage road. The type and location of the street trees would be determined by the City at the implementation stage. Note that street trees have a high canopy and would not obstruct the view of drivers exiting the project driveways.

The California Avenue driveway would be located 260 feet south of Trousdale Drive. However, because no roadway curve or on-street parking is present on California Avenue between Trousdale Drive and the driveway that would obstruct the vision of exiting drivers, vehicles exiting the driveway would be able to see approaching traffic on beyond Trousdale Drive with an adequate sight distance (greater than 300 feet) for the southbound traffic through traffic. Vehicles turning from Trousdale Drive to southbound California Avenue are expected to travel with lower speed while making turns. The Caltrans stopping sight distance is 200 feet based on a travel speed of 30 mph. Therefore, the sight distance (260 feet) for traffic turning from Trousdale Drive is adequate.

At the El Camino Real frontage road driveway, no roadway curve or on-street parking is present to the left side of the driveway that would obstruct the vision of exiting drivers. Therefore, vehicles exiting the driveway would be able to see approaching traffic on the frontage road with an adequate sight distance (greater than 200 feet).

At the Trousdale Drive driveway, based on the site plan and existing red curbs on the street, there would be no vehicles parked next to driveway. Therefore, vehicles exiting the driveway would be able to see approaching traffic on the frontage road with an adequate sight distance (greater than 200 feet).

Project Driveway Operations

The project-generated gross trips that are estimated to occur at the project driveways are shown in Figure 14. At the driveway on the El Camino Real frontage road, because vehicles can only make right turns, there would be minimal delay for inbound traffic. For outbound traffic, some on-site vehicle queuing could occur due to a combination of the inherent unpredictability of vehicle arrivals at the driveway and the random occurrence of gaps in traffic along the frontage road, but the queue is not expected to affect the on-site circulation.

For the driveway at California Avenue, the level of service analysis shows that that the outbound and left-turn inbound movements of the driveway would operate adequately (LOS C for the outbound traffic and LOS A for left-turn inbound traffic) with short delay under all project conditions. The project is estimated to add 23 and 8 new northbound left-turn trips in the AM and PM peak hours, respectively, at the driveway with the vehicle delay of 9 and 8 seconds per vehicle in the AM and PM peak hours, respectively, for the left-turn movement. The short delay is not expected to affect traffic flow on northbound California Avenue. Therefore, no operational issues related to vehicle queueing and/or

vehicle delay are expected to occur at the driveway. Some minor on-site vehicle queuing could occur due to a combination of the inherent unpredictability of vehicle arrivals at the driveway and the random occurrence of gaps in traffic along California Avenue. However, given the estimated 99 outbound trips in the PM peak hour at the driveway, that calculates to about one outbound trip every 36 seconds, the probability of two or more outbound vehicles exiting the parking garage at the same time would likely be low. The maximum queue is not expected to affect the on-site circulation. Additionally, vehicles turning right into the project site from California Avenue may block the travel lane momentarily due to vehicles slowing down to turn into the driveway, but this is unlikely to have a significant effect on traffic operations.

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of Burlingame Zoning Code and generally accepted traffic engineering standards. Generally, the proposed site plan would provide vehicle traffic with adequate connectivity through the parking areas. The site plan (see Figures 15 and 16) shows dead-end aisles in the lower level of the parking garage, but turn-around spaces would also be provided at the dead-end aisles.

The slope of the parking garage access ramp to the El Camino Real frontage road would be 10 percent. The site plan does not show where the ramp would meet ground level. It is recommended that a 20-foot flat area be provided in back of the sidewalk so exiting vehicles can see pedestrians on the sidewalk.

The project would provide 90-degree parking throughout the surface parking area and within the proposed parking garage. The City's standard minimum width for two-way drive aisles is 24 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the drive aisles throughout the parking garage measure 24 feet wide. Thus, adequate access to all parking stalls would be provided throughout the site.

Parking Stall Dimensions

Parking spaces are shown to be 17 feet long by 8.5 feet wide for standard parking spaces and 18 feet long by 9 feet wide for accessible parking spaces. According to the City of Burlingame Zoning Code for the North Burlingame Mixed-Use Zoning District, all parking stalls may be provided in a single dimension, 8.5 feet in width by 17 feet in length, except for required accessible parking spaces which shall meet the dimensions required in the California Building Code. The proposed parking space dimensions would meet the City requirements.

The project would provide two-level puzzle lifts in the lower level of the parking garage with lift pits. Therefore, it is expected that the parking lifts would have adequate height to accommodate all passenger vehicles.

Passenger Loading

The site plan shows a passenger loading area on-site for residents with access via the Trousdale Drive driveway. Another passenger loading area is shown along the El Camino Real frontage road that could be used for the retail and office space. The loading areas would allow for residents, employees, or visitors to be picked up or dropped off.

Figure 15
Parking Garage Plan - Level B1

NORTH
Not to Scale

Figure 16
Parking Garage Plan - Level B2

NORTH
Not to Scale

Bike and Pedestrian On-site Circulation

The site plan provides adequate pedestrian circulation throughout the site, as well as between the site and the surrounding pedestrian facilities. In addition to the sidewalks along Trousdale Drive and the frontage road, the site plan shows continuous a walkway along Trousdale Drive that provides pedestrian access between Trousdale Drive and the residential lobby and dog play area. It also shows a bulb-out at the southeast corner of the El Camino Real frontage road/Trousdale Drive intersection. The project proposes a bicycle parking room on the ground floor, which can be accessed from the residential lobby and the walkway in front of the residential lobby.

Although the City of Burlingame Zoning Code does not require bike parking for office use, to encourage bicycling by employees it is recommended the project provide secured bicycle parking for employees within the building or provide convenient access for employees to access the bicycle parking room.

Truck Access and Circulation

Garbage Collection

The site plan shows two trash rooms on the ground level of the building, one near Trousdale Drive and the other one near the El Camino Real frontage road. Garbage collection activities for the project are not expected to occur on-site due to access limitations. Therefore, the trash bins should be moved to the curb along Trousdale Drive and the El Camino Real frontage road on designated garbage collection days. Given that on-street parking is permitted along both streets, signs prohibiting parking during garbage pickup hours should be placed adjacent to the proposed staging areas. The trash bins also should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak-hour traffic conditions.

Emergency Vehicle Access

Emergency vehicles access would be provided via Trousdale Drive, the El Camino Real frontage road, and the California Drive driveway. The site plan shows adequate access for emergency vehicles to access the building via the California Drive driveway.

Potential Effects on Pedestrians, Bicycles, and Transit Facilities

All new development projects in the City of Burlingame should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve Burlingame's mobility goals. In addition, the adopted Bicycle Transportation Plan establishes goals and policies to make bicycling a daily part of life in Burlingame. The Transportation Plan includes designated bike lanes where possible, as well as designated routes for both local and regional trips, to provide a complete connection through Burlingame. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

The project is consistent with many of the General Plan's goals. The project is consistent with Goal M-6 in that the development is near Millbrae Station, is in a designated mixed-use area, and has a site design that is convenient for pedestrians.

Pedestrian Facilites

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). Within a typical walking distance (a half mile or 10 minutes), continuous pedestrian facilities are present between the site and the surrounding land uses,

including the Millbrae Station and bus stops in the area. The project site plan shows sidewalks of approximately 10 feet in width along the Trousdale Drive and El Camino Real frontages. The project proposes to improve the frontages with planters and trees between the sidewalk and the roadway. The Trousdale Drive frontage would be set back with planters between the building and the sidewalk; and the El Camino Real frontage would be set back with landscaping and a pedestrian plaza between the building and the sidewalk. The project would also improve the El Camino Real frontage road/Trousdale Drive intersection with a bulb-out at the southeast corner, to reduce pedestrian crossing distance. The project is expected to increase the number of pedestrians using the sidewalks and crosswalks. The bulb-out would be beneficial to the project and the overall pedestrian network.

Bicycle Facilites

The project is adjacent to the bike lanes on California Avenue, which can connect to the bike routes on Broadway, Trousdale Drive between Magnolia Avenue and Ashton Avenue, and Rosedale Avenue/Ray Drive between California Drive and Devereux Drive. There are some planned additional bicycle facilities in the study area, including a bike route along Millbrae Avenue between Old Bayshore Highway and California Drive.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities.

Transit Services

The project site is well-served by transit, primarily by Caltrain and BART, whose distance is about 0.5-mile from the project site, an approximately 15-minute walk. The project is also adjacent to the bus stop for SamTrans bus route ECR, which provides frequent busses along El Camino Real. Both cycling and walking are feasible to reach the Millbrae Station. Table 6 shows a mixed-use trip reduction of 26 AM and 35 PM peak-hour trips. Some of the trip reduction would be made by transit riders. Given the number of trains during peak hours, it is expected that trains have sufficient capacity to accommodate an additional 3 to 4 riders per train or bus.

The project would not remove any transit facilities, nor would it conflict with any adopted plans or policies associated with new transit facilities. The project's proximity to the Millbrae Station makes it consistent with the City of Burlingame's General Plan Goal M-6, which encourages development that is supportive of transit use.

Parking

According to the City of Burlingame Zoning Code for the North Burlingame (NBMU) Mixed-Use District (Section 25.40.050), the project is required to provide 582 vehicle parking spaces (see Table 11). The project is proposing a Zoning Code Amendment to reduce the office parking ratio within the NMBU zone from 1:300 s.f. to 1:400 s.f., which would reduce the parking requirement to 458 parking spaces (69 for residents, 370 for office, and 19 for retail). The project also proposes a parking reduction by implementing a transportation demand management (TDM) plan. According to the Zoning Code Section 250.40.050, projects utilizing a TDM plan can be allowed up to a 20 percent reduction in required off-street vehicle parking (not including bicycle parking and EV stalls), provided the project provides for a permanent mobility mode shift towards alternative transportation of 25 percent or greater for building occupants through a TDM program. Therefore, the project requires City approval for any reduction in on-site vehicle parking spaces with a TDM plan that would achieve an alternative transportation mode share of 25 percent or greater. The recommended TDM measures the project could implement to achieve an alternative transportation mode share of 25 percent or greater are listed in Table 13 below. With the 20 percent parking reduction, the project would be required to provide 367 parking spaces.

With the Zoning Code Amendment and TDM reduction, the project proposes to provide 385 spaces, including 69 designated residential spaces, 143 stacked parking spaces, and 173 standard spaces in the ground parking area and parking garage, and 3 visitors spaces in the residential loading area. Of the 385 spaces, the site plan shows 72 spaces would be dedicated for residents and residential visitors but does not designate usage for the other 313 spaces.

The stacked parking spaces would be provided via 2-level puzzle lifts in the lower level of the parking garage. The project should encourage employees or residents to use the stacked spaces, thus allowing non-mechanical parking spaces within the garage to be available to retail customers. The project should also designate some non-mechanical parking spaces in the upper level of the parking garage for retail customers.

Table 11
Parking Requirement

Land Use	Size		Requirement	Spaces Needed
1-Bedroom	45	units	1 spaces per unit	45
2-Bedroom	12	units	1.5 spaces perunit	18
3-Bedroom	3	units	2 spaces per unit	6
			Residential Subtotal:	*69*
Office Sapce	148,057	square feet	1 spaces per 300 s.f.	494
Retail Space	7,588	square feet	1 spaces per 400 s.f.	19
			Total:	**582**

The Zoning Code requires residential developments in the NBMU District to provide 0.5 long-term bicycle parking spaces per unit and 0.05 short-term bicycle parking spaces per unit. There is no bicycle parking requirement for commercial developments. Therefore, the project is required to provide 30 long-term bicycle parking spaces and 3 short-term bicycle spaces. As proposed, the project would provide 80 long-term bicycle parking spaces in a bicycle room in the residential portion of the building, meeting the requirement for long-term bicycle parking. The site plan does not show locations of short-term bicycle spaces. Therefore, the project should provide at least 3 short-term bicycle spaces for residential guests in bicycle racks near the entrances of the building. Although there is no bicycle parking requirement for commercial developments, to encourage bicycling by patrons and employees, it is recommended the project provide secured bicycle parking for employees within the building and additional bicycle racks at several locations near entrances of the building for office visitors or retail customers.

7. Freeway Segment Analysis and CMP Compliance

Freeway Segment Analysis

Per CMP technical guidelines, a freeway segment level of service analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. New freeway trips generated by the project are expected to be considerably less than the one percent threshold of freeway capacity to all segments in the area. Therefore, a detailed analysis of freeway segments was not performed, and the project is considered to have an insignificant impact on the study freeway segments. A simple freeway segment capacity evaluation to substantiate this determination is presented in Table 12.

Table 12
Freeway Segment Capacity Evaluation

Freeway	Segment	Direction	Peak Hour	# of Lanes	Capacity[1]	Project Trips	% Capacity	Impact
US 101	Peninsula Avenue to Broadway	NB	AM	4	9,200	32	0.35%	NO
			PM	4	9,200	11	0.12%	NO
US 101	Broadway to Millbrae Avenue	NB	AM	4	9,200	10	0.11%	NO
			PM	4	9,200	3	0.03%	NO
US 101	Millbrae Avenue to I-380	NB	AM	4	9,200	9	0.10%	NO
			PM	4	9,200	27	0.29%	NO
US 101	I-380 to Millbrae Avenue	SB	AM	4	9,200	27	0.29%	NO
			PM	4	9,200	9	0.10%	NO
US 101	Millbrae Avenue to Broadway	SB	AM	4	9,200	3	0.03%	NO
			PM	4	9,200	10	0.11%	NO
US 101	Broadway to Peninsula Avenue	SB	AM	4	9,200	11	0.12%	NO
			PM	4	9,200	32	0.35%	NO

1. Freeway segment capacity is calculated based on the capacities cities in Highway Capacity Manual 2000 (2,200 vehicles per hour per lane (vphpl) for two-lane freeway segments and 2,300 vphpl for three-lane or larger freeway segments).

CMP Compliance

C/CAG requires developments that are estimated to generate 100 or more new peak-hour trips to implement transportation demand management (TDM) measures that provide trip credits equal to or

greater than the project's net peak-hour trip generation. Trip credits are applied to each TDM measure proposed, in accordance with the C/CAG TDM checklist. TDM measures include services, incentives, facilities, and actions that reduce single–occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems.

The proposed project would generate approximately 150 net AM peak-hour trips and 169 net PM peak-hour trips. Table 13 provides a summary of the on-site features and recommended TDM measures for which the project can receive trip credit on the C/CAG checklist. The table shows that the project could provide up to 177 peak-hour trip credits, which meets the C/CAG requirement.

Table 13
Summary of Recommended TDM Measures and C/CAG Trip Credits

Recommended TDM Measure	Applicable Land Use	Implementation Responsibility	C/CAG Trip Credit Rate	Provided	Trips Credited
Proximity to the Millbrae Station	All Uses		-		
Make roads and streets more pedestrian and bicycle friendly *- Sidewalk improvements* *- A pedestrian plaza*	All Uses	Developer	5 trips/facility	2	10
Install/maintain safety and security systems for pedestrians and bicyclists *- Enhanced crosswalk with bulb out* *- Street lighting* *- ADA ramps*	All Uses	Developer	5 trips/facility	3	15
Provision of on-site amenities that encourage people to stay on site during the workday *- Fitness center* *- Bike/dog wash* *- Dog play/artificial turf*	Office and Residential	Developer	5 trips/feature	3	15
Secure bicycle storage	Residential	Developer	1 trip/3 bike lockers or racks	80	26
Operation of a commute assistance center, offering transit and commute alternatives, preferably staffed with a live person to assist building tenants with trip planning *- Transit information brochure rack, and transportation information packets for new tenants* *- Quarterly educational programs to support commute alternatives* *- Ridematching assistance*	Office and Residential	Property Manager and Office Tenants	1 trip/feature plus 1 trip/staffed hour	3	3
Install/maintain an online alternative transportation kiosk	Office and Residential	Property Manager	5 trips/kiosk	1	5
TDM Monitoring - survey employee and residents to examine use and best practices	Office and Residential	Property Manager	3 trips/survey conducted twice yearly	1	3
Unbundling of on-site parking	All Uses	Property Manager	-[1]	-[1]	2
Creation of preferential parking for carpoolers	Office and Retail	Property Manager	2 trips/carpool space	0[2]	0

Recommended TDM Measure	Applicable Land Use	Implementation Responsibility	C/CAG Trip Credit Rate	Provided	Trips Credited
Flextime: Implementation of an alternate hours workweek program *- Assumed 8% of office employees based on 300 s.f. per employee*	Office	Office Tenants	1 trip/employee that is offered to work staggered work hours	39	39
Subsidizing transit tickets for employees *- Assumed 10% of office employees based on 300 s.f. per employee.*	Office	Office Tenants	1 trip/transit pass (employers are recommended to subsidize at least 50% of employees' transit fares)	49	49
Emergency ride home program	Office	Office Tenants	-[3]	-[3]	2
Participate in/create/sponsor a Transportation Management Association			5 trips		
Encourage infill development			2% of peak-hour trips	1	3
Combine any 10 elements and receive 5 credits			5 trips	1	5
				Total:	**177**
				Net Project Trips:	**169**

Notes:
1. C/CAG's guidelines does not list the TDM measure. Credited trips are based on the trip credit for encouraging shared parking.
2. Site plan does not indicate whether there would be designated parking spaces for carpoolers.
3. C/CAG's guidelines does not list the TDM measure. Credited trips are based on the trip credit for joining the Alliance's guaranteed ride home program.

1766 El Camino Real Mixed-Use Development

Technical Appendices

June 22, 2020

Appendix A

Volume Summary

Existing Volume Adjustment Summary

Study Inter. #	N/S Street	E/W Street	Jurisdiction	Count Date AM	Count Date PM	Count Source	Number of growth years with 1% per year AM	Number of growth years with 1% per year PM
1	US 101 NB Ramps	Millbrae Ave	Millbrae	02/12/19	02/12/19	1 Adrian Court TIA	0	0
2	US 101 SB Ramps	Millbrae Ave	Millbrae	02/12/19	02/12/19	1 Adrian Court TIA	0	0
3	Rollins Rd	Millbrae Ave	Millbrae	02/12/19	02/12/19	1 Adrian Court TIA	0	0
4	El Camino Real	Millbrae Ave*	Millbrae	04/15/19	04/15/19	C/CAG	0	0
5	California Dr	Murchison Dr	Burlingame	03/19/14	03/19/14	Millbrae Station Area Plan	6	6
6	El Camino Real	Murchison Dr	Burlingame	04/05/16	04/05/16	Burlingame Road Diet	4	4
7	California Dr	Trousdale Dr	Burlingame	*None*	*None*	*Estimated using counts at #5 and #8*		
8	El Camino Real	Trousdale Dr	Burlingame	02/27/20	02/27/20	Burlingame Bicycle and Pedestrian Master Plan, Focused Corridor Analyses by Alta	0	0
9	El Camino Real	Broadway*	Burlingame	04/15/19	04/15/19	C/CAG	0	0
10	California Dr	Broadway	Burlingame	05/30/18	05/30/18	Topgolf Burlingame TIA by F&P	2	2
11	Rollins Rd	Broadway	Burlingame	02/12/19	02/12/19	1 Adrian Court TIA	0	0
12	US 101 SB Ramps	Broadway	Burlingame	01/09/20	01/09/20	30 Ingold TIA	0	0
13	Old Bayshore Hwy	Broadway	Burlingame	01/09/20	01/09/20	30 Ingold TIA	0	0
14	Old Bayshore Hwy	US 101 NB Ramps	Burlingame	01/09/20	01/09/20	30 Ingold TIA	0	0

Intersection Number: 1
Intersection Name: US 101 NB Ramps and Millbrae Ave
Peak Hour: AM
Count Date: 02/12/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	7	0	0	271	183	0	69	2	832	743	1052	8	*3167*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	2	0	0	0	4	0	6	0	*12*
1499 Old Bayshore Hwy Hotel	0	0	0	0	9	0	0	0	0	0	49	0	*58*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	7	0	0	0	88	0	5	0	*100*
Serra Station Development	0	0	0	0	4	0	0	0	56	0	3	0	*63*
Total Approved Trips	*0*	*0*	*0*	*0*	*22*	*0*	*0*	*0*	*148*	*0*	*63*	*0*	*233*
Background Conditions	7	0	0	271	205	0	69	2	980	743	1115	8	*3400*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*10*	*0*	*0*	*0*	*10*
Existing + Project Conditions	7	0	0	271	183	0	69	2	842	743	1052	8	*3177*
Background + Project Conditions	7	0	0	271	205	0	69	2	990	743	1115	8	*3410*
Cumulative No Project Conditions	7	0	0	280	214	0	76	2	1014	769	1151	8	*3521*
Cumulative + Project Conditions	7	0	0	280	214	0	76	2	1024	769	1151	8	*3531*

Intersection Number: 2
Intersection Name: US 101 SB Ramps and Millbrae Ave
Peak Hour: AM
Count Date: 02/12/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	914	0	643	49	1003	0	0	0	0	613	1130	0	*4352*
Approved Project Trips													
1 Adrian Court Residential	7	0	0	0	6	0	0	0	0	11	23	0	*47*
1499 Old Bayshore Hwy Hotel	0	0	34	0	9	0	0	0	0	0	15	0	*58*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	74	0	0	0	95	0	0	0	0	59	54	0	*282*
Serra Station Development	47	0	0	0	60	0	0	0	0	35	32	0	*174*
Total Approved Trips	*128*	*0*	*34*	*0*	*170*	*0*	*0*	*0*	*0*	*105*	*124*	*0*	*561*
Background Conditions	1042	0	677	49	1173	0	0	0	0	718	1254	0	*4913*
Proposed Project Trips	*27*	*0*	*0*	*0*	*10*	*0*	*0*	*0*	*0*	*0*	*9*	*0*	*46*
Existing + Project Conditions	941	0	643	49	1013	0	0	0	0	613	1139	0	*4398*
Background + Project Conditions	1069	0	677	49	1183	0	0	0	0	718	1263	0	*4959*
Cumulative No Project Conditions	1100	0	694	49	1117	0	0	0	0	718	1253	0	*4931*
Cumulative + Project Conditions	1127	0	694	49	1127	0	0	0	0	718	1262	0	*4977*

Intersection Number: 3
Intersection Name: Rollins Rd and Millbrae Ave
Peak Hour: AM
Count Date: 02/12/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	48	17	132	493	859	401	248	129	150	337	1342	417	*4573*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	13	34	0	19	8	0	0	*74*
1499 Old Bayshore Hwy Hotel	0	0	0	0	9	0	0	0	0	0	15	0	*24*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	93	30	113	169	0	0	0	44	0	0	0	139	*588*
Serra Station Development	0	0	0	0	107	0	0	0	11	7	66	0	*191*
Total Approved Trips	*93*	*30*	*113*	*169*	*116*	*13*	*34*	*44*	*30*	*15*	*81*	*139*	*877*
Background Conditions	141	47	245	662	975	414	282	173	180	352	1423	556	*5450*
Proposed Project Trips	*0*	*0*	*0*	*0*	*37*	*0*	*0*	*0*	*0*	*0*	*12*	*0*	*49*
Existing + Project Conditions	48	17	132	493	896	401	248	129	150	337	1354	417	*4622*
Background + Project Conditions	141	47	245	662	1012	414	282	173	180	352	1435	556	*5499*
Cumulative No Project Conditions	141	47	245	662	975	414	282	173	180	352	1423	556	*5450*
Cumulative + Project Conditions	141	47	245	662	1012	414	282	173	180	352	1435	556	*5499*

Intersection Number: 4
Intersection Name: El Camino Real and Millbrae Ave*
Peak Hour: AM
Count Date: 04/15/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	36	786	798	755	295	359	715	431	31	45	648	108	*5007*
Approved Project Trips													
1 Adrian Court Residential	0	0	3	7	11	1	0	0	0	0	4	0	*26*
1499 Old Bayshore Hwy Hotel	0	0	8	5	0	4	7	0	0	0	0	0	*24*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	8	0	0	0	0	0	4	0	0	0	0	*12*
Gateway Development at Millbrae Station	0	0	67	45	7	41	62	0	0	0	11	0	*233*
Serra Station Development	4	12	37	80	0	38	37	19	0	0	0	7	*234*
Total Approved Trips	*4*	*20*	*115*	*137*	*18*	*84*	*106*	*23*	*0*	*0*	*15*	*7*	*529*
Background Conditions	40	806	913	892	313	443	821	454	31	45	663	115	*5536*
Proposed Project Trips	*0*	*17*	*0*	*8*	*0*	*29*	*12*	*4*	*0*	*0*	*0*	*0*	*70*
Existing + Project Conditions	36	803	798	763	295	388	727	435	31	45	648	108	*5077*
Background + Project Conditions	40	823	913	900	313	472	833	458	31	45	663	115	*5606*
Cumulative No Project Conditions	43	921	996	945	336	505	896	548	38	47	749	125	*6149*
Cumulative + Project Conditions	43	938	996	953	336	534	908	552	38	47	749	125	*6219*

Intersection Number: 5
Intersection Name: California Dr and Murchison Dr
Peak Hour: AM
Count Date: 03/19/14
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	42	115	2	1	6	5	7	173	65	251	4	42	*713*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	7	5	0	0	*12*
Serra Station Development	45	14	0	0	0	0	0	23	0	0	0	51	*133*
Total Approved Trips	*45*	*14*	*0*	*0*	*0*	*0*	*0*	*23*	*7*	*5*	*0*	*51*	*145*
Background Conditions	87	129	2	1	6	5	7	196	72	256	4	93	*858*
Proposed Project Trips	*0*	*8*	*0*	*0*	*0*	*0*	*0*	*2*	*8*	*20*	*0*	*0*	*38*
Existing + Project Conditions	42	123	2	1	6	5	7	175	73	271	4	42	*751*
Background + Project Conditions	87	137	2	1	6	5	7	198	80	276	4	93	*896*
Cumulative No Project Conditions	50	137	2	1	7	6	8	207	78	300	5	50	*851*
Cumulative + Project Conditions	50	145	2	1	7	6	8	209	86	320	5	50	*889*

Intersection Number: 6
Intersection Name: El Camino Real and Murchison Dr
Peak Hour: AM
Count Date: 04/05/16
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	330	878	196	107	71	11	26	793	42	47	125	278	*2904*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	4	0	7	0	0	0	0	*11*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	8	0	0	0	0	0	4	0	0	0	0	*12*
Gateway Development at Millbrae Station	7	30	5	7	0	0	0	44	0	0	0	11	*104*
Serra Station Development	2	10	38	37	2	6	10	16	0	0	3	3	*127*
Total Approved Trips	*9*	*48*	*43*	*44*	*2*	*10*	*10*	*71*	*0*	*0*	*3*	*14*	*254*
Background Conditions	339	926	239	151	73	21	36	864	42	47	128	292	*3158*
Proposed Project Trips	*0*	*26*	*20*	*8*	*0*	*0*	*0*	*9*	*0*	*0*	*0*	*0*	*63*
Existing + Project Conditions	330	904	216	115	71	11	26	802	42	47	125	278	*2967*
Background + Project Conditions	339	952	259	159	73	21	36	873	42	47	128	292	*3221*
Cumulative No Project Conditions	394	1049	234	128	85	13	31	947	50	56	149	332	*3468*
Cumulative + Project Conditions	394	1075	254	136	85	13	31	956	50	56	149	332	*3531*

Intersection Number: 7
Intersection Name: California Dr and Trousdale Dr
Peak Hour: AM
Count Date: None
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	80	290	1	0	2	2	2	194	125	304	1	51	*1052*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	5	0	0	0	0	0	7	0	0	0	0	*12*
Serra Station Development	12	3	0	0	0	0	0	4	0	0	0	19	*38*
Total Approved Trips	*12*	*8*	*0*	*0*	*0*	*0*	*0*	*11*	*0*	*0*	*0*	*19*	*50*
Background Conditions	92	298	1	0	2	2	2	205	125	304	1	70	*1102*
Proposed Project Trips	*0*	*28*	*0*	*0*	*0*	*0*	*0*	*10*	*7*	*43*	*0*	*0*	*88*
Existing + Project Conditions	80	318	1	0	2	2	2	204	132	347	1	51	*1140*
Background + Project Conditions	92	326	1	0	2	2	2	215	132	347	1	70	*1190*
Cumulative No Project Conditions	96	346	1	0	2	2	2	232	149	363	1	61	*1255*
Cumulative + Project Conditions	96	374	1	0	2	2	2	242	156	406	1	61	*1343*

Intersection Number: 8
Intersection Name: El Camino Real and Trousdale Dr
Peak Hour: AM
Count Date: 02/27/20
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	195	620	115	33	163	11	51	490	255	218	190	192	*2533*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	4	0	7	0	0	0	0	*11*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	8	0	0	0	0	0	0	0	8	4	0	4	*24*
Gateway Development at Millbrae Station	12	18	0	0	0	0	0	26	0	0	0	18	*74*
Serra Station Development	3	12	0	0	3	8	13	20	0	0	6	6	*71*
Total Approved Trips	*23*	*30*	*0*	*0*	*3*	*12*	*13*	*53*	*8*	*4*	*6*	*28*	*180*
Background Conditions	218	650	115	33	166	23	64	543	263	222	196	220	*2713*
Proposed Project Trips	*0*	*0*	*26*	*9*	*6*	*3*	*0*	*0*	*0*	*0*	*17*	*0*	*61*
Existing + Project Conditions	195	620	141	42	169	14	51	490	255	218	207	192	*2594*
Background + Project Conditions	218	650	141	42	172	26	64	543	263	222	213	220	*2774*
Cumulative No Project Conditions	323	889	124	27	196	11	49	1094	269	231	220	282	*3715*
Cumulative + Project Conditions	323	889	150	36	202	14	49	1094	269	231	237	282	*3776*

Intersection Number: 9
Intersection Name: El Camino Real and Broadway*
Peak Hour: AM
Count Date: 04/15/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	Total
Existing Conditions	23	813	114	53	91	127	128	824	0	64	163	25	*2425*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	7	3	0	0	0	0	0	*10*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	3	6	0	0	0	0	0	*9*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	10	0	0	0	0	0	0	0	0	*10*
1095 Rollin Rd Residential	0	0	1	4	0	0	0	0	0	0	0	0	*5*
1600 Trousdale Dr Assisted Living Facility	0	4	0	0	0	0	0	8	0	0	0	0	*12*
Gateway Development at Millbrae Station	0	18	0	0	0	18	26	26	0	0	0	0	*88*
Serra Station Development	0	21	0	0	0	0	0	33	0	0	0	0	*54*
Total Approved Trips	*0*	*43*	*1*	*14*	*0*	*28*	*35*	*67*	*0*	*0*	*0*	*0*	*188*
Background Conditions	23	856	115	67	91	155	163	891	0	64	163	25	*2613*
Proposed Project Trips	*0*	*6*	*0*	*0*	*0*	*0*	*0*	*17*	*0*	*0*	*0*	*0*	*23*
Existing + Project Conditions	23	819	114	53	91	127	128	841	0	64	163	25	*2448*
Background + Project Conditions	23	862	115	67	91	155	163	908	0	64	163	25	*2636*
Cumulative No Project Conditions	27	1229	99	82	89	128	252	1345	0	71	183	18	*3523*
Cumulative + Project Conditions	27	1235	99	82	89	128	252	1362	0	71	183	18	*3546*

Intersection Number: 10
Intersection Name: California Dr and Broadway
Peak Hour: AM
Count Date: 05/30/18
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	Total
Existing Conditions	22	340	409	358	293	258	452	386	45	28	424	3	*3018*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	7	0	0	0	0	0	3	0	*10*
1499 Old Bayshore Hwy Hotel	0	0	0	0	3	3	6	0	0	0	6	0	*18*
300 Airport Blvd Office	15	56	-34	2	48	9	98	-80	6	18	-36	2	*104*
Carolan Ave & Rollins Rd Residential	0	0	0	2	10	0	0	0	0	0	0	0	*12*
1095 Rollin Rd Residential	0	0	1	0	4	0	0	0	0	0	1	0	*6*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	18	0	0	0	0	0	26	0	*44*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*15*	*56*	*-33*	*4*	*90*	*12*	*104*	*-80*	*6*	*18*	*0*	*2*	*194*
Background Conditions	37	396	376	362	383	270	556	306	51	46	424	5	*3212*
Proposed Project Trips	*0*	*0*	*8*	*23*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*31*
Existing + Project Conditions	22	340	417	381	293	258	452	386	45	28	424	3	*3049*
Background + Project Conditions	37	396	384	385	383	270	556	306	51	46	424	5	*3243*
Cumulative No Project Conditions	37	396	376	362	383	270	556	306	51	46	424	5	*3212*
Cumulative + Project Conditions	37	396	384	385	383	270	556	306	51	46	424	5	*3243*

Intersection Number: 11
Intersection Name: Rollins Rd and Broadway
Peak Hour: AM
Count Date: 02/12/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	79	105	114	298	806	313	380	189	130	34	1076	170	*3694*
Approved Project Trips													
1 Adrian Court Residential	7	0	11	4	0	0	0	0	0	0	0	3	*25*
1499 Old Bayshore Hwy Hotel	0	0	0	0	7	3	5	0	0	0	15	0	*30*
300 Airport Blvd Office	7	3	13	30	60	29	26	7	3	10	107	21	*316*
Carolan Ave & Rollins Rd Residential	0	0	0	0	-1	-2	40	3	0	0	14	0	*54*
1095 Rollin Rd Residential	0	0	0	0	0	6	20	1	4	2	0	0	*33*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	18	0	0	0	0	0	0	0	0	0	0	26	*44*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*32*	*3*	*24*	*34*	*66*	*36*	*91*	*11*	*7*	*12*	*136*	*50*	*502*
Background Conditions	111	108	138	332	872	349	471	200	137	46	1212	220	*4196*
Proposed Project Trips	*0*	*0*	*0*	*0*	*23*	*0*	*0*	*0*	*0*	*0*	*8*	*0*	*31*
Existing + Project Conditions	79	105	114	298	829	313	380	189	130	34	1084	170	*3725*
Background + Project Conditions	111	108	138	332	895	349	471	200	137	46	1220	220	*4227*
Cumulative No Project Conditions	89	109	114	298	882	336	389	232	170	34	1355	237	*4245*
Cumulative + Project Conditions	89	109	114	298	905	336	389	232	170	34	1363	237	*4276*

Intersection Number: 12
Intersection Name: US 101 SB Ramps and Broadway
Peak Hour: AM
Count Date: 01/09/20
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	850	21	364	0	538	241	0	0	0	473	1212	0	*3699*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	4	0	0	0	0	11	0	0	*15*
1499 Old Bayshore Hwy Hotel	0	0	0	0	10	14	0	0	0	0	20	0	*44*
300 Airport Blvd Office	69	0	36	0	50	16	0	0	0	43	106	0	*320*
Carolan Ave & Rollins Rd Residential	-1	0	0	0	-1	0	0	0	0	19	36	0	*53*
1095 Rollin Rd Residential	2	0	0	0	4	0	0	0	0	7	13	0	*26*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*70*	*0*	*36*	*0*	*67*	*30*	*0*	*0*	*0*	*80*	*175*	*0*	*458*
Background Conditions	920	21	400	0	605	271	0	0	0	553	1387	0	*4157*
Proposed Project Trips	*0*	*0*	*0*	*0*	*23*	*0*	*0*	*0*	*0*	*8*	*0*	*0*	*31*
Existing + Project Conditions	850	21	364	0	561	241	0	0	0	481	1212	0	*3730*
Background + Project Conditions	920	21	400	0	628	271	0	0	0	561	1387	0	*4188*
Cumulative No Project Conditions	920	21	400	0	605	271	0	0	0	553	1387	0	*4157*
Cumulative + Project Conditions	920	21	400	0	628	271	0	0	0	561	1387	0	*4188*

Intersection Number: 13
Intersection Name: Old Bayshore Hwy and Broadway
Peak Hour: AM
Count Date: 01/09/20
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	670	9	220	78	91	2	9	9	11	16	491	1098	*2704*
Approved Project Trips													
1 Adrian Court Residential	4	0	0	0	0	0	0	0	0	0	0	0	*4*
1499 Old Bayshore Hwy Hotel	24	0	4	7	0	0	0	0	0	0	0	20	*55*
300 Airport Blvd Office	60	5	12	9	4	1	2	6	2	6	32	104	*243*
Carolan Ave & Rollins Rd Residential	-1	0	0	0	0	0	0	0	0	0	3	33	*35*
1095 Rollin Rd Residential	4	0	0	0	0	0	0	0	0	0	1	12	*17*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*91*	*5*	*16*	*16*	*4*	*1*	*2*	*6*	*2*	*6*	*36*	*169*	*354*
Background Conditions	761	14	236	94	95	3	11	15	13	22	527	1267	*3058*
Proposed Project Trips	*23*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*23*
Existing + Project Conditions	693	9	220	78	91	2	9	9	11	16	491	1098	*2727*
Background + Project Conditions	784	14	236	94	95	3	11	15	13	22	527	1267	*3081*
Cumulative No Project Conditions	670	11	226	86	181	2	9	20	31	49	616	1260	*3161*
Cumulative + Project Conditions	693	11	226	86	181	2	9	20	31	49	616	1260	*3184*

Intersection Number: 14
Intersection Name: Old Bayshore Hwy and US 101 NB Ramps
Peak Hour: AM
Count Date: 01/09/20
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	69	474	13	4	5	4	8	262	898	417	10	359	*2523*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	4	0	0	*4*
1499 Old Bayshore Hwy Hotel	0	29	0	0	0	0	0	27	0	0	0	27	*83*
300 Airport Blvd Office	7	27	1	1	1	1	3	30	88	50	0	33	*242*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	4	29	-1	0	0	*32*
1095 Rollin Rd Residential	0	1	0	0	0	0	0	1	11	3	0	0	*16*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*7*	*57*	*1*	*1*	*1*	*1*	*3*	*62*	*128*	*56*	*0*	*60*	*377*
Background Conditions	76	531	14	5	6	5	11	324	1026	473	10	419	*2900*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*23*	*0*	*0*	*23*
Existing + Project Conditions	69	474	13	4	5	4	8	262	898	440	10	359	*2546*
Background + Project Conditions	76	531	14	5	6	5	11	324	1026	496	10	419	*2923*
Cumulative No Project Conditions	76	531	14	5	6	5	11	324	1026	473	10	419	*2900*
Cumulative + Project Conditions	76	531	14	5	6	5	11	324	1026	496	10	419	*2923*

Intersection Number: 1
Intersection Name: US 101 NB Ramps and Millbrae Ave
Peak Hour: PM
Count Date: 02/12/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	Total
Existing Conditions	9	0	1	689	417	0	94	1	669	844	591	6	*3321*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	6	0	0	0	11	0	4	0	*21*
1499 Old Bayshore Hwy Hotel	0	0	0	0	12	0	0	0	0	0	41	0	*53*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	6	0	0	0	74	0	7	0	*87*
Serra Station Development	0	0	0	0	3	0	0	0	42	0	5	0	*50*
Total Approved Trips	*0*	*0*	*0*	*0*	*27*	*0*	*0*	*0*	*127*	*0*	*57*	*0*	*211*
Background Conditions	9	0	1	689	444	0	94	1	796	844	648	6	*3532*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*3*	*0*	*0*	*0*	*3*
Existing + Project Conditions	9	0	1	689	417	0	94	1	672	844	591	6	*3324*
Background + Project Conditions	9	0	1	689	444	0	94	1	799	844	648	6	*3535*
Cumulative No Project Conditions	9	0	1	695	449	0	95	1	803	852	654	6	*3565*
Cumulative + Project Conditions	9	0	1	695	449	0	95	1	806	852	654	6	*3568*

Intersection Number: 2
Intersection Name: US 101 SB Ramps and Millbrae Ave
Peak Hour: PM
Count Date: 02/12/19
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	Total
Existing Conditions	797	0	378	66	1034	0	0	0	0	812	1012	0	*4099*
Approved Project Trips													
1 Adrian Court Residential	18	0	0	0	16	0	0	0	0	7	16	0	*57*
1499 Old Bayshore Hwy Hotel	0	0	28	0	12	0	0	0	0	0	13	0	*53*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	62	0	0	0	80	0	0	0	0	88	81	0	*311*
Serra Station Development	35	0	0	0	45	0	0	0	0	68	62	0	*210*
Total Approved Trips	*115*	*0*	*28*	*0*	*153*	*0*	*0*	*0*	*0*	*163*	*172*	*0*	*631*
Background Conditions	912	0	406	66	1187	0	0	0	0	975	1184	0	*4730*
Proposed Project Trips	*9*	*0*	*0*	*0*	*3*	*0*	*0*	*0*	*0*	*0*	*27*	*0*	*39*
Existing + Project Conditions	806	0	378	66	1037	0	0	0	0	812	1039	0	*4138*
Background + Project Conditions	921	0	406	66	1190	0	0	0	0	975	1211	0	*4769*
Cumulative No Project Conditions	980	0	462	66	1079	0	0	0	0	975	1292	0	*4854*
Cumulative + Project Conditions	989	0	462	66	1082	0	0	0	0	975	1319	0	*4893*

Intersection Number: 3
Intersection Name: Rollins Rd and Millbrae Ave
Peak Hour: PM
Count Date: 02/12/19
Date of Analysis: 06/08/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	234	55	401	175	1460	280	505	49	435	321	908	72	*4895*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	34	23	0	13	19	0	0	*89*
1499 Old Bayshore Hwy Hotel	0	0	0	0	12	0	0	0	0	0	13	0	*25*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	138	44	168	142	0	0	0	37	0	0	0	117	*646*
Serra Station Development	0	0	0	0	80	0	0	0	8	14	130	0	*232*
Total Approved Trips	*138*	*44*	*168*	*142*	*92*	*34*	*23*	*37*	*21*	*33*	*143*	*117*	*992*
Background Conditions	372	99	569	317	1552	314	528	86	456	354	1051	189	*5887*
Proposed Project Trips	*0*	*0*	*0*	*0*	*13*	*0*	*0*	*0*	*0*	*0*	*36*	*0*	*49*
Existing + Project Conditions	234	55	401	175	1473	280	505	49	435	321	944	72	*4944*
Background + Project Conditions	372	99	569	317	1565	314	528	86	456	354	1087	189	*5936*
Cumulative No Project Conditions	372	99	569	317	1552	314	528	86	456	354	1051	189	*5887*
Cumulative + Project Conditions	372	99	569	317	1565	314	528	86	456	354	1087	189	*5936*

Intersection Number: 4
Intersection Name: El Camino Real and Millbrae Ave*
Peak Hour: PM
Count Date: 04/15/19
Date of Analysis: 06/08/20

	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
Scenario	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	58	774	642	1055	648	508	599	666	58	36	319	127	*5490*
Approved Project Trips													
1 Adrian Court Residential	0	0	7	5	7	1	0	0	0	0	11	0	*31*
1499 Old Bayshore Hwy Hotel	0	0	7	6	0	6	6	0	0	0	0	0	*25*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	6	0	0	0	0	0	10	0	0	0	0	*16*
Gateway Development at Millbrae Station	0	0	56	67	11	61	52	0	0	0	9	0	*256*
Serra Station Development	8	23	72	60	0	28	72	14	0	0	0	5	*282*
Total Approved Trips	*8*	*29*	*142*	*138*	*18*	*96*	*130*	*24*	*0*	*0*	*20*	*5*	*610*
Background Conditions	66	803	784	1193	666	604	729	690	58	36	339	132	*6100*
Proposed Project Trips	*0*	*9*	*0*	*3*	*0*	*10*	*36*	*13*	*1*	*1*	*0*	*0*	*73*
Existing + Project Conditions	58	783	642	1058	648	518	635	679	59	37	319	127	*5563*
Background + Project Conditions	66	812	784	1196	666	614	765	703	59	37	339	132	*6173*
Cumulative No Project Conditions	70	871	819	1245	702	642	761	741	66	40	355	137	*6449*
Cumulative + Project Conditions	70	880	819	1248	702	652	797	754	67	41	355	137	*6522*

Intersection Number: 5
Intersection Name: California Dr and Murchison Dr
Peak Hour: PM
Date of Analysis: 06/08/20
Count Date: 03/19/14

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	71	92	0	3	12	10	1	244	131	194	0	52	*810*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	6	7	0	0	*13*
Serra Station Development	88	28	0	0	0	0	0	17	0	0	0	38	*171*
Total Approved Trips	*88*	*28*	*0*	*0*	*0*	*0*	*0*	*17*	*6*	*7*	*0*	*38*	*184*
Background Conditions	159	120	0	3	12	10	1	261	137	201	0	90	*994*
Proposed Project Trips	*0*	*3*	*0*	*0*	*0*	*0*	*0*	*6*	*22*	*7*	*0*	*0*	*38*
Existing + Project Conditions	71	95	0	3	12	10	1	250	153	201	0	52	*848*
Background + Project Conditions	159	123	0	3	12	10	1	267	159	208	0	90	*1032*
Cumulative No Project Conditions	159	120	0	3	12	10	1	261	137	201	0	90	*994*
Cumulative + Project Conditions	159	123	0	3	12	10	1	267	159	208	0	90	*1032*

Intersection Number: 6
Intersection Name: El Camino Real and Murchison Dr
Peak Hour: PM
Date of Analysis: 06/08/20
Count Date: 04/05/16

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	224	1095	233	188	96	34	44	821	76	73	88	252	*3224*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	6	0	6	0	0	0	0	*12*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	6	0	0	0	0	0	10	0	0	0	0	*16*
Gateway Development at Millbrae Station	11	44	7	6	0	0	0	37	0	0	0	9	*114*
Serra Station Development	4	19	28	72	4	12	7	12	0	0	2	2	*162*
Total Approved Trips	*15*	*69*	*35*	*78*	*4*	*18*	*7*	*65*	*0*	*0*	*2*	*11*	*304*
Background Conditions	239	1164	268	266	100	52	51	886	76	73	90	263	*3528*
Proposed Project Trips	*0*	*13*	*7*	*22*	*0*	*0*	*0*	*28*	*0*	*0*	*0*	*0*	*70*
Existing + Project Conditions	224	1108	240	210	96	34	44	849	76	73	88	252	*3294*
Background + Project Conditions	239	1177	275	288	100	52	51	914	76	73	90	263	*3598*
Cumulative No Project Conditions	263	1284	273	220	113	40	52	963	89	86	103	296	*3782*
Cumulative + Project Conditions	263	1297	280	242	113	40	52	991	89	86	103	296	*3852*

Intersection Number: 7
Intersection Name: California Dr and Trousdale Dr
Peak Hour: PM
Count Date: None
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	108	188	0	1	4	3	0	318	198	211	0	57	*1088*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	0	0	0	0	0	0	0	*0*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	7	0	0	0	0	0	6	0	0	0	0	*13*
Serra Station Development	23	5	0	0	0	0	0	3	0	0	0	14	*45*
Total Approved Trips	*23*	*12*	*0*	*0*	*0*	*0*	*0*	*9*	*0*	*0*	*0*	*14*	*58*
Background Conditions	131	200	0	1	4	3	0	327	198	211	0	71	*1146*
Proposed Project Trips	*0*	*10*	*0*	*0*	*0*	*0*	*0*	*29*	*20*	*21*	*0*	*0*	*80*
Existing + Project Conditions	108	198	0	1	4	3	0	347	218	232	0	57	*1168*
Background + Project Conditions	131	210	0	1	4	3	0	356	218	232	0	71	*1226*
Cumulative No Project Conditions	127	220	0	1	5	4	0	373	232	247	0	67	*1276*
Cumulative + Project Conditions	127	230	0	1	5	4	0	402	252	268	0	67	*1356*

Intersection Number: 8
Intersection Name: El Camino Real and Trousdale Dr
Peak Hour: PM
Count Date: 02/27/20
Date of Analysis: 06/08/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	175	764	74	58	232	20	30	697	230	223	164	267	*2934*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	6	0	6	0	0	0	0	*12*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1095 Rollin Rd Residential	0	0	0	0	0	0	0	0	0	0	0	0	*0*
1600 Trousdale Dr Assisted Living Facility	6	0	0	0	0	0	0	0	6	10	0	10	*32*
Gateway Development at Millbrae Station	18	26	0	0	0	0	0	22	0	0	0	15	*81*
Serra Station Development	7	24	0	0	7	16	10	15	0	0	4	4	*87*
Total Approved Trips	*31*	*50*	*0*	*0*	*7*	*22*	*10*	*43*	*6*	*10*	*4*	*29*	*212*
Background Conditions	206	814	74	58	239	42	40	740	236	233	168	296	*3146*
Proposed Project Trips	*0*	*0*	*13*	*28*	*19*	*10*	*0*	*0*	*0*	*0*	*8*	*0*	*78*
Existing + Project Conditions	175	764	87	86	251	30	30	697	230	223	172	267	*3012*
Background + Project Conditions	206	814	87	86	258	52	40	740	236	233	176	296	*3224*
Cumulative No Project Conditions	277	1247	113	115	229	22	24	986	267	239	184	250	*3953*
Cumulative + Project Conditions	277	1247	126	143	248	32	24	986	267	239	192	250	*4031*

Intersection Number: 9
Intersection Name: El Camino Real and Broadway*
Peak Hour: PM
Count Date: 04/15/19
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	33	751	109	64	80	118	140	919	2	34	117	16	*2383*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	5	7	0	0	0	0	0	*12*
1499 Old Bayshore Hwy Hotel	0	0	0	0	0	5	5	0	0	0	0	0	*10*
300 Airport Blvd Office	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Carolan Ave & Rollins Rd Residential	0	0	8	2	0	0	0	0	0	0	0	0	*10*
1095 Rollin Rd Residential	0	0	2	1	0	0	0	0	0	0	0	0	*3*
1600 Trousdale Dr Assisted Living Facility	0	10	0	0	0	0	0	6	0	0	0	0	*16*
Gateway Development at Millbrae Station	0	26	0	0	0	26	22	22	0	0	0	0	*96*
Serra Station Development	0	41	0	0	0	0	0	25	0	0	0	0	*66*
Total Approved Trips	*0*	*77*	*10*	*3*	*0*	*36*	*34*	*53*	*0*	*0*	*0*	*0*	*213*
Background Conditions	33	828	119	67	80	154	174	972	2	34	117	16	*2596*
Proposed Project Trips	*1*	*19*	*0*	*0*	*0*	*0*	*0*	*9*	*0*	*0*	*0*	*1*	*30*
Existing + Project Conditions	34	770	109	64	80	118	140	928	2	34	117	17	*2413*
Background + Project Conditions	34	847	119	67	80	154	174	981	2	34	117	17	*2626*
Cumulative No Project Conditions	22	1322	110	129	92	184	161	1414	1	58	115	12	*3620*
Cumulative + Project Conditions	23	1341	110	129	92	184	161	1423	1	58	115	13	*3650*

Intersection Number: 10
Intersection Name: California Dr and Broadway
Peak Hour: PM
Count Date: 05/30/18
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	32	337	309	454	436	312	383	401	38	48	249	10	*3009*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	5	0	0	0	0	0	7	0	*12*
1499 Old Bayshore Hwy Hotel	0	0	0	0	5	4	5	0	0	0	5	0	*19*
300 Airport Blvd Office	23	59	84	179	91	42	53	-21	88	18	63	5	*684*
Carolan Ave & Rollins Rd Residential	0	0	2	0	2	0	0	0	0	0	8	0	*12*
1095 Rollin Rd Residential	0	0	0	0	1	0	0	0	0	0	2	0	*3*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	26	0	0	0	0	0	22	0	*48*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*23*	*59*	*86*	*179*	*130*	*46*	*58*	*-21*	*88*	*18*	*107*	*5*	*778*
Background Conditions	55	396	395	633	566	358	441	380	126	66	356	15	*3787*
Proposed Project Trips	*0*	*0*	*22*	*8*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*30*
Existing + Project Conditions	32	337	331	462	436	312	383	401	38	48	249	10	*3039*
Background + Project Conditions	55	396	417	641	566	358	441	380	126	66	356	15	*3817*
Cumulative No Project Conditions	55	396	395	633	566	358	441	380	126	66	356	15	*3787*
Cumulative + Project Conditions	55	396	417	641	566	358	441	380	126	66	356	15	*3817*

Intersection Number: 11
Intersection Name: Rollins Rd and Broadway
Peak Hour: PM
Count Date: 02/12/19
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	170	211	295	134	1096	473	218	62	45	51	838	143	*3736*
Approved Project Trips													
1 Adrian Court Residential	5	0	7	11	0	0	0	0	0	0	0	7	*30*
1499 Old Bayshore Hwy Hotel	0	0	0	0	12	4	5	0	0	0	12	0	*33*
300 Airport Blvd Office	29	29	41	13	114	78	27	6	5	17	91	13	*463*
Carolan Ave & Rollins Rd Residential	0	2	0	0	12	34	8	1	0	0	3	0	*60*
1095 Rollin Rd Residential	0	1	0	0	0	14	2	0	1	2	0	0	*20*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	26	0	0	0	0	0	0	0	0	0	0	22	*48*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*60*	*32*	*48*	*24*	*138*	*130*	*42*	*7*	*6*	*19*	*106*	*42*	*654*
Background Conditions	230	243	343	158	1234	603	260	69	51	70	944	185	*4390*
Proposed Project Trips	*0*	*0*	*0*	*0*	*8*	*0*	*0*	*0*	*0*	*0*	*22*	*0*	*30*
Existing + Project Conditions	170	211	295	134	1104	473	218	62	45	51	860	143	*3766*
Background + Project Conditions	230	243	343	158	1242	603	260	69	51	70	966	185	*4420*
Cumulative No Project Conditions	196	269	295	134	1600	618	283	74	45	52	1036	143	*4745*
Cumulative + Project Conditions	196	269	295	134	1608	618	283	74	45	52	1058	143	*4775*

Intersection Number: 12
Intersection Name: US 101 SB Ramps and Broadway
Peak Hour: PM
Count Date: 01/09/20
Date of Analysis: 06/08/20

Scenario	Movements												
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
Existing Conditions	921	1	198	0	701	514	0	0	0	582	870	0	*3787*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	11	0	0	0	0	7	0	0	*18*
1499 Old Bayshore Hwy Hotel	0	0	0	0	16	24	0	0	0	0	17	0	*57*
300 Airport Blvd Office	129	0	14	0	78	57	0	0	0	59	102	0	*439*
Carolan Ave & Rollins Rd Residential	25	0	0	0	22	0	0	0	0	4	7	0	*58*
1095 Rollin Rd Residential	5	0	0	0	9	0	0	0	0	1	1	0	*16*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*159*	*0*	*14*	*0*	*136*	*81*	*0*	*0*	*0*	*71*	*127*	*0*	*588*
Background Conditions	1080	1	212	0	837	595	0	0	0	653	997	0	*4375*
Proposed Project Trips	*0*	*0*	*0*	*0*	*8*	*0*	*0*	*0*	*0*	*22*	*0*	*0*	*30*
Existing + Project Conditions	921	1	198	0	709	514	0	0	0	604	870	0	*3817*
Background + Project Conditions	1080	1	212	0	845	595	0	0	0	675	997	0	*4405*
Cumulative No Project Conditions	1068	1	312	0	1177	578	0	0	0	582	1111	0	*4829*
Cumulative + Project Conditions	1068	1	312	0	1185	578	0	0	0	604	1111	0	*4859*

Intersection Number: 13
Intersection Name: Old Bayshore Hwy and Broadway
Peak Hour: PM
Date of Analysis: 06/08/20
Count Date: 01/09/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	1015	5	112	145	231	2	5	8	10	13	243	820	*2609*
Approved Project Trips													
1 Adrian Court Residential	11	0	0	0	0	0	0	0	0	0	0	0	*11*
1499 Old Bayshore Hwy Hotel	40	0	6	6	0	0	0	0	0	0	0	17	*69*
300 Airport Blvd Office	122	3	55	14	11	1	1	4	2	1	22	94	*330*
Carolan Ave & Rollins Rd Residential	20	0	0	0	2	0	0	0	0	0	1	6	*29*
1095 Rollin Rd Residential	8	0	0	0	1	0	0	0	0	0	0	1	*10*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*201*	*3*	*61*	*20*	*14*	*1*	*1*	*4*	*2*	*1*	*23*	*118*	*449*
Background Conditions	1216	8	173	165	245	3	6	12	12	14	266	938	*3058*
Proposed Project Trips	*8*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*8*
Existing + Project Conditions	1023	5	112	145	231	2	5	8	10	13	243	820	*2617*
Background + Project Conditions	1224	8	173	165	245	3	6	12	12	14	266	938	*3066*
Cumulative No Project Conditions	1373	10	124	145	379	2	5	25	44	59	370	1001	*3537*
Cumulative + Project Conditions	1381	10	124	145	379	2	5	25	44	59	370	1001	*3545*

Intersection Number: 14
Intersection Name: Old Bayshore Hwy and US 101 NB Ramps
Peak Hour: PM
Date of Analysis: 06/08/20
Count Date: 01/09/20

Scenario	Southbound Approach RT	Southbound Approach TH	Southbound Approach LT	Westbound Approach RT	Westbound Approach TH	Westbound Approach LT	Northbound Approach RT	Northbound Approach TH	Northbound Approach LT	Eastbound Approach RT	Eastbound Approach TH	Eastbound Approach LT	*Total*
Existing Conditions	207	666	9	7	12	19	18	231	704	444	13	179	*2509*
Approved Project Trips													
1 Adrian Court Residential	0	0	0	0	0	0	0	0	0	11	0	0	*11*
1499 Old Bayshore Hwy Hotel	0	46	0	0	0	0	0	23	0	0	0	23	*92*
300 Airport Blvd Office	20	118	2	1	1	1	3	27	86	60	0	17	*336*
Carolan Ave & Rollins Rd Residential	0	3	0	0	0	0	0	1	5	16	0	0	*25*
1095 Rollin Rd Residential	0	1	0	0	0	0	0	0	1	3	0	0	*5*
1600 Trousdale Dr Assisted Living Facility	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Gateway Development at Millbrae Station	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Serra Station Development	0	0	0	0	0	0	0	0	0	0	0	0	*0*
Total Approved Trips	*20*	*168*	*2*	*1*	*1*	*1*	*3*	*51*	*92*	*90*	*0*	*40*	*469*
Background Conditions	227	834	11	8	13	20	21	282	796	534	13	219	*2978*
Proposed Project Trips	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*8*	*0*	*0*	*8*
Existing + Project Conditions	207	666	9	7	12	19	18	231	704	452	13	179	*2517*
Background + Project Conditions	227	834	11	8	13	20	21	282	796	542	13	219	*2986*
Cumulative No Project Conditions	221	796	9	7	12	19	18	324	706	689	13	189	*3003*
Cumulative + Project Conditions	221	796	9	7	12	19	18	324	706	697	13	189	*3011*

Appendix B

Level of Service Calculations

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1052	743	0	183	832	69
Future Volume (veh/h)	1052	743	0	183	832	69
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	1052	0	0	183	832	36
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1704	763	0	1704	1272	585
Arrive On Green	0.48	0.00	0.00	0.48	0.37	0.37
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	1052	0	0	183	832	36
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	8.8	0.0	0.0	1.1	8.1	0.6
Cycle Q Clear(g_c), s	8.8	0.0	0.0	1.1	8.1	0.6
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1704	763	0	1704	1272	585
V/C Ratio(X)	0.62	0.00	0.00	0.11	0.65	0.06
Avail Cap(c_a), veh/h	2546	1139	0	2546	2562	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.7	0.0	0.0	5.7	10.6	8.2
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.0	0.5	3.9	0.3
LnGrp Delay(d),s/veh	8.1	0.0	0.0	5.7	11.1	8.2
LnGrp LOS	A			A	B	A
Approach Vol, veh/h	1052			183	868	
Approach Delay, s/veh	8.1			5.7	11.0	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		17.9		22.4				22.4
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		28.5		27.5				27.5
Max Q Clear Time (g_c+I1), s		10.1		10.8				3.1
Green Ext Time (p_c), s		3.3		7.1				1.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1130	1003	49	643	914
Future Volume (veh/h)	0	1130	1003	49	643	914
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1130	1003	0	514	1037
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2094	2094	0	843	1505
Arrive On Green	0.00	0.41	0.41	0.00	0.48	0.48
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1130	1003	0	514	1037
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	8.9	7.7	0.0	11.4	13.6
Cycle Q Clear(g_c), s	0.0	8.9	7.7	0.0	11.4	13.6
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2094	2094	0	843	1505
V/C Ratio(X)	0.00	0.54	0.48	0.00	0.61	0.69
Avail Cap(c_a), veh/h	0	3831	3831	0	2305	4115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	11.8	11.4	0.0	10.3	10.9
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	3.6	0.0	5.6	5.9
LnGrp Delay(d),s/veh	0.0	12.0	11.6	0.0	11.0	11.4
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1130	1003		1551	
Approach Delay, s/veh		12.0	11.6		11.3	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				24.9		28.2		24.9
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				38.5		67.5		38.5
Max Q Clear Time (g_c+I1), s				10.9		15.6		9.7
Green Ext Time (p_c), s				9.4		8.2		8.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	417	1342	337	401	859	493	150	129	248	132	17	48
Future Volume (veh/h)	417	1342	337	401	859	493	150	129	248	132	17	48
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	417	1342	176	401	859	242	150	129	34	132	17	21
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	2224	692	601	1657	516	413	223	467	326	177	150
Arrive On Green	0.29	0.44	0.44	0.17	0.33	0.33	0.12	0.12	0.12	0.09	0.09	0.09
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	417	1342	176	401	859	242	150	129	34	132	17	21
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	15.2	14.0	4.9	7.5	9.5	8.4	2.8	4.5	0.0	2.5	0.6	0.8
Cycle Q Clear(g_c), s	15.2	14.0	4.9	7.5	9.5	8.4	2.8	4.5	0.0	2.5	0.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	508	2224	692	601	1657	516	413	223	467	326	177	150
V/C Ratio(X)	0.82	0.60	0.25	0.67	0.52	0.47	0.36	0.58	0.07	0.40	0.10	0.14
Avail Cap(c_a), veh/h	820	3407	1061	1049	2607	812	497	269	505	1516	820	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	14.9	12.3	26.7	18.9	18.6	28.0	28.8	17.6	29.5	28.6	28.8
Incr Delay (d2), s/veh	3.6	0.3	0.2	1.3	0.3	0.7	0.5	2.4	0.1	0.8	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	6.5	2.1	3.7	4.4	3.7	1.3	2.5	0.5	1.2	0.3	0.4
LnGrp Delay(d),s/veh	26.7	15.2	12.5	28.0	19.2	19.2	28.6	31.2	17.7	30.3	28.9	29.2
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	C	C
Approach Vol, veh/h		1935			1502			313			170	
Approach Delay, s/veh		17.4			21.5			28.5			30.0	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		9.6	15.1	33.3		11.3	22.8	25.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.0	19.6	44.9		8.5	30.5	34.0
Max Q Clear Time (g_c+I1), s		4.5	9.5	16.0		6.5	17.2	11.5
Green Ext Time (p_c), s		0.6	1.1	12.8		0.3	1.1	7.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	648	45	359	295	755	31	431	715	798	786	36
Future Volume (veh/h)	108	648	45	359	295	755	31	431	715	798	786	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.91	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	108	648	45	359	295	671	31	431	671	798	786	36
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1018	71	714	1142	774	42	1214	590	677	2050	94
Arrive On Green	0.13	0.31	0.31	0.14	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3331	231	5003	3539	1435	1774	5085	1527	3442	4979	227
Grp Volume(v), veh/h	108	344	349	359	295	671	31	431	671	798	534	288
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1668	1770	1435	1774	1695	1527	1721	1695	1816
Q Serve(g_s), s	8.8	25.9	26.0	10.3	9.5	50.0	2.7	10.9	37.0	30.5	17.1	17.2
Cycle Q Clear(g_c), s	8.8	25.9	26.0	10.3	9.5	50.0	2.7	10.9	37.0	30.5	17.1	17.2
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	223	541	548	714	1142	774	42	1214	590	677	1396	748
V/C Ratio(X)	0.48	0.64	0.64	0.50	0.26	0.87	0.74	0.36	1.14	1.18	0.38	0.38
Avail Cap(c_a), veh/h	223	541	548	888	1142	774	80	1214	590	677	1396	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	46.4	46.4	61.4	38.8	33.5	75.2	49.1	48.2	62.2	31.8	31.9
Incr Delay (d2), s/veh	1.6	5.6	5.6	0.5	0.5	11.1	17.4	0.6	77.1	95.1	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	13.5	13.8	4.8	4.7	27.8	1.5	5.2	37.9	23.4	8.2	8.9
LnGrp Delay(d),s/veh	64.7	52.0	52.0	61.8	39.3	44.6	92.6	49.7	125.3	157.3	32.6	33.4
LnGrp LOS	E	D	D	E	D	D	F	D	F	F	C	C
Approach Vol, veh/h		801			1325			1133			1620	
Approach Delay, s/veh		53.7			48.1			95.7			94.2	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	26.6	51.9	8.2	68.3	24.0	54.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.5	37.0	27.5	42.0	7.0	60.5	19.5	50.0
Max Q Clear Time (g_c+I1), s	32.5	39.0	12.3	28.0	4.7	19.2	10.8	52.0
Green Ext Time (p_c), s	0.0	0.0	1.2	3.7	0.0	6.4	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	75.4
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	4	251	5	6	1	65	173	7	2	115	42
Future Vol, veh/h	42	4	251	5	6	1	65	173	7	2	115	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	4	251	5	6	1	65	173	7	2	115	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	450	450	136	575	468	177	157	0	0	180	0	0
Stage 1	140	140	-	307	307	-	-	-	-	-	-	-
Stage 2	310	310	-	268	161	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	519	504	913	429	493	866	1423	-	-	1396	-	-
Stage 1	863	781	-	703	661	-	-	-	-	-	-	-
Stage 2	700	659	-	738	765	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	495	480	913	298	469	866	1423	-	-	1396	-	-
Mov Cap-2 Maneuver	495	480	-	298	469	-	-	-	-	-	-	-
Stage 1	823	779	-	671	631	-	-	-	-	-	-	-
Stage 2	661	629	-	531	763	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	14.5	2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1423	-	-	495	900	391	1396	-	-
HCM Lane V/C Ratio	0.046	-	-	0.085	0.283	0.031	0.001	-	-
HCM Control Delay (s)	7.7	-	-	12.9	10.6	14.5	7.6	0	-
HCM Lane LOS	A	-	-	B	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	1.2	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	125	47	11	71	107	42	793	26	196	878	330
Future Volume (veh/h)	278	125	47	11	71	107	42	793	26	196	878	330
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	278	125	47	11	71	107	42	793	26	196	878	330
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	268	101	48	329	166	73	1374	428	250	1882	586
Arrive On Green	0.21	0.21	0.21	0.10	0.10	0.10	0.04	0.27	0.27	0.14	0.37	0.37
Sat Flow, veh/h	1774	1291	486	461	3148	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	278	0	172	44	38	107	42	793	26	196	878	330
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.6	0.0	5.5	1.4	1.3	4.2	1.5	8.7	0.8	6.9	8.5	10.8
Cycle Q Clear(g_c), s	9.6	0.0	5.5	1.4	1.3	4.2	1.5	8.7	0.8	6.9	8.5	10.8
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	367	0	368	192	185	166	73	1374	428	250	1882	586
V/C Ratio(X)	0.76	0.00	0.47	0.23	0.21	0.65	0.58	0.58	0.06	0.79	0.47	0.56
Avail Cap(c_a), veh/h	1080	0	1082	1148	1104	988	697	4349	1354	697	4349	1354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	22.6	26.7	26.6	27.9	30.6	20.5	17.6	26.9	15.6	16.3
Incr Delay (d2), s/veh	3.2	0.0	0.9	0.6	0.5	4.2	7.1	0.4	0.1	5.4	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	2.8	0.8	0.7	2.0	0.9	4.1	0.4	3.8	4.0	4.8
LnGrp Delay(d),s/veh	27.4	0.0	23.5	27.3	27.1	32.1	37.7	20.9	17.6	32.3	15.7	17.1
LnGrp LOS	C		C	C	C	C	D	C	B	C	B	B
Approach Vol, veh/h		450			189			861			1404	
Approach Delay, s/veh		25.9			30.0			21.6			18.4	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.6	22.0		17.9	7.2	28.5		11.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5
Max Q Clear Time (g_c+I1), s	8.9	10.7		11.6	3.5	12.8		6.2
Green Ext Time (p_c), s	0.5	6.8		1.9	0.1	9.3		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	1	304	2	2	0	125	194	2	1	290	80
Future Vol, veh/h	51	1	304	2	2	0	125	194	2	1	290	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	1	304	2	2	0	125	194	2	1	290	80

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	778	778	330	930	817	195	370	0	0	196	0	0
Stage 1	332	332	-	445	445	-	-	-	-	-	-	-
Stage 2	446	446	-	485	372	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	314	328	712	248	311	846	1189	-	-	1377	-	-
Stage 1	681	644	-	592	575	-	-	-	-	-	-	-
Stage 2	591	574	-	563	619	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	287	293	712	130	278	846	1189	-	-	1377	-	-
Mov Cap-2 Maneuver	287	293	-	130	278	-	-	-	-	-	-	-
Stage 1	609	643	-	530	515	-	-	-	-	-	-	-
Stage 2	527	514	-	322	618	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	25.8	3.3	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1189	-	-	287	712	177	1377	-	-
HCM Lane V/C Ratio	0.105	-	-	0.181	0.427	0.023	0.001	-	-
HCM Control Delay (s)	8.4	-	-	20.3	13.8	25.8	7.6	0	-
HCM Lane LOS	A	-	-	C	B	D	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.6	2.1	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	190	218	11	163	33	255	490	51	115	620	195
Future Volume (veh/h)	192	190	218	11	163	33	255	490	51	115	620	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	192	190	218	11	163	33	255	490	51	115	620	195
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	434	369	24	363	76	352	1719	535	193	1263	686
Arrive On Green	0.23	0.23	0.23	0.10	0.13	0.10	0.20	0.34	0.34	0.11	0.25	0.22
Sat Flow, veh/h	1774	1863	1583	186	2830	595	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	192	190	218	109	0	98	255	490	51	115	620	195
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1853	0	1758	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	5.8	5.4	7.7	3.4	0.0	3.2	8.4	4.4	1.4	3.9	6.5	5.0
Cycle Q Clear(g_c), s	5.8	5.4	7.7	3.4	0.0	3.2	8.4	4.4	1.4	3.9	6.5	5.0
Prop In Lane	1.00		1.00	0.10		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	434	369	238	0	226	352	1719	535	193	1263	686
V/C Ratio(X)	0.46	0.44	0.59	0.46	0.00	0.43	0.72	0.28	0.10	0.60	0.49	0.28
Avail Cap(c_a), veh/h	1092	1147	975	1141	0	1082	766	4636	1443	766	4636	1736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	20.5	21.3	25.3	0.0	25.4	23.5	15.2	14.2	26.6	20.1	11.5
Incr Delay (d2), s/veh	0.8	0.7	1.5	1.4	0.0	1.3	2.8	0.1	0.1	2.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	2.9	3.5	1.8	0.0	1.6	4.4	2.1	0.6	2.0	3.1	3.0
LnGrp Delay(d),s/veh	21.4	21.2	22.8	26.7	0.0	26.7	26.3	15.2	14.2	29.5	20.4	11.7
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		600			207			796			930	
Approach Delay, s/veh		21.9			26.7			18.7			19.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.8	24.1		17.6	15.4	18.5		11.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		37.0	25.5	55.5		37.0
Max Q Clear Time (g_c+I1), s	5.9	6.4		9.7	10.4	8.5		5.4
Green Ext Time (p_c), s	0.3	3.8		3.4	0.6	5.5		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	424	28	258	293	358	45	386	452	409	340	22
Future Volume (veh/h)	3	424	28	258	293	358	45	386	452	409	340	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	3	424	28	258	293	358	45	386	0	409	340	22
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	507	33	438	460	391	58	1152	515	479	747	48
Arrive On Green	0.15	0.15	0.15	0.25	0.25	0.25	0.03	0.33	0.00	0.14	0.43	0.43
Sat Flow, veh/h	1774	3371	222	1774	1863	1583	1774	3539	1583	3442	1731	112
Grp Volume(v), veh/h	3	222	230	258	293	358	45	386	0	409	0	362
Grp Sat Flow(s),veh/h/ln	1774	1770	1824	1774	1863	1583	1774	1770	1583	1721	0	1843
Q Serve(g_s), s	0.2	15.9	16.0	16.7	18.3	28.7	3.3	10.8	0.0	15.1	0.0	18.1
Cycle Q Clear(g_c), s	0.2	15.9	16.0	16.7	18.3	28.7	3.3	10.8	0.0	15.1	0.0	18.1
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	267	266	274	438	460	391	58	1152	515	479	0	796
V/C Ratio(X)	0.01	0.83	0.84	0.59	0.64	0.92	0.78	0.34	0.00	0.85	0.00	0.45
Avail Cap(c_a), veh/h	350	349	359	469	493	419	129	1152	515	673	0	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.1	53.8	53.9	43.2	43.9	47.8	62.6	33.3	0.0	54.8	0.0	26.2
Incr Delay (d2), s/veh	0.0	12.5	12.7	1.7	2.5	23.7	19.4	0.2	0.0	7.6	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.7	9.0	8.4	9.8	15.1	1.9	5.3	0.0	7.7	0.0	9.6
LnGrp Delay(d),s/veh	47.2	66.3	66.5	45.0	46.3	71.4	82.0	33.5	0.0	62.5	0.0	28.1
LnGrp LOS	D	E	E	D	D	E	F	C		E		C
Approach Vol, veh/h		455			909			431			771	
Approach Delay, s/veh		66.3			55.8			38.5			46.3	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.6	46.9		24.1	8.8	60.8		36.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	40.3		25.7	9.5	56.3		34.5
Max Q Clear Time (g_c+I1), s	17.1	12.8		18.0	5.3	20.1		30.7
Green Ext Time (p_c), s	1.0	2.7		1.6	0.0	2.4		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1076	34	313	806	298	130	189	380	114	105	79
Future Volume (veh/h)	170	1076	34	313	806	298	130	189	380	114	105	79
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	170	1076	34	313	806	0	130	189	103	114	105	10
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	278	1761	56	435	2001	623	269	282	240	332	180	153
Arrive On Green	0.08	0.35	0.35	0.13	0.39	0.00	0.15	0.15	0.15	0.10	0.10	0.10
Sat Flow, veh/h	3442	5065	160	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	170	720	390	313	806	0	130	189	103	114	105	10
Grp Sat Flow(s),veh/h/ln	1721	1695	1835	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.1	11.4	11.4	5.7	7.4	0.0	4.3	6.2	3.8	2.0	3.5	0.4
Cycle Q Clear(g_c), s	3.1	11.4	11.4	5.7	7.4	0.0	4.3	6.2	3.8	2.0	3.5	0.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	1179	638	435	2001	623	269	282	240	332	180	153
V/C Ratio(X)	0.61	0.61	0.61	0.72	0.40	0.00	0.48	0.67	0.43	0.34	0.58	0.07
Avail Cap(c_a), veh/h	877	2434	1317	717	3415	1063	671	704	599	1195	647	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	17.5	17.5	27.2	14.2	0.0	25.2	26.0	24.9	27.3	28.0	26.6
Incr Delay (d2), s/veh	2.2	0.5	1.0	2.2	0.1	0.0	1.3	2.7	1.2	0.6	3.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.4	5.9	2.8	3.5	0.0	2.2	3.4	1.7	1.0	2.0	0.2
LnGrp Delay(d),s/veh	31.0	18.0	18.5	29.4	14.3	0.0	26.5	28.7	26.2	28.0	31.0	26.8
LnGrp LOS	C	B	B	C	B		C	C	C	C	C	C
Approach Vol, veh/h		1280			1119			422			229	
Approach Delay, s/veh		19.9			18.5			27.4			29.3	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		10.7	12.7	27.0		14.3	9.7	30.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		22.5	13.5	46.5		24.5	16.5	43.5
Max Q Clear Time (g_c+I1), s		5.5	7.7	13.4		8.2	5.1	9.4
Green Ext Time (p_c), s		0.9	0.6	9.1		1.6	0.4	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1098	491	16	2	91	78	11	9	9	220	9	670
Future Volume (veh/h)	1098	491	16	2	91	78	11	9	9	220	9	670
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1193	534	17	2	91	78	11	9	9	226	0	670
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1587	1019	866	5	313	140	41	34	35	487	0	1895
Arrive On Green	0.46	0.55	0.55	0.00	0.09	0.09	0.03	0.03	0.03	0.14	0.00	0.14
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1300	1078	1091	3548	0	3167
Grp Volume(v), veh/h	1193	534	17	2	91	78	15	0	14	226	0	670
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1798	0	1670	1774	0	1583
Q Serve(g_s), s	17.8	11.3	0.3	0.1	1.5	2.9	0.5	0.0	0.5	3.6	0.0	0.0
Cycle Q Clear(g_c), s	17.8	11.3	0.3	0.1	1.5	2.9	0.5	0.0	0.5	3.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	1587	1019	866	5	313	140	57	0	53	487	0	1895
V/C Ratio(X)	0.75	0.52	0.02	0.41	0.29	0.56	0.27	0.00	0.26	0.46	0.00	0.35
Avail Cap(c_a), veh/h	1587	1019	866	143	1025	458	521	0	484	913	0	2275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	8.9	6.5	31.0	26.5	27.2	29.4	0.0	29.4	24.7	0.0	6.4
Incr Delay (d2), s/veh	3.3	1.9	0.0	47.8	0.5	3.4	2.5	0.0	2.6	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	6.3	0.1	0.1	0.8	1.4	0.3	0.0	0.3	1.8	0.0	2.9
LnGrp Delay(d),s/veh	17.2	10.9	6.5	78.8	27.0	30.6	31.9	0.0	32.0	25.4	0.0	6.5
LnGrp LOS	B	B	A	E	C	C	C		C	C		A
Approach Vol, veh/h		1744			171			29			896	
Approach Delay, s/veh		15.1			29.3			31.9			11.2	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		6.5	4.7	38.5		12.5	33.2	10.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.5
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.0	20.5	18.0
Max Q Clear Time (g_c+I1), s		2.5	2.1	13.3		5.6	19.8	4.9
Green Ext Time (p_c), s		0.1	0.0	3.5		2.9	0.4	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	359	10	417	4	5	4	898	262	8	13	474	69
Future Volume (veh/h)	359	10	417	4	5	4	898	262	8	13	474	69
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	417	0	119	4	5	4	898	262	8	13	474	69
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	606	0	270	9	11	9	1123	1785	54	29	704	315
Arrive On Green	0.17	0.00	0.17	0.02	0.02	0.02	0.33	0.51	0.51	0.02	0.20	0.20
Sat Flow, veh/h	3548	0	1583	536	670	536	3442	3507	107	1774	3539	1583
Grp Volume(v), veh/h	417	0	119	13	0	0	898	132	138	13	474	69
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1741	0	0	1721	1770	1844	1774	1770	1583
Q Serve(g_s), s	6.9	0.0	4.2	0.5	0.0	0.0	14.9	2.5	2.5	0.5	7.7	2.3
Cycle Q Clear(g_c), s	6.9	0.0	4.2	0.5	0.0	0.0	14.9	2.5	2.5	0.5	7.7	2.3
Prop In Lane	1.00		1.00	0.31		0.31	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	606	0	270	28	0	0	1123	901	939	29	704	315
V/C Ratio(X)	0.69	0.00	0.44	0.46	0.00	0.00	0.80	0.15	0.15	0.45	0.67	0.22
Avail Cap(c_a), veh/h	1447	0	646	501	0	0	2009	1514	1578	142	1245	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	23.2	30.5	0.0	0.0	19.2	8.1	8.1	30.5	23.2	21.0
Incr Delay (d2), s/veh	1.4	0.0	1.1	11.3	0.0	0.0	1.4	0.1	0.1	10.8	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	1.9	0.3	0.0	0.0	7.2	1.2	1.3	0.3	3.9	1.0
LnGrp Delay(d),s/veh	25.8	0.0	24.4	41.8	0.0	0.0	20.6	8.2	8.2	41.3	24.3	21.3
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		536			13			1168			556	
Approach Delay, s/veh		25.5			41.8			17.7			24.3	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	36.3		5.5	24.9	16.9		15.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	53.5		18.0	36.5	22.0		25.5
Max Q Clear Time (g_c+I1), s	2.5	4.5		2.5	16.9	9.7		8.9
Green Ext Time (p_c), s	0.0	1.7		0.0	3.5	2.7		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	163	64	127	91	53	0	824	128	114	813	23
Future Volume (vph)	25	163	64	127	91	53	0	824	128	114	813	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1850	1583		1810	1583		3539	1583		3505	
Flt Permitted		0.95	1.00		0.64	1.00		1.00	1.00		0.73	
Satd. Flow (perm)		1761	1583		1188	1583		3539	1583		2592	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	163	64	127	91	53	0	824	128	114	813	23
RTOR Reduction (vph)	0	0	46	0	0	38	0	0	46	0	2	0
Lane Group Flow (vph)	0	188	18	0	218	15	0	824	82	0	948	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8			2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		508	457		343	457		2280	1020		1670	
v/s Ratio Prot								0.23				
v/s Ratio Perm		0.11	0.01		c0.18	0.01			0.05		c0.37	
v/c Ratio		0.37	0.04		0.64	0.03		0.36	0.08		0.57	
Uniform Delay, d1		25.5	23.0		27.9	23.0		7.4	6.0		9.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.1	0.2		8.7	0.1		0.4	0.2		1.4	
Delay (s)		27.5	23.2		36.6	23.1		7.9	6.2		10.4	
Level of Service		C	C		D	C		A	A		B	
Approach Delay (s)		26.4			33.9			7.6			10.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1212	473	241	538	0	0	0	0	364	21	850
Future Volume (vph)	0	1212	473	241	538	0	0	0	0	364	21	850
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	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)		4751	1362	3433	3539						1779	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4751	1362	3433	3539						1779	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1212	473	241	538	0	0	0	0	364	21	850
RTOR Reduction (vph)	0	7	129	0	0	0	0	0	0	0	0	23
Lane Group Flow (vph)	0	1304	245	241	538	0	0	0	0	0	385	827
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		41.0	41.0	21.5	21.5						32.5	78.0
Effective Green, g (s)		41.0	41.0	21.5	21.5						32.5	78.0
Actuated g/C Ratio		0.38	0.38	0.20	0.20						0.30	0.72
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1795	514	680	701						532	2595
v/s Ratio Prot		c0.27		0.07	c0.15						c0.22	0.23
v/s Ratio Perm			0.18									
v/c Ratio		0.73	0.48	0.35	0.77						0.72	0.32
Uniform Delay, d1		28.9	25.6	37.5	41.1						34.0	5.6
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		2.6	3.2	0.3	5.0						4.8	0.1
Delay (s)		31.6	28.8	37.8	46.2						38.8	5.6
Level of Service		C	C	D	D						D	A
Approach Delay (s)		30.9			43.6			0.0			16.0	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	108.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	591	844	0	417	669	94
Future Volume (veh/h)	591	844	0	417	669	94
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	591	0	0	417	669	61
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1424	637	0	1424	1301	598
Arrive On Green	0.40	0.00	0.00	0.40	0.38	0.38
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	591	0	0	417	669	61
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	3.3	0.0	0.0	2.2	4.1	0.7
Cycle Q Clear(g_c), s	3.3	0.0	0.0	2.2	4.1	0.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1424	637	0	1424	1301	598
V/C Ratio(X)	0.42	0.00	0.00	0.29	0.51	0.10
Avail Cap(c_a), veh/h	4021	1799	0	4021	3531	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.9	0.0	0.0	5.5	6.6	5.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	1.1	1.9	0.3
LnGrp Delay(d),s/veh	6.0	0.0	0.0	5.6	6.9	5.6
LnGrp LOS	A			A	A	A
Approach Vol, veh/h	591			417	730	
Approach Delay, s/veh	6.0			5.6	6.8	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		13.3		14.0				14.0
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		26.5		29.5				29.5
Max Q Clear Time (g_c+I1), s		6.1		5.3				4.2
Green Ext Time (p_c), s		2.7		4.2				2.8

Intersection Summary	
HCM 2010 Ctrl Delay	6.2
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1012	1034	66	378	797
Future Volume (veh/h)	0	1012	1034	66	378	797
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1012	1034	0	378	781
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2269	2269	0	723	1291
Arrive On Green	0.00	0.45	0.45	0.00	0.41	0.41
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1012	1034	0	378	781
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	5.7	5.8	0.0	6.6	8.0
Cycle Q Clear(g_c), s	0.0	5.7	5.8	0.0	6.6	8.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2269	2269	0	723	1291
V/C Ratio(X)	0.00	0.45	0.46	0.00	0.52	0.60
Avail Cap(c_a), veh/h	0	5445	5445	0	2806	5009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.9	7.9	0.0	9.2	9.6
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	2.7	0.0	3.3	3.6
LnGrp Delay(d),s/veh	0.0	8.0	8.1	0.0	9.7	10.0
LnGrp LOS		A	A		A	B
Approach Vol, veh/h		1012	1034		1159	
Approach Delay, s/veh		8.0	8.1		9.9	
Approach LOS		A	A		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.3		19.8		21.3
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				42.5		63.5		42.5
Max Q Clear Time (g_c+I1), s				7.7		10.0		7.8
Green Ext Time (p_c), s				8.8		5.3		9.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	908	321	280	1460	175	435	49	505	401	55	234
Future Volume (veh/h)	72	908	321	280	1460	175	435	49	505	401	55	234
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	72	908	160	280	1460	-76	435	49	291	401	55	207
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1355	422	754	2115	659	623	337	633	658	356	303
Arrive On Green	0.07	0.27	0.27	0.22	0.42	0.00	0.18	0.18	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	72	908	160	280	1460	-76	435	49	291	401	55	207
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.3	13.4	7.0	5.8	19.8	0.0	10.0	1.9	0.0	9.0	2.1	10.3
Cycle Q Clear(g_c), s	3.3	13.4	7.0	5.8	19.8	0.0	10.0	1.9	0.0	9.0	2.1	10.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	1355	422	754	2115	659	623	337	633	658	356	303
V/C Ratio(X)	0.58	0.67	0.38	0.37	0.69	-0.12	0.70	0.15	0.46	0.61	0.15	0.68
Avail Cap(c_a), veh/h	219	1779	554	1102	2780	866	816	442	722	1286	696	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	27.6	25.2	28.0	20.2	0.0	32.4	29.0	18.6	31.2	28.4	31.7
Incr Delay (d2), s/veh	4.3	0.6	0.6	0.3	0.5	0.0	1.8	0.2	0.5	0.9	0.2	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.4	3.1	2.8	9.3	0.0	4.9	1.0	5.0	4.4	1.1	4.7
LnGrp Delay(d),s/veh	42.4	28.2	25.8	28.3	20.7	0.0	34.1	29.2	19.1	32.1	28.6	34.5
LnGrp LOS	D	C	C	C	C		C	C	B	C	C	C
Approach Vol, veh/h		1140			1664			775			663	
Approach Delay, s/veh		28.8			22.9			28.2			32.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		19.1	21.5	25.5		18.3	8.9	38.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		30.0	25.5	28.0		18.5	8.9	44.6
Max Q Clear Time (g_c+I1), s		12.3	7.8	15.4		12.0	5.3	21.8
Green Ext Time (p_c), s		2.4	0.9	5.5		1.8	0.0	11.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	319	36	508	648	1055	58	666	599	642	774	58
Future Volume (veh/h)	127	319	36	508	648	1055	58	666	599	642	774	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	127	319	36	508	648	971	58	666	555	642	774	58
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	858	95	698	1062	755	74	1355	629	712	2080	155
Arrive On Green	0.11	0.27	0.27	0.14	0.30	0.30	0.04	0.27	0.27	0.21	0.43	0.43
Sat Flow, veh/h	1774	3166	352	5003	3539	1423	1774	5085	1531	3442	4819	359
Grp Volume(v), veh/h	127	176	179	508	648	971	58	666	555	642	543	289
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1668	1770	1423	1774	1695	1531	1721	1695	1788
Q Serve(g_s), s	10.6	12.5	12.9	15.1	24.3	46.5	5.0	17.1	41.3	28.2	16.8	17.0
Cycle Q Clear(g_c), s	10.6	12.5	12.9	15.1	24.3	46.5	5.0	17.1	41.3	28.2	16.8	17.0
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	196	480	474	698	1062	755	74	1355	629	712	1463	772
V/C Ratio(X)	0.65	0.37	0.38	0.73	0.61	1.29	0.78	0.49	0.88	0.90	0.37	0.37
Avail Cap(c_a), veh/h	196	480	474	698	1062	755	121	1355	629	899	1463	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	0.75	0.75	0.75	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.1	45.7	45.9	63.9	46.5	39.2	73.6	48.0	42.9	59.9	29.8	29.9
Incr Delay (d2), s/veh	7.3	2.2	2.3	2.7	1.8	135.9	12.6	1.0	13.0	10.3	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	6.4	6.5	7.1	12.2	60.7	2.7	8.1	24.3	14.4	8.0	8.6
LnGrp Delay(d),s/veh	73.3	47.9	48.2	66.6	48.3	175.2	86.2	49.0	55.8	70.3	30.5	31.2
LnGrp LOS	E	D	D	E	D	F	F	D	E	E	C	C
Approach Vol, veh/h		482			2127			1279			1474	
Approach Delay, s/veh		54.7			110.6			53.6			48.0	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.6	45.8	26.1	46.5	11.0	71.4	21.6	51.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	46.5	37.0	17.5	42.0	10.6	66.9	15.7	43.8
Max Q Clear Time (g_c+I1), s	30.2	43.3	17.1	14.9	7.0	19.0	12.6	48.5
Green Ext Time (p_c), s	1.9	0.0	0.1	2.2	0.0	6.6	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.8
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	194	10	12	3	131	244	1	0	92	71
Future Vol, veh/h	52	0	194	10	12	3	131	244	1	0	92	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	0	194	10	12	3	131	244	1	0	92	71

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	642	635	128	732	670	245	163	0	0	245	0	0
Stage 1	128	128	-	507	507	-	-	-	-	-	-	-
Stage 2	514	507	-	225	163	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	387	396	922	337	378	794	1416	-	-	1321	-	-
Stage 1	876	790	-	548	539	-	-	-	-	-	-	-
Stage 2	543	539	-	778	763	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	349	359	922	247	343	794	1416	-	-	1321	-	-
Mov Cap-2 Maneuver	349	359	-	247	343	-	-	-	-	-	-	-
Stage 1	795	790	-	497	489	-	-	-	-	-	-	-
Stage 2	479	489	-	614	763	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	17.4	2.7	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1416	-	-	349	922	315	1321	-	-
HCM Lane V/C Ratio	0.093	-	-	0.149	0.21	0.079	-	-	-
HCM Control Delay (s)	7.8	-	-	17.1	9.9	17.4	0	-	-
HCM Lane LOS	A	-	-	C	A	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.5	0.8	0.3	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	88	73	34	96	188	76	821	44	233	1095	224
Future Volume (veh/h)	252	88	73	34	96	188	76	821	44	233	1095	224
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	252	88	73	34	96	188	76	821	44	233	1095	224
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	174	145	138	417	245	99	1314	409	286	1850	576
Arrive On Green	0.18	0.18	0.18	0.15	0.15	0.15	0.06	0.26	0.26	0.16	0.36	0.36
Sat Flow, veh/h	1774	943	782	892	2696	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	252	0	161	69	61	188	76	821	44	233	1095	224
Grp Sat Flow(s),veh/h/ln	1774	0	1725	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	10.1	0.0	6.3	2.5	2.2	8.5	3.2	10.7	1.6	9.5	13.1	7.8
Cycle Q Clear(g_c), s	10.1	0.0	6.3	2.5	2.2	8.5	3.2	10.7	1.6	9.5	13.1	7.8
Prop In Lane	1.00		0.45	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	0	319	282	274	245	99	1314	409	286	1850	576
V/C Ratio(X)	0.77	0.00	0.50	0.25	0.22	0.77	0.77	0.62	0.11	0.81	0.59	0.39
Avail Cap(c_a), veh/h	937	0	911	571	556	497	368	2821	878	889	4317	1344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	27.4	27.8	27.7	30.3	34.8	24.5	21.2	30.3	19.3	17.6
Incr Delay (d2), s/veh	3.8	0.0	1.2	0.5	0.4	5.0	11.7	0.5	0.1	5.6	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	3.1	1.3	1.1	4.1	1.9	5.0	0.7	5.1	6.1	3.5
LnGrp Delay(d),s/veh	32.8	0.0	28.6	28.2	28.1	35.3	46.5	25.0	21.3	35.9	19.6	18.1
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	B
Approach Vol, veh/h		413			318			941			1552	
Approach Delay, s/veh		31.2			32.4			26.6			21.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.6	23.8		18.3	8.7	31.7		16.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	11.5	12.7		12.1	5.2	15.1		10.5
Green Ext Time (p_c), s	0.7	6.7		1.7	0.1	11.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	0	211	3	4	1	198	318	0	0	188	108
Future Vol, veh/h	57	0	211	3	4	1	198	318	0	0	188	108
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	0	211	3	4	1	198	318	0	0	188	108

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	959	956	242	1062	1010	318	296	0	0	318	0	0
Stage 1	242	242	-	714	714	-	-	-	-	-	-	-
Stage 2	717	714	-	348	296	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	237	258	797	201	240	723	1265	-	-	1242	-	-
Stage 1	762	705	-	422	435	-	-	-	-	-	-	-
Stage 2	421	435	-	668	668	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	205	217	797	130	202	723	1265	-	-	1242	-	-
Mov Cap-2 Maneuver	205	217	-	130	202	-	-	-	-	-	-	-
Stage 1	642	705	-	356	367	-	-	-	-	-	-	-
Stage 2	351	367	-	491	668	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	25.8	3.2	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1265	-	-	205	797	181	1242	-	-
HCM Lane V/C Ratio	0.157	-	-	0.278	0.265	0.044	-	-	-
HCM Control Delay (s)	8.4	-	-	29.2	11.1	25.8	0	-	-
HCM Lane LOS	A	-	-	D	B	D	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	1.1	1.1	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	164	223	20	232	58	230	697	30	74	764	175
Future Volume (veh/h)	267	164	223	20	232	58	230	697	30	74	764	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	218	233	223	20	232	58	230	697	16	74	764	175
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	406	427	363	36	424	110	317	1884	587	133	1356	785
Arrive On Green	0.23	0.23	0.23	0.14	0.16	0.14	0.18	0.37	0.37	0.07	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	225	2671	696	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	218	233	223	165	0	145	230	697	16	74	764	175
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1852	0	1740	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	7.8	7.9	9.1	5.9	0.0	5.5	8.8	7.2	0.5	2.9	9.3	4.5
Cycle Q Clear(g_c), s	7.8	7.9	9.1	5.9	0.0	5.5	8.8	7.2	0.5	2.9	9.3	4.5
Prop In Lane	1.00		1.00	0.12		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	406	427	363	294	0	276	317	1884	587	133	1356	785
V/C Ratio(X)	0.54	0.55	0.61	0.56	0.00	0.53	0.73	0.37	0.03	0.56	0.56	0.22
Avail Cap(c_a), veh/h	987	1037	881	1005	0	944	1012	4317	1344	518	2901	1266
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	24.4	24.9	28.0	0.0	28.0	27.9	16.5	14.4	32.1	22.7	10.3
Incr Delay (d2), s/veh	1.1	1.1	1.7	1.7	0.0	1.5	3.2	0.1	0.0	3.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	4.2	4.1	3.2	0.0	2.8	4.6	3.4	0.2	1.6	4.4	2.9
LnGrp Delay(d),s/veh	25.5	25.5	26.6	29.7	0.0	29.6	31.0	16.6	14.4	35.7	23.1	10.4
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		674			310			943			1013	
Approach Delay, s/veh		25.8			29.6			20.1			21.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	29.6		19.5	15.8	22.2		14.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	19.5	59.5		38.5	39.5	39.5		37.5
Max Q Clear Time (g_c+I1), s	4.9	9.2		11.1	10.8	11.3		7.9
Green Ext Time (p_c), s	0.1	5.5		3.9	0.7	6.3		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	249	48	312	436	454	38	401	383	309	337	32
Future Volume (veh/h)	10	249	48	312	436	454	38	401	383	309	337	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	249	48	312	436	454	38	401	0	309	337	32
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	306	58	576	605	514	49	1209	541	370	706	67
Arrive On Green	0.10	0.10	0.10	0.32	0.32	0.32	0.03	0.34	0.00	0.11	0.42	0.42
Sat Flow, veh/h	1774	2969	564	1774	1863	1583	1774	3539	1583	3442	1676	159
Grp Volume(v), veh/h	10	147	150	312	436	454	38	401	0	309	0	369
Grp Sat Flow(s),veh/h/ln	1774	1770	1763	1774	1863	1583	1774	1770	1583	1721	0	1835
Q Serve(g_s), s	0.7	11.8	12.2	21.0	30.1	39.6	3.1	12.3	0.0	12.8	0.0	21.3
Cycle Q Clear(g_c), s	0.7	11.8	12.2	21.0	30.1	39.6	3.1	12.3	0.0	12.8	0.0	21.3
Prop In Lane	1.00		0.32	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	183	183	182	576	605	514	49	1209	541	370	0	773
V/C Ratio(X)	0.05	0.80	0.83	0.54	0.72	0.88	0.78	0.33	0.00	0.84	0.00	0.48
Avail Cap(c_a), veh/h	249	249	248	772	810	689	140	1209	541	625	0	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.0	64.0	64.2	40.4	43.5	46.7	70.5	35.7	0.0	63.9	0.0	30.6
Incr Delay (d2), s/veh	0.1	12.7	15.0	0.8	2.1	10.3	22.5	0.7	0.0	5.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.4	6.7	10.4	15.9	18.8	1.8	6.1	0.0	6.4	0.0	11.2
LnGrp Delay(d),s/veh	59.2	76.7	79.2	41.2	45.6	57.0	93.0	36.4	0.0	68.9	0.0	32.7
LnGrp LOS	E	E	E	D	D	E	F	D		E		C
Approach Vol, veh/h		307			1202			439			678	
Approach Delay, s/veh		77.4			48.8			41.3			49.2	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.2	54.3		19.6	8.5	66.0		51.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	14.8	14.3		14.2	5.1	23.3		41.6
Green Ext Time (p_c), s	0.8	2.9		0.9	0.0	2.5		5.7

Intersection Summary	
HCM 2010 Ctrl Delay	51.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	838	51	473	1096	134	45	62	218	295	211	170
Future Volume (veh/h)	143	838	51	473	1096	134	45	62	218	295	211	170
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	143	838	51	473	1096	0	45	62	-59	295	211	101
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	1390	84	652	2020	629	81	86	73	622	337	286
Arrive On Green	0.08	0.28	0.28	0.19	0.40	0.00	0.05	0.05	0.00	0.18	0.18	0.18
Sat Flow, veh/h	3442	4903	298	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	143	579	310	473	1096	0	45	62	-59	295	211	101
Grp Sat Flow(s),veh/h/ln	1721	1695	1810	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.4	8.8	8.9	7.7	9.9	0.0	1.5	2.0	0.0	4.6	6.3	3.3
Cycle Q Clear(g_c), s	2.4	8.8	8.9	7.7	9.9	0.0	1.5	2.0	0.0	4.6	6.3	3.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	261	961	513	652	2020	629	81	86	73	622	337	286
V/C Ratio(X)	0.55	0.60	0.60	0.73	0.54	0.00	0.55	0.73	-0.81	0.47	0.63	0.35
Avail Cap(c_a), veh/h	603	1839	982	1579	4200	1308	548	575	489	1637	886	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	18.6	18.6	22.8	13.9	0.0	28.0	28.2	0.0	22.0	22.7	21.5
Incr Delay (d2), s/veh	1.8	0.6	1.2	1.6	0.2	0.0	5.7	11.0	0.0	0.6	1.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.2	4.6	3.8	4.6	0.0	0.9	1.3	0.0	2.2	3.4	1.5
LnGrp Delay(d),s/veh	28.5	19.2	19.7	24.4	14.1	0.0	33.7	39.2	0.0	22.6	24.6	22.2
LnGrp LOS	C	B	B	C	B		C	D		C	C	C
Approach Vol, veh/h		1032			1569			48			607	
Approach Delay, s/veh		20.6			17.2			82.3			23.2	
Approach LOS		C			B			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		15.3	15.9	21.5		7.3	9.0	28.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	27.5	32.5		18.5	10.5	49.5
Max Q Clear Time (g_c+I1), s		8.3	9.7	10.9		4.0	4.4	11.9
Green Ext Time (p_c), s		2.6	1.6	6.1		0.3	0.2	9.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	820	243	13	2	231	145	10	8	5	112	5	1015
Future Volume (veh/h)	820	243	13	2	231	145	10	8	5	112	5	1015
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	891	264	14	2	231	145	10	8	5	116	0	1015
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1184	1077	915	5	866	387	39	32	21	445	0	1486
Arrive On Green	0.34	0.58	0.58	0.00	0.24	0.24	0.03	0.03	0.03	0.13	0.00	0.13
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1484	1241	787	3548	0	3167
Grp Volume(v), veh/h	891	264	14	2	231	145	12	0	11	116	0	1015
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1789	0	1724	1774	0	1583
Q Serve(g_s), s	15.0	4.6	0.2	0.1	3.5	5.0	0.4	0.0	0.4	1.9	0.0	0.0
Cycle Q Clear(g_c), s	15.0	4.6	0.2	0.1	3.5	5.0	0.4	0.0	0.4	1.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	1184	1077	915	5	866	387	47	0	45	445	0	1486
V/C Ratio(X)	0.75	0.25	0.02	0.41	0.27	0.37	0.26	0.00	0.24	0.26	0.00	0.68
Avail Cap(c_a), veh/h	1184	1077	915	136	866	387	492	0	474	895	0	1888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.0	6.8	5.9	32.6	20.0	20.5	31.2	0.0	31.2	25.9	0.0	13.6
Incr Delay (d2), s/veh	4.4	0.5	0.0	47.9	0.8	2.8	2.9	0.0	2.8	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	2.4	0.1	0.1	1.8	2.5	0.3	0.0	0.2	1.0	0.0	7.1
LnGrp Delay(d),s/veh	23.4	7.3	5.9	80.5	20.7	23.3	34.1	0.0	34.0	26.2	0.0	14.3
LnGrp LOS	C	A	A	F	C	C	C		C	C		B
Approach Vol, veh/h		1169			378			23			1131	
Approach Delay, s/veh		19.6			22.0			34.0			15.5	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		6.2	4.7	42.3		12.2	27.0	20.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.5	22.5	16.0
Max Q Clear Time (g_c+I1), s		2.4	2.1	6.6		3.9	17.0	7.0
Green Ext Time (p_c), s		0.0	0.0	1.6		4.3	1.9	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	13	444	19	12	7	704	231	18	9	666	207
Future Volume (veh/h)	179	13	444	19	12	7	704	231	18	9	666	207
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	208	0	54	19	12	7	704	231	18	9	666	207
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	363	0	162	35	22	13	906	1752	136	21	972	435
Arrive On Green	0.10	0.00	0.10	0.04	0.04	0.04	0.26	0.53	0.53	0.01	0.27	0.27
Sat Flow, veh/h	3548	0	1583	881	556	324	3442	3329	258	1774	3539	1583
Grp Volume(v), veh/h	208	0	54	38	0	0	704	122	127	9	666	207
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1761	0	0	1721	1770	1817	1774	1770	1583
Q Serve(g_s), s	3.1	0.0	1.8	1.2	0.0	0.0	10.7	2.0	2.0	0.3	9.5	6.1
Cycle Q Clear(g_c), s	3.1	0.0	1.8	1.2	0.0	0.0	10.7	2.0	2.0	0.3	9.5	6.1
Prop In Lane	1.00		1.00	0.50		0.18	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	363	0	162	70	0	0	906	931	956	21	972	435
V/C Ratio(X)	0.57	0.00	0.33	0.54	0.00	0.00	0.78	0.13	0.13	0.44	0.68	0.48
Avail Cap(c_a), veh/h	1135	0	507	564	0	0	1438	1290	1325	158	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	23.5	26.5	0.0	0.0	19.2	6.8	6.8	27.6	18.2	17.0
Incr Delay (d2), s/veh	1.4	0.0	1.2	6.4	0.0	0.0	1.5	0.1	0.1	13.7	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.8	0.7	0.0	0.0	5.2	1.0	1.0	0.2	4.7	2.7
LnGrp Delay(d),s/veh	25.5	0.0	24.7	32.9	0.0	0.0	20.7	6.8	6.8	41.3	19.1	17.8
LnGrp LOS	C		C	C			C	A	A	D	B	B
Approach Vol, veh/h		262			38			953			882	
Approach Delay, s/veh		25.3			32.9			17.1			19.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.2	34.1		6.7	19.3	20.0		10.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	41.0		18.0	23.5	22.5		18.0
Max Q Clear Time (g_c+I1), s	2.3	4.0		3.2	12.7	11.5		5.1
Green Ext Time (p_c), s	0.0	1.5		0.1	2.2	4.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	117	34	118	80	64	2	919	140	109	751	33
Future Volume (vph)	16	117	34	118	80	64	2	919	140	109	751	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1852	1583		1809	1583		3539	1583		3498	
Flt Permitted		0.96	1.00		0.74	1.00		0.95	1.00		0.71	
Satd. Flow (perm)		1786	1583		1376	1583		3377	1583		2505	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	117	34	118	80	64	2	919	140	109	751	33
RTOR Reduction (vph)	0	0	24	0	0	46	0	0	50	0	3	0
Lane Group Flow (vph)	0	133	10	0	198	18	0	921	90	0	890	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		515	457		397	457		2176	1020		1614	
v/s Ratio Prot												
v/s Ratio Perm		0.07	0.01		c0.14	0.01		0.27	0.06		c0.36	
v/c Ratio		0.26	0.02		0.50	0.04		0.42	0.09		0.55	
Uniform Delay, d1		24.6	22.9		26.6	23.0		7.8	6.0		8.8	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.2	0.1		4.4	0.2		0.6	0.2		1.4	
Delay (s)		25.8	23.0		31.0	23.2		8.4	6.2		10.2	
Level of Service		C	C		C	C		A	A		B	
Approach Delay (s)		25.2			29.1			8.1			10.2	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	870	582	514	701	0	0	0	0	198	1	921
Future Volume (vph)	0	870	582	514	701	0	0	0	0	198	1	921
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	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)		4645	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4645	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	870	582	514	701	0	0	0	0	198	1	921
RTOR Reduction (vph)	0	55	216	0	0	0	0	0	0	0	0	40
Lane Group Flow (vph)	0	1065	116	514	701	0	0	0	0	0	199	881
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		31.5	31.5	26.5	26.5						18.5	54.5
Effective Green, g (s)		31.5	31.5	26.5	26.5						18.5	54.5
Actuated g/C Ratio		0.35	0.35	0.29	0.29						0.21	0.61
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1625	476	1010	1042						364	2186
v/s Ratio Prot		c0.23		0.15	c0.20						c0.11	0.24
v/s Ratio Perm			0.09									
v/c Ratio		0.66	0.24	0.51	0.67						0.55	0.40
Uniform Delay, d1		24.7	20.8	26.3	27.9						32.0	9.3
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.0	0.3	0.4	3.5						5.8	0.1
Delay (s)		25.6	21.1	26.8	31.4						37.8	9.4
Level of Service		C	C	C	C						D	A
Approach Delay (s)		24.6			29.4			0.0			14.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1052	0	0	183	842	69
Future Volume (veh/h)	1052	0	0	183	842	69
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	1052	0	0	183	842	36
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1699	760	0	1699	1280	589
Arrive On Green	0.48	0.00	0.00	0.48	0.37	0.37
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	1052	0	0	183	842	36
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	8.9	0.0	0.0	1.1	8.3	0.6
Cycle Q Clear(g_c), s	8.9	0.0	0.0	1.1	8.3	0.6
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1699	760	0	1699	1280	589
V/C Ratio(X)	0.62	0.00	0.00	0.11	0.66	0.06
Avail Cap(c_a), veh/h	2531	1132	0	2531	2546	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	0.0	5.8	10.6	8.2
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.0	0.6	4.0	0.3
LnGrp Delay(d),s/veh	8.2	0.0	0.0	5.8	11.2	8.2
LnGrp LOS	A			A	B	A
Approach Vol, veh/h	1052			183	878	
Approach Delay, s/veh	8.2			5.8	11.1	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		18.1		22.5				22.5
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		28.5		27.5				27.5
Max Q Clear Time (g_c+I1), s		10.3		10.9				3.1
Green Ext Time (p_c), s		3.3		7.1				1.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1139	1013	0	643	941
Future Volume (veh/h)	0	1139	1013	0	643	941
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1139	1013	0	523	1054
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2085	2085	0	850	1517
Arrive On Green	0.00	0.41	0.41	0.00	0.48	0.48
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1139	1013	0	523	1054
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	9.2	8.0	0.0	11.8	14.1
Cycle Q Clear(g_c), s	0.0	9.2	8.0	0.0	11.8	14.1
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2085	2085	0	850	1517
V/C Ratio(X)	0.00	0.55	0.49	0.00	0.62	0.69
Avail Cap(c_a), veh/h	0	3754	3754	0	2259	4032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	12.2	11.8	0.0	10.4	11.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	3.7	0.0	5.8	6.1
LnGrp Delay(d),s/veh	0.0	12.4	12.0	0.0	11.1	11.6
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1139	1013		1577	
Approach Delay, s/veh		12.4	12.0		11.4	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				25.2		29.0		25.2
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				38.5		67.5		38.5
Max Q Clear Time (g_c+I1), s				11.2		16.1		10.0
Green Ext Time (p_c), s				9.5		8.4		8.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	417	1354	337	401	896	493	150	129	248	132	17	48
Future Volume (veh/h)	417	1354	337	401	896	493	150	129	248	132	17	48
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	417	1354	176	401	896	242	150	129	34	132	17	21
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	2233	695	600	1667	519	412	223	465	325	176	150
Arrive On Green	0.29	0.44	0.44	0.17	0.33	0.33	0.12	0.12	0.12	0.09	0.09	0.09
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	417	1354	176	401	896	242	150	129	34	132	17	21
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	15.3	14.2	4.9	7.6	10.0	8.4	2.8	4.6	0.0	2.5	0.6	0.8
Cycle Q Clear(g_c), s	15.3	14.2	4.9	7.6	10.0	8.4	2.8	4.6	0.0	2.5	0.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	2233	695	600	1667	519	412	223	465	325	176	150
V/C Ratio(X)	0.82	0.61	0.25	0.67	0.54	0.47	0.36	0.58	0.07	0.41	0.10	0.14
Avail Cap(c_a), veh/h	815	3389	1055	1043	2593	807	494	268	504	1508	816	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	14.9	12.3	26.9	19.1	18.6	28.2	29.0	17.7	29.7	28.8	28.9
Incr Delay (d2), s/veh	3.7	0.3	0.2	1.3	0.3	0.7	0.5	2.4	0.1	0.8	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	6.6	2.1	3.7	4.7	3.8	1.4	2.5	0.5	1.2	0.3	0.4
LnGrp Delay(d),s/veh	26.9	15.2	12.5	28.2	19.4	19.2	28.8	31.4	17.8	30.5	29.0	29.4
LnGrp LOS	C	B	B	C	B	B	C	C	B	C	C	C
Approach Vol, veh/h		1947			1539			313			170	
Approach Delay, s/veh		17.5			21.6			28.6			30.2	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		9.6	15.1	33.6		11.3	22.9	25.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.0	19.6	44.9		8.5	30.5	34.0
Max Q Clear Time (g_c+I1), s		4.5	9.6	16.2		6.6	17.3	12.0
Green Ext Time (p_c), s		0.6	1.1	12.9		0.3	1.1	7.6

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	648	45	388	295	763	31	435	727	798	803	36
Future Volume (veh/h)	108	648	45	388	295	763	31	435	727	798	803	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		0.91	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	108	648	45	388	295	679	31	435	683	798	803	36
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	998	69	743	1142	774	42	1214	600	677	2052	92
Arrive On Green	0.13	0.30	0.30	0.15	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3330	231	5003	3539	1435	1774	5085	1527	3442	4984	223
Grp Volume(v), veh/h	108	344	349	388	295	679	31	435	683	798	545	294
Grp Sat Flow(s),veh/h/ln	1774	1770	1791	1668	1770	1435	1774	1695	1527	1721	1695	1817
Q Serve(g_s), s	8.8	26.2	26.3	11.1	9.5	50.0	2.7	11.0	37.0	30.5	17.5	17.6
Cycle Q Clear(g_c), s	8.8	26.2	26.3	11.1	9.5	50.0	2.7	11.0	37.0	30.5	17.5	17.6
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	223	531	537	743	1142	774	42	1214	600	677	1396	748
V/C Ratio(X)	0.48	0.65	0.65	0.52	0.26	0.88	0.74	0.36	1.14	1.18	0.39	0.39
Avail Cap(c_a), veh/h	223	531	537	888	1142	774	80	1214	600	677	1396	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	47.2	47.2	60.9	38.8	33.8	75.2	49.1	47.7	62.2	32.0	32.0
Incr Delay (d2), s/veh	1.6	6.0	6.0	0.5	0.5	11.7	17.2	0.6	77.7	95.1	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	13.7	13.9	5.2	4.7	28.5	1.5	5.2	38.6	23.4	8.3	9.1
LnGrp Delay(d),s/veh	64.7	53.2	53.2	61.4	39.3	45.5	92.4	49.8	125.4	157.3	32.8	33.5
LnGrp LOS	E	D	D	E	D	D	F	D	F	F	C	C
Approach Vol, veh/h		801			1362			1149			1637	
Approach Delay, s/veh		54.7			48.7			95.9			93.6	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	27.5	51.0	8.2	68.3	24.0	54.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.5	37.0	27.5	42.0	7.0	60.5	19.5	50.0
Max Q Clear Time (g_c+I1), s	32.5	39.0	13.1	28.3	4.7	19.6	10.8	52.0
Green Ext Time (p_c), s	0.0	0.0	1.3	3.7	0.0	6.6	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	75.5
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	4	271	5	6	1	73	175	7	2	123	42
Future Vol, veh/h	42	4	271	5	6	1	73	175	7	2	123	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	4	271	5	6	1	73	175	7	2	123	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	476	476	144	611	494	179	165	0	0	182	0	0
Stage 1	148	148	-	325	325	-	-	-	-	-	-	-
Stage 2	328	328	-	286	169	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	499	488	903	406	476	864	1413	-	-	1393	-	-
Stage 1	855	775	-	687	649	-	-	-	-	-	-	-
Stage 2	685	647	-	721	759	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	473	462	903	271	450	864	1413	-	-	1393	-	-
Mov Cap-2 Maneuver	473	462	-	271	450	-	-	-	-	-	-	-
Stage 1	811	773	-	651	615	-	-	-	-	-	-	-
Stage 2	643	613	-	501	757	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	15.2	2.2	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1413	-	-	473	891	364	1393	-	-
HCM Lane V/C Ratio	0.052	-	-	0.089	0.309	0.033	0.001	-	-
HCM Control Delay (s)	7.7	-	-	13.4	10.8	15.2	7.6	0	-
HCM Lane LOS	A	-	-	B	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	1.3	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	125	47	11	71	115	42	802	26	216	904	330
Future Volume (veh/h)	278	125	47	11	71	115	42	802	26	216	904	330
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	278	125	47	11	71	115	42	802	26	216	904	330
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	265	100	50	343	172	72	1364	425	270	1932	602
Arrive On Green	0.20	0.20	0.20	0.11	0.11	0.11	0.04	0.27	0.27	0.15	0.38	0.38
Sat Flow, veh/h	1774	1291	486	461	3148	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	278	0	172	44	38	115	42	802	26	216	904	330
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	10.0	0.0	5.8	1.5	1.3	4.7	1.6	9.3	0.8	8.0	9.1	11.1
Cycle Q Clear(g_c), s	10.0	0.0	5.8	1.5	1.3	4.7	1.6	9.3	0.8	8.0	9.1	11.1
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	364	0	364	200	193	172	72	1364	425	270	1932	602
V/C Ratio(X)	0.76	0.00	0.47	0.22	0.20	0.67	0.59	0.59	0.06	0.80	0.47	0.55
Avail Cap(c_a), veh/h	1035	0	1037	1100	1058	947	668	4168	1298	668	4168	1298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	23.7	27.5	27.5	29.0	31.9	21.5	18.4	27.7	15.8	16.4
Incr Delay (d2), s/veh	3.4	0.0	1.0	0.5	0.5	4.4	7.4	0.4	0.1	5.4	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	2.9	0.8	0.7	2.3	0.9	4.4	0.4	4.3	4.2	4.9
LnGrp Delay(d),s/veh	28.7	0.0	24.6	28.1	28.0	33.4	39.4	21.9	18.5	33.2	16.0	17.2
LnGrp LOS	C		C	C	C	C	D	C	B	C	B	B
Approach Vol, veh/h		450			197			870			1450	
Approach Delay, s/veh		27.2			31.2			22.7			18.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.8	22.7		18.4	7.2	30.2		11.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		39.5	25.5	55.5		40.5
Max Q Clear Time (g_c+I1), s	10.0	11.3		12.0	3.6	13.1		6.7
Green Ext Time (p_c), s	0.5	6.9		1.9	0.1	9.6		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	1	347	2	2	0	132	204	2	1	318	80
Future Vol, veh/h	51	1	347	2	2	0	132	204	2	1	318	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	1	347	2	2	0	132	204	2	1	318	80

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	830	830	358	1003	869	205	398	0	0	206	0	0
Stage 1	360	360	-	469	469	-	-	-	-	-	-	-
Stage 2	470	470	-	534	400	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	289	306	686	221	290	836	1161	-	-	1365	-	-
Stage 1	658	626	-	575	561	-	-	-	-	-	-	-
Stage 2	574	560	-	530	602	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	262	271	686	99	257	836	1161	-	-	1365	-	-
Mov Cap-2 Maneuver	262	271	-	99	257	-	-	-	-	-	-	-
Stage 1	583	625	-	509	497	-	-	-	-	-	-	-
Stage 2	507	496	-	261	601	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.4	30.9	3.3	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1161	-	-	262	686	143	1365	-	-
HCM Lane V/C Ratio	0.114	-	-	0.198	0.506	0.028	0.001	-	-
HCM Control Delay (s)	8.5	-	-	22.1	15.5	30.9	7.6	0	-
HCM Lane LOS	A	-	-	C	C	D	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.7	2.9	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	207	218	14	169	42	255	490	51	141	620	195
Future Volume (veh/h)	192	207	218	14	169	42	255	490	51	141	620	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	192	207	218	14	169	42	255	490	51	141	620	195
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	434	369	29	362	93	350	1614	502	224	1251	684
Arrive On Green	0.23	0.23	0.23	0.11	0.13	0.11	0.20	0.32	0.32	0.13	0.25	0.22
Sat Flow, veh/h	1774	1863	1583	217	2684	691	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	192	207	218	119	0	106	255	490	51	141	620	195
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1852	0	1741	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	5.9	6.1	7.8	3.8	0.0	3.6	8.6	4.6	1.4	4.8	6.7	5.1
Cycle Q Clear(g_c), s	5.9	6.1	7.8	3.8	0.0	3.6	8.6	4.6	1.4	4.8	6.7	5.1
Prop In Lane	1.00		1.00	0.12		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	434	369	250	0	235	350	1614	502	224	1251	684
V/C Ratio(X)	0.46	0.48	0.59	0.48	0.00	0.45	0.73	0.30	0.10	0.63	0.50	0.29
Avail Cap(c_a), veh/h	1073	1127	958	1120	0	1053	753	4555	1418	753	4555	1713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	21.1	21.7	25.5	0.0	25.6	23.9	16.4	15.3	26.4	20.6	11.7
Incr Delay (d2), s/veh	0.8	0.8	1.5	1.4	0.0	1.4	2.9	0.1	0.1	2.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.2	3.5	2.0	0.0	1.8	4.5	2.2	0.6	2.5	3.1	3.1
LnGrp Delay(d),s/veh	21.8	21.9	23.2	27.0	0.0	27.0	26.8	16.5	15.4	29.3	20.9	11.9
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		617			225			796			956	
Approach Delay, s/veh		22.3			27.0			19.7			20.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	23.2		17.8	15.6	18.7		11.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	55.5		37.0	25.5	55.5		37.0
Max Q Clear Time (g_c+I1), s	6.8	6.6		9.8	10.6	8.7		5.8
Green Ext Time (p_c), s	0.3	3.8		3.5	0.6	5.5		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	424	28	258	293	381	45	386	452	417	340	22
Future Volume (veh/h)	3	424	28	258	293	381	45	386	452	417	340	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	3	424	28	258	293	381	45	386	0	417	340	22
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	505	33	454	476	405	58	1124	503	485	737	48
Arrive On Green	0.15	0.15	0.15	0.26	0.26	0.26	0.03	0.32	0.00	0.14	0.43	0.43
Sat Flow, veh/h	1774	3371	222	1774	1863	1583	1774	3539	1583	3442	1731	112
Grp Volume(v), veh/h	3	222	230	258	293	381	45	386	0	417	0	362
Grp Sat Flow(s),veh/h/ln	1774	1770	1824	1774	1863	1583	1774	1770	1583	1721	0	1843
Q Serve(g_s), s	0.2	16.1	16.2	16.8	18.4	31.2	3.3	11.0	0.0	15.7	0.0	18.6
Cycle Q Clear(g_c), s	0.2	16.1	16.2	16.8	18.4	31.2	3.3	11.0	0.0	15.7	0.0	18.6
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	266	265	273	454	476	405	58	1124	503	485	0	785
V/C Ratio(X)	0.01	0.84	0.84	0.57	0.62	0.94	0.78	0.34	0.00	0.86	0.00	0.46
Avail Cap(c_a), veh/h	345	344	354	463	486	413	127	1124	503	664	0	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.9	54.6	54.7	42.9	43.5	48.2	63.5	34.6	0.0	55.5	0.0	27.1
Incr Delay (d2), s/veh	0.0	13.1	13.3	1.6	2.3	29.6	19.4	0.2	0.0	8.4	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.9	9.2	8.4	9.7	16.9	2.0	5.4	0.0	8.0	0.0	9.9
LnGrp Delay(d),s/veh	47.9	67.8	68.0	44.5	45.7	77.8	82.9	34.8	0.0	63.9	0.0	29.1
LnGrp LOS	D	E	E	D	D	E	F	C		E		C
Approach Vol, veh/h		455			932			431			779	
Approach Delay, s/veh		67.8			58.5			39.8			47.7	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.1	46.5		24.3	8.8	60.8		38.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	40.3		25.7	9.5	56.3		34.5
Max Q Clear Time (g_c+I1), s	17.7	13.0		18.2	5.3	20.6		33.2
Green Ext Time (p_c), s	1.0	2.7		1.6	0.0	2.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	53.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1084	34	313	829	298	130	189	380	114	105	79
Future Volume (veh/h)	170	1084	34	313	829	298	130	189	380	114	105	79
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	170	1084	34	313	829	0	130	189	103	114	105	10
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	1770	55	435	2009	626	268	282	240	331	179	152
Arrive On Green	0.08	0.35	0.35	0.13	0.40	0.00	0.15	0.15	0.15	0.10	0.10	0.10
Sat Flow, veh/h	3442	5066	159	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	170	725	393	313	829	0	130	189	103	114	105	10
Grp Sat Flow(s),veh/h/ln	1721	1695	1835	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.1	11.5	11.5	5.7	7.7	0.0	4.4	6.2	3.8	2.0	3.5	0.4
Cycle Q Clear(g_c), s	3.1	11.5	11.5	5.7	7.7	0.0	4.4	6.2	3.8	2.0	3.5	0.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1184	641	435	2009	626	268	282	240	331	179	152
V/C Ratio(X)	0.61	0.61	0.61	0.72	0.41	0.00	0.48	0.67	0.43	0.34	0.59	0.07
Avail Cap(c_a), veh/h	873	2424	1312	714	3401	1059	668	702	596	1190	644	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	17.5	17.5	27.3	14.2	0.0	25.3	26.1	25.1	27.5	28.1	26.7
Incr Delay (d2), s/veh	2.2	0.5	1.0	2.3	0.1	0.0	1.4	2.8	1.2	0.6	3.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.4	6.0	2.8	3.6	0.0	2.2	3.4	1.7	1.0	2.0	0.2
LnGrp Delay(d),s/veh	31.1	18.0	18.5	29.6	14.4	0.0	26.6	28.8	26.3	28.1	31.2	26.9
LnGrp LOS	C	B	B	C	B		C	C	C	C	C	C
Approach Vol, veh/h		1288			1142			422			229	
Approach Delay, s/veh		19.9			18.5			27.5			29.4	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		10.8	12.7	27.2		14.3	9.7	30.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		22.5	13.5	46.5		24.5	16.5	43.5
Max Q Clear Time (g_c+I1), s		5.5	7.7	13.5		8.2	5.1	9.7
Green Ext Time (p_c), s		0.9	0.6	9.2		1.6	0.4	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1098	491	16	2	91	78	11	9	9	220	9	693
Future Volume (veh/h)	1098	491	16	2	91	78	11	9	9	220	9	693
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1193	534	17	2	91	78	11	9	9	226	0	693
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1585	1017	865	5	313	140	41	34	35	491	0	1896
Arrive On Green	0.46	0.55	0.55	0.00	0.09	0.09	0.03	0.03	0.03	0.14	0.00	0.14
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1300	1078	1091	3548	0	3167
Grp Volume(v), veh/h	1193	534	17	2	91	78	15	0	14	226	0	693
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1798	0	1670	1774	0	1583
Q Serve(g_s), s	17.8	11.4	0.3	0.1	1.5	2.9	0.5	0.0	0.5	3.6	0.0	0.0
Cycle Q Clear(g_c), s	17.8	11.4	0.3	0.1	1.5	2.9	0.5	0.0	0.5	3.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	1585	1017	865	5	313	140	57	0	53	491	0	1896
V/C Ratio(X)	0.75	0.52	0.02	0.41	0.29	0.56	0.27	0.00	0.26	0.46	0.00	0.37
Avail Cap(c_a), veh/h	1585	1017	865	142	1023	458	520	0	483	912	0	2272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	9.0	6.5	31.0	26.5	27.2	29.4	0.0	29.4	24.7	0.0	6.4
Incr Delay (d2), s/veh	3.4	1.9	0.0	47.8	0.5	3.4	2.5	0.0	2.6	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	6.3	0.1	0.1	0.8	1.4	0.3	0.0	0.3	1.8	0.0	3.0
LnGrp Delay(d),s/veh	17.2	10.9	6.5	78.8	27.1	30.6	31.9	0.0	32.0	25.4	0.0	6.5
LnGrp LOS	B	B	A	E	C	C	C		C	C		A
Approach Vol, veh/h		1744			171			29			919	
Approach Delay, s/veh		15.2			29.3			32.0			11.2	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		6.5	4.7	38.5		12.6	33.2	10.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.5
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.0	20.5	18.0
Max Q Clear Time (g_c+I1), s		2.5	2.1	13.4		5.6	19.8	4.9
Green Ext Time (p_c), s		0.1	0.0	3.5		3.0	0.4	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	359	10	440	4	5	4	898	262	8	13	474	69
Future Volume (veh/h)	359	10	440	4	5	4	898	262	8	13	474	69
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	424	0	135	4	5	4	898	262	8	13	474	69
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	615	0	275	9	11	9	1121	1782	54	29	702	314
Arrive On Green	0.17	0.00	0.17	0.02	0.02	0.02	0.33	0.51	0.51	0.02	0.20	0.20
Sat Flow, veh/h	3548	0	1583	536	670	536	3442	3507	107	1774	3539	1583
Grp Volume(v), veh/h	424	0	135	13	0	0	898	132	138	13	474	69
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1741	0	0	1721	1770	1844	1774	1770	1583
Q Serve(g_s), s	7.1	0.0	4.8	0.5	0.0	0.0	15.0	2.5	2.5	0.5	7.8	2.3
Cycle Q Clear(g_c), s	7.1	0.0	4.8	0.5	0.0	0.0	15.0	2.5	2.5	0.5	7.8	2.3
Prop In Lane	1.00		1.00	0.31		0.31	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	615	0	275	28	0	0	1121	899	937	29	702	314
V/C Ratio(X)	0.69	0.00	0.49	0.46	0.00	0.00	0.80	0.15	0.15	0.45	0.68	0.22
Avail Cap(c_a), veh/h	1438	0	642	498	0	0	1997	1505	1568	141	1238	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	23.5	30.7	0.0	0.0	19.3	8.2	8.2	30.7	23.3	21.1
Incr Delay (d2), s/veh	1.4	0.0	1.4	11.4	0.0	0.0	1.4	0.1	0.1	10.8	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	2.2	0.3	0.0	0.0	7.3	1.2	1.3	0.3	3.9	1.0
LnGrp Delay(d),s/veh	25.8	0.0	24.9	42.0	0.0	0.0	20.7	8.3	8.3	41.5	24.5	21.5
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		559			13			1168			556	
Approach Delay, s/veh		25.6			42.0			17.8			24.5	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	36.5		5.5	25.0	17.0		15.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	53.5		18.0	36.5	22.0		25.5
Max Q Clear Time (g_c+I1), s	2.5	4.5		2.5	17.0	9.8		9.1
Green Ext Time (p_c), s	0.0	1.7		0.0	3.5	2.7		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	163	64	127	91	53	0	841	128	114	819	23
Future Volume (vph)	25	163	64	127	91	53	0	841	128	114	819	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1850	1583		1810	1583		3539	1583		3506	
Flt Permitted		0.95	1.00		0.64	1.00		1.00	1.00		0.73	
Satd. Flow (perm)		1761	1583		1188	1583		3539	1583		2576	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	163	64	127	91	53	0	841	128	114	819	23
RTOR Reduction (vph)	0	0	46	0	0	38	0	0	46	0	2	0
Lane Group Flow (vph)	0	188	18	0	218	15	0	841	82	0	954	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8			2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		508	457		343	457		2280	1020		1660	
v/s Ratio Prot								0.24				
v/s Ratio Perm		0.11	0.01		c0.18	0.01			0.05		c0.37	
v/c Ratio		0.37	0.04		0.64	0.03		0.37	0.08		0.57	
Uniform Delay, d1		25.5	23.0		27.9	23.0		7.5	6.0		9.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.1	0.2		8.7	0.1		0.5	0.2		1.5	
Delay (s)		27.5	23.2		36.6	23.1		7.9	6.2		10.5	
Level of Service		C	C		D	C		A	A		B	
Approach Delay (s)		26.4			33.9			7.7			10.5	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1212	481	241	561	0	0	0	0	364	21	850
Future Volume (vph)	0	1212	481	241	561	0	0	0	0	364	21	850
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	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)		4750	1362	3433	3539						1779	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4750	1362	3433	3539						1779	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1212	481	241	561	0	0	0	0	364	21	850
RTOR Reduction (vph)	0	7	132	0	0	0	0	0	0	0	0	20
Lane Group Flow (vph)	0	1306	248	241	561	0	0	0	0	0	385	830
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		41.0	41.0	21.9	21.9						32.6	78.1
Effective Green, g (s)		41.0	41.0	21.9	21.9						32.6	78.1
Actuated g/C Ratio		0.38	0.38	0.20	0.20						0.30	0.72
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1786	512	689	711						532	2586
v/s Ratio Prot		c0.27		0.07	c0.16						c0.22	0.23
v/s Ratio Perm			0.18									
v/c Ratio		0.73	0.49	0.35	0.79						0.72	0.32
Uniform Delay, d1		29.3	25.9	37.4	41.4						34.2	5.7
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		2.7	3.3	0.3	5.8						4.8	0.1
Delay (s)		31.9	29.2	37.7	47.2						39.0	5.8
Level of Service		C	C	D	D						D	A
Approach Delay (s)		31.3			44.3			0.0			16.1	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	109.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	591	0	0	417	672	94
Future Volume (veh/h)	591	0	0	417	672	94
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	591	0	0	417	672	61
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1422	636	0	1422	1303	600
Arrive On Green	0.40	0.00	0.00	0.40	0.38	0.38
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	591	0	0	417	672	61
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	3.3	0.0	0.0	2.2	4.1	0.7
Cycle Q Clear(g_c), s	3.3	0.0	0.0	2.2	4.1	0.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1422	636	0	1422	1303	600
V/C Ratio(X)	0.42	0.00	0.00	0.29	0.52	0.10
Avail Cap(c_a), veh/h	4014	1796	0	4014	3526	1622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.9	0.0	0.0	5.5	6.6	5.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	1.1	1.9	0.3
LnGrp Delay(d),s/veh	6.1	0.0	0.0	5.7	6.9	5.6
LnGrp LOS	A			A	A	A
Approach Vol, veh/h	591			417	733	
Approach Delay, s/veh	6.1			5.7	6.8	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		13.3		14.0				14.0
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		26.5		29.5				29.5
Max Q Clear Time (g_c+I1), s		6.1		5.3				4.2
Green Ext Time (p_c), s		2.7		4.2				2.8

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1039	1037	0	378	806
Future Volume (veh/h)	0	1039	1037	0	378	806
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1039	1037	0	378	790
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2266	2266	0	727	1297
Arrive On Green	0.00	0.45	0.45	0.00	0.41	0.41
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1039	1037	0	378	790
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	5.9	5.9	0.0	6.6	8.1
Cycle Q Clear(g_c), s	0.0	5.9	5.9	0.0	6.6	8.1
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2266	2266	0	727	1297
V/C Ratio(X)	0.00	0.46	0.46	0.00	0.52	0.61
Avail Cap(c_a), veh/h	0	5395	5395	0	2780	4963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	8.0	8.0	0.0	9.2	9.6
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	2.7	0.0	3.3	3.6
LnGrp Delay(d),s/veh	0.0	8.2	8.2	0.0	9.8	10.1
LnGrp LOS		A	A		A	B
Approach Vol, veh/h		1039	1037		1168	
Approach Delay, s/veh		8.2	8.2		10.0	
Approach LOS		A	A		A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.5		20.0		21.5
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				42.5		63.5		42.5
Max Q Clear Time (g_c+I1), s				7.9		10.1		7.9
Green Ext Time (p_c), s				9.1		5.4		9.1

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	944	321	280	1473	175	435	49	505	401	55	234
Future Volume (veh/h)	72	944	321	280	1473	175	435	49	505	401	55	234
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	72	944	160	280	1473	-76	435	49	291	401	55	207
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1386	432	738	2124	661	621	336	625	657	356	302
Arrive On Green	0.07	0.27	0.27	0.21	0.42	0.00	0.18	0.18	0.18	0.19	0.19	0.19
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	72	944	160	280	1473	-76	435	49	291	401	55	207
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.3	14.1	6.9	5.9	20.1	0.0	10.1	1.9	0.0	9.0	2.1	10.3
Cycle Q Clear(g_c), s	3.3	14.1	6.9	5.9	20.1	0.0	10.1	1.9	0.0	9.0	2.1	10.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	1386	432	738	2124	661	621	336	625	657	356	302
V/C Ratio(X)	0.58	0.68	0.37	0.38	0.69	-0.11	0.70	0.15	0.47	0.61	0.15	0.68
Avail Cap(c_a), veh/h	218	1769	551	1096	2765	861	812	439	713	1279	692	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	27.5	25.0	28.5	20.2	0.0	32.6	29.2	19.0	31.4	28.6	31.9
Incr Delay (d2), s/veh	4.3	0.7	0.5	0.3	0.5	0.0	1.8	0.2	0.5	0.9	0.2	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.7	3.1	2.8	9.5	0.0	4.9	1.0	5.1	4.4	1.1	4.8
LnGrp Delay(d),s/veh	42.6	28.3	25.5	28.8	20.8	0.0	34.4	29.4	19.5	32.3	28.8	34.7
LnGrp LOS	D	C	C	C	C		C	C	B	C	C	C
Approach Vol, veh/h		1176			1677			775			663	
Approach Delay, s/veh		28.8			23.0			28.5			32.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		19.2	21.2	26.1		18.3	8.9	38.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		30.0	25.5	28.0		18.5	8.9	44.6
Max Q Clear Time (g_c+I1), s		12.3	7.9	16.1		12.1	5.3	22.1
Green Ext Time (p_c), s		2.4	0.9	5.6		1.8	0.0	11.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	319	37	518	648	1058	59	679	635	642	783	58
Future Volume (veh/h)	127	319	37	518	648	1058	59	679	635	642	783	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	127	319	37	518	648	974	59	679	591	642	783	58
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	855	98	695	1068	757	75	1358	629	712	2082	153
Arrive On Green	0.11	0.27	0.27	0.14	0.30	0.30	0.04	0.27	0.27	0.21	0.43	0.43
Sat Flow, veh/h	1774	3155	361	5003	3539	1424	1774	5085	1531	3442	4824	356
Grp Volume(v), veh/h	127	177	179	518	648	974	59	679	591	642	549	292
Grp Sat Flow(s),veh/h/ln	1774	1770	1746	1668	1770	1424	1774	1695	1531	1721	1695	1789
Q Serve(g_s), s	10.7	12.6	12.9	15.4	24.3	46.8	5.1	17.5	41.4	28.2	17.0	17.2
Cycle Q Clear(g_c), s	10.7	12.6	12.9	15.4	24.3	46.8	5.1	17.5	41.4	28.2	17.0	17.2
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	192	480	473	695	1068	757	75	1358	629	712	1463	772
V/C Ratio(X)	0.66	0.37	0.38	0.75	0.61	1.29	0.78	0.50	0.94	0.90	0.38	0.38
Avail Cap(c_a), veh/h	192	480	473	695	1068	757	121	1358	629	899	1463	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	45.8	45.9	64.1	46.3	39.1	73.5	48.0	44.5	59.9	29.9	29.9
Incr Delay (d2), s/veh	8.2	2.2	2.3	3.1	1.8	135.9	12.2	1.0	19.2	10.3	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	6.4	6.5	7.3	12.1	60.8	2.8	8.4	27.7	14.4	8.1	8.8
LnGrp Delay(d),s/veh	74.5	47.9	48.2	67.2	48.1	175.0	85.7	49.0	63.6	70.3	30.6	31.3
LnGrp LOS	E	D	D	E	D	F	F	D	E	E	C	C
Approach Vol, veh/h		483			2140			1329			1483	
Approach Delay, s/veh		55.0			110.4			57.2			47.9	
Approach LOS		E			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.6	45.9	26.0	46.5	11.1	71.4	21.3	51.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	46.5	37.0	17.5	42.0	10.6	66.9	15.7	43.8
Max Q Clear Time (g_c+I1), s	30.2	43.4	17.4	14.9	7.1	19.2	12.7	48.8
Green Ext Time (p_c), s	1.9	0.0	0.0	2.2	0.0	6.7	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	75.4
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	201	10	12	3	153	250	1	0	95	71
Future Vol, veh/h	52	0	201	10	12	3	153	250	1	0	95	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	0	201	10	12	3	153	250	1	0	95	71

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	695	688	131	788	723	251	166	0	0	251	0	0
Stage 1	131	131	-	557	557	-	-	-	-	-	-	-
Stage 2	564	557	-	231	166	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	357	369	919	309	352	788	1412	-	-	1314	-	-
Stage 1	873	788	-	515	512	-	-	-	-	-	-	-
Stage 2	510	512	-	772	761	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	317	329	919	221	314	788	1412	-	-	1314	-	-
Mov Cap-2 Maneuver	317	329	-	221	314	-	-	-	-	-	-	-
Stage 1	779	788	-	459	457	-	-	-	-	-	-	-
Stage 2	441	457	-	603	761	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	18.8	3	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1412	-	-	317	919	286	1314	-	-
HCM Lane V/C Ratio	0.108	-	-	0.164	0.219	0.087	-	-	-
HCM Control Delay (s)	7.9	-	-	18.6	10	18.8	0	-	-
HCM Lane LOS	A	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.6	0.8	0.3	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	88	73	34	96	210	76	849	44	240	1108	224
Future Volume (veh/h)	252	88	73	34	96	210	76	849	44	240	1108	224
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	252	88	73	34	96	210	76	849	44	240	1108	224
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	172	143	148	448	263	99	1323	412	291	1872	583
Arrive On Green	0.18	0.18	0.18	0.17	0.17	0.17	0.06	0.26	0.26	0.16	0.37	0.37
Sat Flow, veh/h	1774	943	782	892	2695	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	252	0	161	69	61	210	76	849	44	240	1108	224
Grp Sat Flow(s),veh/h/ln	1774	0	1725	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	10.7	0.0	6.7	2.6	2.3	10.1	3.3	11.7	1.7	10.4	13.9	8.2
Cycle Q Clear(g_c), s	10.7	0.0	6.7	2.6	2.3	10.1	3.3	11.7	1.7	10.4	13.9	8.2
Prop In Lane	1.00		0.45	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	0	315	302	294	263	99	1323	412	291	1872	583
V/C Ratio(X)	0.78	0.00	0.51	0.23	0.21	0.80	0.77	0.64	0.11	0.83	0.59	0.38
Avail Cap(c_a), veh/h	885	0	860	539	525	470	347	2664	830	840	4077	1269
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	0.0	29.2	28.6	28.5	31.7	36.9	26.0	22.3	32.0	20.2	18.4
Incr Delay (d2), s/veh	4.1	0.0	1.3	0.4	0.3	5.5	11.6	0.5	0.1	5.9	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	3.3	1.3	1.2	4.8	2.0	5.6	0.7	5.5	6.5	3.7
LnGrp Delay(d),s/veh	34.9	0.0	30.5	29.0	28.8	37.2	48.5	26.6	22.4	37.9	20.5	18.8
LnGrp LOS	C		C	C	C	D	D	C	C	D	C	B
Approach Vol, veh/h		413			340			969			1572	
Approach Delay, s/veh		33.2			34.0			28.1			22.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.5	25.1		19.0	8.9	33.7		17.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	12.4	13.7		12.7	5.3	15.9		12.1
Green Ext Time (p_c), s	0.7	6.9		1.7	0.1	11.9		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	0	232	3	4	1	218	347	0	0	198	108
Future Vol, veh/h	57	0	232	3	4	1	218	347	0	0	198	108
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	0	232	3	4	1	218	347	0	0	198	108

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1038	1035	252	1151	1089	347	306	0	0	347	0	0
Stage 1	252	252	-	783	783	-	-	-	-	-	-	-
Stage 2	786	783	-	368	306	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	209	232	787	175	215	696	1255	-	-	1212	-	-
Stage 1	752	698	-	387	404	-	-	-	-	-	-	-
Stage 2	385	404	-	652	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	178	192	787	107	178	696	1255	-	-	1212	-	-
Mov Cap-2 Maneuver	178	192	-	107	178	-	-	-	-	-	-	-
Stage 1	621	698	-	320	334	-	-	-	-	-	-	-
Stage 2	314	334	-	460	662	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16	29.7	3.3	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1255	-	-	178	787	154	1212	-	-
HCM Lane V/C Ratio	0.174	-	-	0.32	0.295	0.052	-	-	-
HCM Control Delay (s)	8.5	-	-	34.5	11.5	29.7	0	-	-
HCM Lane LOS	A	-	-	D	B	D	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	1.3	1.2	0.2	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	172	223	30	251	86	230	697	30	87	764	175
Future Volume (veh/h)	267	172	223	30	251	86	230	697	30	87	764	175
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	221	237	223	30	251	86	230	697	16	87	764	175
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	420	357	50	427	153	313	1803	561	148	1329	771
Arrive On Green	0.23	0.23	0.23	0.16	0.18	0.16	0.18	0.35	0.35	0.08	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	282	2414	863	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	221	237	223	197	0	170	230	697	16	87	764	175
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1849	0	1710	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	8.3	8.5	9.5	7.4	0.0	6.9	9.2	7.7	0.5	3.6	9.8	4.8
Cycle Q Clear(g_c), s	8.3	8.5	9.5	7.4	0.0	6.9	9.2	7.7	0.5	3.6	9.8	4.8
Prop In Lane	1.00		1.00	0.15		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	400	420	357	327	0	302	313	1803	561	148	1329	771
V/C Ratio(X)	0.55	0.56	0.62	0.60	0.00	0.56	0.73	0.39	0.03	0.59	0.57	0.23
Avail Cap(c_a), veh/h	944	992	843	959	0	888	968	4128	1285	496	2775	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	25.8	26.2	28.6	0.0	28.6	29.3	18.1	15.8	33.2	24.1	11.1
Incr Delay (d2), s/veh	1.2	1.2	1.8	1.8	0.0	1.6	3.3	0.1	0.0	3.7	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	4.5	4.3	3.9	0.0	3.4	4.8	3.6	0.2	1.9	4.6	3.0
LnGrp Delay(d),s/veh	26.9	27.0	28.0	30.4	0.0	30.3	32.6	18.3	15.8	36.9	24.5	11.3
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		681			367			943			1026	
Approach Delay, s/veh		27.3			30.3			21.7			23.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	29.6		19.9	16.3	22.6		16.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	19.5	59.5		38.5	39.5	39.5		37.5
Max Q Clear Time (g_c+I1), s	5.6	9.7		11.5	11.2	11.8		9.4
Green Ext Time (p_c), s	0.1	5.5		3.9	0.7	6.3		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	249	48	312	436	462	38	401	383	331	337	32
Future Volume (veh/h)	10	249	48	312	436	462	38	401	383	331	337	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	249	48	312	436	462	38	401	0	331	337	32
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	306	58	583	613	521	49	1175	526	392	701	67
Arrive On Green	0.10	0.10	0.10	0.33	0.33	0.33	0.03	0.33	0.00	0.11	0.42	0.42
Sat Flow, veh/h	1774	2969	564	1774	1863	1583	1774	3539	1583	3442	1676	159
Grp Volume(v), veh/h	10	147	150	312	436	462	38	401	0	331	0	369
Grp Sat Flow(s),veh/h/ln	1774	1770	1763	1774	1863	1583	1774	1770	1583	1721	0	1835
Q Serve(g_s), s	0.7	11.9	12.3	21.1	30.2	40.7	3.1	12.6	0.0	13.9	0.0	21.5
Cycle Q Clear(g_c), s	0.7	11.9	12.3	21.1	30.2	40.7	3.1	12.6	0.0	13.9	0.0	21.5
Prop In Lane	1.00		0.32	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	183	182	182	583	613	521	49	1175	526	392	0	767
V/C Ratio(X)	0.05	0.81	0.83	0.53	0.71	0.89	0.78	0.34	0.00	0.85	0.00	0.48
Avail Cap(c_a), veh/h	247	247	246	766	804	684	139	1175	526	620	0	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	64.5	64.7	40.2	43.2	46.8	71.0	37.0	0.0	63.9	0.0	31.2
Incr Delay (d2), s/veh	0.1	13.0	15.4	0.8	2.0	11.0	22.4	0.8	0.0	6.2	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.5	6.8	10.4	15.8	19.4	1.8	6.3	0.0	7.0	0.0	11.3
LnGrp Delay(d),s/veh	59.6	77.6	80.1	41.0	45.3	57.8	93.5	37.8	0.0	70.1	0.0	33.3
LnGrp LOS	E	E	F	D	D	E	F	D		E		C
Approach Vol, veh/h		307			1210			439			700	
Approach Delay, s/veh		78.2			48.9			42.6			50.7	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.2	53.3		19.6	8.6	66.0		52.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	16.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	15.9	14.6		14.3	5.1	23.5		42.7
Green Ext Time (p_c), s	0.9	2.9		0.9	0.0	2.5		5.7

Intersection Summary	
HCM 2010 Ctrl Delay	51.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	860	51	473	1104	134	45	62	218	295	211	170
Future Volume (veh/h)	143	860	51	473	1104	134	45	62	218	295	211	170
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	143	860	51	473	1104	0	45	62	-59	295	211	101
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	1414	84	650	2042	636	81	85	72	620	336	285
Arrive On Green	0.08	0.29	0.29	0.19	0.40	0.00	0.05	0.05	0.00	0.18	0.18	0.18
Sat Flow, veh/h	3442	4911	290	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	143	593	318	473	1104	0	45	62	-59	295	211	101
Grp Sat Flow(s),veh/h/ln	1721	1695	1811	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	2.4	9.1	9.2	7.8	10.0	0.0	1.5	2.0	0.0	4.7	6.3	3.4
Cycle Q Clear(g_c), s	2.4	9.1	9.2	7.8	10.0	0.0	1.5	2.0	0.0	4.7	6.3	3.4
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	976	521	650	2042	636	81	85	72	620	336	285
V/C Ratio(X)	0.55	0.61	0.61	0.73	0.54	0.00	0.55	0.73	-0.81	0.48	0.63	0.35
Avail Cap(c_a), veh/h	597	1820	973	1563	4158	1295	542	569	484	1620	877	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	18.6	18.6	23.1	13.8	0.0	28.3	28.5	0.0	22.3	22.9	21.7
Incr Delay (d2), s/veh	1.8	0.6	1.2	1.6	0.2	0.0	5.8	11.2	0.0	0.6	1.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.4	4.8	3.8	4.7	0.0	0.9	1.3	0.0	2.3	3.4	1.5
LnGrp Delay(d),s/veh	28.9	19.2	19.8	24.7	14.1	0.0	34.1	39.7	0.0	22.8	24.9	22.5
LnGrp LOS	C	B	B	C	B		C	D		C	C	C
Approach Vol, veh/h		1054			1577			48			607	
Approach Delay, s/veh		20.7			17.2			83.2			23.5	
Approach LOS		C			B			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		15.4	15.9	21.9		7.3	9.0	28.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	27.5	32.5		18.5	10.5	49.5
Max Q Clear Time (g_c+I1), s		8.3	9.8	11.2		4.0	4.4	12.0
Green Ext Time (p_c), s		2.6	1.6	6.2		0.3	0.2	10.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	820	243	13	2	231	145	10	8	5	112	5	1023
Future Volume (veh/h)	820	243	13	2	231	145	10	8	5	112	5	1023
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	891	264	14	2	231	145	10	8	5	116	0	1023
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1183	1076	915	5	865	387	39	32	21	447	0	1487
Arrive On Green	0.34	0.58	0.58	0.00	0.24	0.24	0.03	0.03	0.03	0.13	0.00	0.13
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1484	1241	787	3548	0	3167
Grp Volume(v), veh/h	891	264	14	2	231	145	12	0	11	116	0	1023
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1789	0	1724	1774	0	1583
Q Serve(g_s), s	15.0	4.6	0.2	0.1	3.5	5.0	0.4	0.0	0.4	1.9	0.0	0.0
Cycle Q Clear(g_c), s	15.0	4.6	0.2	0.1	3.5	5.0	0.4	0.0	0.4	1.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	1183	1076	915	5	865	387	47	0	45	447	0	1487
V/C Ratio(X)	0.75	0.25	0.02	0.41	0.27	0.37	0.26	0.00	0.24	0.26	0.00	0.69
Avail Cap(c_a), veh/h	1183	1076	915	136	865	387	492	0	474	894	0	1887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.0	6.8	5.9	32.6	20.0	20.6	31.2	0.0	31.2	25.8	0.0	13.6
Incr Delay (d2), s/veh	4.5	0.5	0.0	47.9	0.8	2.8	2.9	0.0	2.8	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	2.5	0.1	0.1	1.8	2.5	0.3	0.0	0.2	1.0	0.0	7.3
LnGrp Delay(d),s/veh	23.5	7.3	5.9	80.5	20.7	23.3	34.1	0.0	34.0	26.2	0.0	14.3
LnGrp LOS	C	A	A	F	C	C	C		C	C		B
Approach Vol, veh/h		1169			378			23			1139	
Approach Delay, s/veh		19.6			22.0			34.1			15.5	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		6.2	4.7	42.3		12.2	27.0	20.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.5	22.5	16.0
Max Q Clear Time (g_c+I1), s		2.4	2.1	6.6		3.9	17.0	7.0
Green Ext Time (p_c), s		0.0	0.0	1.6		4.3	1.9	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	13	452	19	12	7	704	231	18	9	666	207
Future Volume (veh/h)	179	13	452	19	12	7	704	231	18	9	666	207
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	210	0	60	19	12	7	704	231	18	9	666	207
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	366	0	163	35	22	13	905	1751	135	21	971	435
Arrive On Green	0.10	0.00	0.10	0.04	0.04	0.04	0.26	0.53	0.53	0.01	0.27	0.27
Sat Flow, veh/h	3548	0	1583	881	556	324	3442	3329	258	1774	3539	1583
Grp Volume(v), veh/h	210	0	60	38	0	0	704	122	127	9	666	207
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1761	0	0	1721	1770	1817	1774	1770	1583
Q Serve(g_s), s	3.2	0.0	2.0	1.2	0.0	0.0	10.7	2.0	2.0	0.3	9.5	6.1
Cycle Q Clear(g_c), s	3.2	0.0	2.0	1.2	0.0	0.0	10.7	2.0	2.0	0.3	9.5	6.1
Prop In Lane	1.00		1.00	0.50		0.18	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	366	0	163	70	0	0	905	931	956	21	971	435
V/C Ratio(X)	0.57	0.00	0.37	0.54	0.00	0.00	0.78	0.13	0.13	0.44	0.69	0.48
Avail Cap(c_a), veh/h	1133	0	506	563	0	0	1435	1287	1322	157	1413	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	23.6	26.6	0.0	0.0	19.2	6.8	6.8	27.7	18.3	17.1
Incr Delay (d2), s/veh	1.4	0.0	1.4	6.4	0.0	0.0	1.5	0.1	0.1	13.7	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.9	0.7	0.0	0.0	5.3	1.0	1.0	0.2	4.7	2.7
LnGrp Delay(d),s/veh	25.5	0.0	24.9	32.9	0.0	0.0	20.7	6.9	6.9	41.4	19.1	17.9
LnGrp LOS	C		C	C			C	A	A	D	B	B
Approach Vol, veh/h		270			38			953			882	
Approach Delay, s/veh		25.4			32.9			17.1			19.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.2	34.1		6.7	19.3	20.0		10.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	41.0		18.0	23.5	22.5		18.0
Max Q Clear Time (g_c+I1), s	2.3	4.0		3.2	12.7	11.5		5.2
Green Ext Time (p_c), s	0.0	1.5		0.1	2.1	4.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	117	34	118	80	64	2	928	140	109	770	34
Future Volume (vph)	17	117	34	118	80	64	2	928	140	109	770	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1851	1583		1809	1583		3539	1583		3499	
Flt Permitted		0.96	1.00		0.74	1.00		0.95	1.00		0.71	
Satd. Flow (perm)		1781	1583		1373	1583		3376	1583		2504	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	117	34	118	80	64	2	928	140	109	770	34
RTOR Reduction (vph)	0	0	24	0	0	46	0	0	50	0	3	0
Lane Group Flow (vph)	0	134	10	0	198	18	0	930	90	0	910	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		514	457		396	457		2175	1020		1613	
v/s Ratio Prot												
v/s Ratio Perm		0.08	0.01		c0.14	0.01		0.28	0.06		c0.36	
v/c Ratio		0.26	0.02		0.50	0.04		0.43	0.09		0.56	
Uniform Delay, d1		24.6	22.9		26.6	23.0		7.9	6.0		8.9	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.2	0.1		4.5	0.2		0.6	0.2		1.4	
Delay (s)		25.8	23.0		31.1	23.2		8.5	6.2		10.4	
Level of Service		C	C		C	C		A	A		B	
Approach Delay (s)		25.3			29.1			8.2			10.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	870	604	514	709	0	0	0	0	198	1	921
Future Volume (vph)	0	870	604	514	709	0	0	0	0	198	1	921
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.96	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)		4637	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4637	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	870	604	514	709	0	0	0	0	198	1	921
RTOR Reduction (vph)	0	61	220	0	0	0	0	0	0	0	0	39
Lane Group Flow (vph)	0	1075	118	514	709	0	0	0	0	0	199	882
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		31.5	31.5	26.5	26.5						18.5	54.5
Effective Green, g (s)		31.5	31.5	26.5	26.5						18.5	54.5
Actuated g/C Ratio		0.35	0.35	0.29	0.29						0.21	0.61
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1622	476	1010	1042						364	2186
v/s Ratio Prot		c0.23		0.15	c0.20						c0.11	0.24
v/s Ratio Perm			0.09									
v/c Ratio		0.66	0.25	0.51	0.68						0.55	0.40
Uniform Delay, d1		24.8	20.8	26.3	28.0						32.0	9.3
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.0	0.3	0.4	3.6						5.8	0.1
Delay (s)		25.8	21.1	26.8	31.6						37.8	9.4
Level of Service		C	C	C	C						D	A
Approach Delay (s)		24.7			29.6			0.0			14.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1115	743	0	205	980	69
Future Volume (veh/h)	1115	743	0	205	980	69
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	1115	0	0	205	980	36
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1677	750	0	1677	1364	627
Arrive On Green	0.47	0.00	0.00	0.47	0.40	0.40
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	1115	0	0	205	980	36
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	11.2	0.0	0.0	1.5	11.1	0.6
Cycle Q Clear(g_c), s	11.2	0.0	0.0	1.5	11.1	0.6
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1677	750	0	1677	1364	627
V/C Ratio(X)	0.66	0.00	0.00	0.12	0.72	0.06
Avail Cap(c_a), veh/h	2301	1029	0	2301	2163	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	0.0	0.0	6.8	11.8	8.6
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.0	0.7	5.3	0.3
LnGrp Delay(d),s/veh	9.8	0.0	0.0	6.8	12.5	8.6
LnGrp LOS	A			A	B	A
Approach Vol, veh/h	1115			205	1016	
Approach Delay, s/veh	9.8			6.8	12.3	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		21.3		24.9				24.9
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		27.5		28.5				28.5
Max Q Clear Time (g_c+I1), s		13.1		13.2				3.5
Green Ext Time (p_c), s		3.7		7.2				1.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1254	1173	49	677	1042
Future Volume (veh/h)	0	1254	1173	49	677	1042
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1254	1173	0	568	1143
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2095	2095	0	875	1561
Arrive On Green	0.00	0.41	0.41	0.00	0.49	0.49
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1254	1173	0	568	1143
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	12.2	11.1	0.0	15.1	18.1
Cycle Q Clear(g_c), s	0.0	12.2	11.1	0.0	15.1	18.1
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2095	2095	0	875	1561
V/C Ratio(X)	0.00	0.60	0.56	0.00	0.65	0.73
Avail Cap(c_a), veh/h	0	3301	3301	0	1910	3409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.5	14.2	0.0	11.9	12.7
Incr Delay (d2), s/veh	0.0	0.3	0.2	0.0	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	5.3	0.0	7.5	7.9
LnGrp Delay(d),s/veh	0.0	14.8	14.4	0.0	12.8	13.4
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1254	1173		1711	
Approach Delay, s/veh		14.8	14.4		13.2	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				29.0		34.1		29.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				39.5		66.5		39.5
Max Q Clear Time (g_c+I1), s				14.2		20.1		13.1
Green Ext Time (p_c), s				10.4		9.6		9.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	1423	352	414	975	662	180	173	282	245	47	141
Future Volume (veh/h)	556	1423	352	414	975	662	180	173	282	245	47	141
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	556	1423	191	414	975	411	180	173	68	245	47	114
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	583	1967	612	923	1660	517	353	191	587	410	222	189
Arrive On Green	0.33	0.39	0.39	0.27	0.33	0.33	0.10	0.10	0.10	0.12	0.12	0.12
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	556	1423	191	414	975	411	180	173	68	245	47	114
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	29.8	23.2	8.2	9.7	15.6	23.0	4.8	8.9	0.0	6.6	2.2	6.7
Cycle Q Clear(g_c), s	29.8	23.2	8.2	9.7	15.6	23.0	4.8	8.9	0.0	6.6	2.2	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	1967	612	923	1660	517	353	191	587	410	222	189
V/C Ratio(X)	0.95	0.72	0.31	0.45	0.59	0.80	0.51	0.90	0.12	0.60	0.21	0.60
Avail Cap(c_a), veh/h	583	2392	745	923	1854	577	353	191	587	1078	583	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	25.4	20.8	29.6	27.3	29.8	41.4	43.2	20.1	40.7	38.8	40.7
Incr Delay (d2), s/veh	26.1	0.9	0.3	0.3	0.4	6.9	1.2	39.4	0.1	1.4	0.5	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.8	11.0	3.6	4.6	7.3	11.0	2.4	6.7	1.2	3.2	1.2	3.1
LnGrp Delay(d),s/veh	58.1	26.3	21.1	30.0	27.7	36.7	42.6	82.7	20.2	42.1	39.2	43.8
LnGrp LOS	E	C	C	C	C	D	D	F	C	D	D	D
Approach Vol, veh/h		2170			1800			421			406	
Approach Delay, s/veh		34.0			30.3			55.4			42.2	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		14.6	29.1	40.7		13.0	35.0	34.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.0	20.2	44.3		8.5	30.5	34.0
Max Q Clear Time (g_c+I1), s		8.7	11.7	25.2		10.9	31.8	25.0
Green Ext Time (p_c), s		1.4	1.0	11.0		0.0	0.0	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	663	45	443	313	892	31	454	821	913	806	40
Future Volume (veh/h)	115	663	45	443	313	892	31	454	821	913	806	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	115	663	45	443	313	808	31	454	777	913	806	40
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	959	65	804	1123	766	42	1214	619	677	2041	101
Arrive On Green	0.13	0.29	0.29	0.16	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3335	226	5003	3539	1432	1774	5085	1527	3442	4957	245
Grp Volume(v), veh/h	115	351	357	443	313	808	31	454	777	913	550	296
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1668	1770	1432	1774	1695	1527	1721	1695	1812
Q Serve(g_s), s	9.3	27.4	27.4	12.6	10.3	49.2	2.7	11.6	37.0	30.5	17.7	17.8
Cycle Q Clear(g_c), s	9.3	27.4	27.4	12.6	10.3	49.2	2.7	11.6	37.0	30.5	17.7	17.8
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	232	509	515	804	1123	766	42	1214	619	677	1396	746
V/C Ratio(X)	0.49	0.69	0.69	0.55	0.28	1.05	0.74	0.37	1.26	1.35	0.39	0.40
Avail Cap(c_a), veh/h	232	509	515	888	1123	766	80	1214	619	677	1396	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	0.74	0.74	0.74	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	49.1	49.1	59.9	39.6	38.6	75.2	49.3	46.8	62.2	32.0	32.0
Incr Delay (d2), s/veh	1.6	7.5	7.5	0.5	0.5	44.7	16.6	0.7	124.6	166.4	0.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	14.4	14.6	5.9	5.1	42.1	1.5	5.5	47.9	30.1	8.4	9.2
LnGrp Delay(d),s/veh	64.2	56.6	56.6	60.4	40.1	83.3	91.8	50.0	171.4	228.6	32.9	33.6
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	C
Approach Vol, veh/h		823			1564			1262			1759	
Approach Delay, s/veh		57.6			68.1			125.8			134.6	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	29.4	49.1	8.2	68.3	24.8	53.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.5	37.0	27.5	42.0	7.0	60.5	20.3	49.2
Max Q Clear Time (g_c+I1), s	32.5	39.0	14.6	29.4	4.7	19.8	11.3	51.2
Green Ext Time (p_c), s	0.0	0.0	1.4	3.6	0.0	6.6	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.6
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	93	4	256	5	6	1	72	196	7	2	129	87
Future Vol, veh/h	93	4	256	5	6	1	72	196	7	2	129	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	4	256	5	6	1	72	196	7	2	129	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	524	524	173	651	564	200	216	0	0	203	0	0
Stage 1	177	177	-	344	344	-	-	-	-	-	-	-
Stage 2	347	347	-	307	220	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	464	458	871	382	435	841	1354	-	-	1369	-	-
Stage 1	825	753	-	671	637	-	-	-	-	-	-	-
Stage 2	669	635	-	703	721	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	439	433	871	257	411	841	1354	-	-	1369	-	-
Mov Cap-2 Maneuver	439	433	-	257	411	-	-	-	-	-	-	-
Stage 1	781	751	-	635	603	-	-	-	-	-	-	-
Stage 2	626	601	-	493	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.2	16	2	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1354	-	-	439	858	340	1369	-	-
HCM Lane V/C Ratio	0.053	-	-	0.212	0.303	0.035	0.001	-	-
HCM Control Delay (s)	7.8	-	-	15.4	11	16	7.6	0	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.8	1.3	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	128	47	21	73	151	42	864	36	239	926	339
Future Volume (veh/h)	292	128	47	21	73	151	42	864	36	239	926	339
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	292	128	47	21	73	151	42	864	36	239	926	339
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	368	270	99	97	358	200	68	1370	427	291	2010	626
Arrive On Green	0.21	0.21	0.21	0.13	0.13	0.13	0.04	0.27	0.27	0.16	0.40	0.40
Sat Flow, veh/h	1774	1301	478	763	2831	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	292	0	175	50	44	151	42	864	36	239	926	339
Grp Sat Flow(s),veh/h/ln	1774	0	1778	1825	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	12.1	0.0	6.7	1.9	1.7	7.1	1.8	11.6	1.3	10.1	10.4	12.8
Cycle Q Clear(g_c), s	12.1	0.0	6.7	1.9	1.7	7.1	1.8	11.6	1.3	10.1	10.4	12.8
Prop In Lane	1.00		0.27	0.42		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	0	369	231	224	200	68	1370	427	291	2010	626
V/C Ratio(X)	0.79	0.00	0.47	0.22	0.20	0.75	0.62	0.63	0.08	0.82	0.46	0.54
Avail Cap(c_a), veh/h	1156	0	1158	482	468	419	263	3116	970	972	5149	1603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	27.0	30.4	30.3	32.7	36.7	24.9	21.2	31.3	17.3	18.0
Incr Delay (d2), s/veh	3.9	0.0	0.9	0.5	0.4	5.6	8.7	0.5	0.1	5.7	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	3.4	1.0	0.9	3.4	1.1	5.5	0.6	5.4	4.9	5.7
LnGrp Delay(d),s/veh	33.0	0.0	27.9	30.9	30.7	38.3	45.5	25.4	21.3	37.0	17.5	18.8
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	B
Approach Vol, veh/h		467			245			942			1504	
Approach Delay, s/veh		31.1			35.4			26.1			20.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.2	25.4		20.6	7.5	35.1		14.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	42.5	47.5		50.5	11.5	78.5		20.5
Max Q Clear Time (g_c+I1), s	12.1	13.6		14.1	3.8	14.8		9.1
Green Ext Time (p_c), s	0.7	7.3		2.0	0.0	10.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	1	304	2	2	0	125	205	2	1	298	92
Future Vol, veh/h	70	1	304	2	2	0	125	205	2	1	298	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	1	304	2	2	0	125	205	2	1	298	92

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	803	803	344	955	848	206	390	0	0	207	0	0
Stage 1	346	346	-	456	456	-	-	-	-	-	-	-
Stage 2	457	457	-	499	392	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	302	317	699	238	298	835	1169	-	-	1364	-	-
Stage 1	670	635	-	584	568	-	-	-	-	-	-	-
Stage 2	583	568	-	554	606	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	275	283	699	123	266	835	1169	-	-	1364	-	-
Mov Cap-2 Maneuver	275	283	-	123	266	-	-	-	-	-	-	-
Stage 1	598	634	-	522	507	-	-	-	-	-	-	-
Stage 2	519	507	-	312	605	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.7	27	3.2	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1169	-	-	275	699	168	1364	-	-
HCM Lane V/C Ratio	0.107	-	-	0.258	0.435	0.024	0.001	-	-
HCM Control Delay (s)	8.4	-	-	22.6	14.1	27	7.6	0	-
HCM Lane LOS	A	-	-	C	B	D	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	1	2.2	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	196	222	23	166	33	263	543	64	115	650	218
Future Volume (veh/h)	220	196	222	23	166	33	263	543	64	115	650	218
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	213	206	222	23	166	33	263	543	64	115	650	218
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	439	373	48	356	74	360	1734	540	189	1244	687
Arrive On Green	0.24	0.24	0.24	0.11	0.13	0.11	0.20	0.34	0.34	0.11	0.24	0.22
Sat Flow, veh/h	1774	1863	1583	362	2692	556	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	213	206	222	117	0	105	263	543	64	115	650	218
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1845	0	1765	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	6.8	6.2	8.1	3.8	0.0	3.6	9.0	5.1	1.8	4.0	7.2	5.9
Cycle Q Clear(g_c), s	6.8	6.2	8.1	3.8	0.0	3.6	9.0	5.1	1.8	4.0	7.2	5.9
Prop In Lane	1.00		1.00	0.20		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	418	439	373	244	0	234	360	1734	540	189	1244	687
V/C Ratio(X)	0.51	0.47	0.60	0.48	0.00	0.45	0.73	0.31	0.12	0.61	0.52	0.32
Avail Cap(c_a), veh/h	1173	1231	1046	1134	0	1085	1227	4612	1436	518	2579	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	21.4	22.1	26.3	0.0	26.3	24.3	15.8	14.7	27.8	21.3	12.1
Incr Delay (d2), s/veh	1.0	0.8	1.5	1.5	0.0	1.3	2.9	0.1	0.1	3.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.2	3.7	2.1	0.0	1.8	4.7	2.4	0.8	2.1	3.4	3.6
LnGrp Delay(d),s/veh	22.6	22.2	23.6	27.8	0.0	27.6	27.1	15.9	14.8	30.9	21.6	12.3
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		641			222			870			983	
Approach Delay, s/veh		22.8			27.7			19.2			20.6	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.9	25.2		18.3	16.2	18.9		11.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.5	57.5		41.5	43.5	31.5		38.5
Max Q Clear Time (g_c+I1), s	6.0	7.1		10.1	11.0	9.2		5.8
Green Ext Time (p_c), s	0.2	4.3		3.7	0.8	5.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	424	46	270	383	362	51	306	556	376	396	37
Future Volume (veh/h)	5	424	46	270	383	362	51	306	556	376	396	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	5	424	46	270	383	362	51	306	0	376	396	37
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	500	54	441	463	393	66	1175	525	444	711	66
Arrive On Green	0.16	0.16	0.16	0.25	0.25	0.25	0.04	0.33	0.00	0.13	0.42	0.42
Sat Flow, veh/h	1774	3223	348	1774	1863	1583	1774	3539	1583	3442	1678	157
Grp Volume(v), veh/h	5	232	238	270	383	362	51	306	0	376	0	433
Grp Sat Flow(s),veh/h/ln	1774	1770	1801	1774	1863	1583	1774	1770	1583	1721	0	1835
Q Serve(g_s), s	0.3	16.9	17.1	17.9	25.8	29.6	3.8	8.4	0.0	14.2	0.0	23.6
Cycle Q Clear(g_c), s	0.3	16.9	17.1	17.9	25.8	29.6	3.8	8.4	0.0	14.2	0.0	23.6
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	275	275	280	441	463	393	66	1175	525	444	0	778
V/C Ratio(X)	0.02	0.84	0.85	0.61	0.83	0.92	0.78	0.26	0.00	0.85	0.00	0.56
Avail Cap(c_a), veh/h	343	342	349	461	484	411	127	1175	525	661	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.5	54.5	54.6	44.3	47.2	48.6	63.4	32.5	0.0	56.6	0.0	28.9
Incr Delay (d2), s/veh	0.0	14.5	15.1	2.2	11.0	25.3	17.4	0.1	0.0	6.6	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.4	9.7	9.0	14.7	15.7	2.2	4.1	0.0	7.1	0.0	12.5
LnGrp Delay(d),s/veh	47.6	69.0	69.8	46.5	58.3	73.9	80.8	32.6	0.0	63.2	0.0	31.7
LnGrp LOS	D	E	E	D	E	E	F	C		E		C
Approach Vol, veh/h		475			1015			357			809	
Approach Delay, s/veh		69.2			60.7			39.5			46.3	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.6	48.6		25.1	9.4	60.8		37.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	40.3		25.7	9.5	56.3		34.5
Max Q Clear Time (g_c+I1), s	16.2	10.4		19.1	5.8	25.6		31.6
Green Ext Time (p_c), s	0.9	2.1		1.5	0.0	3.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	55.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	1212	46	349	872	332	137	200	471	138	108	111
Future Volume (veh/h)	220	1212	46	349	872	332	137	200	471	138	108	111
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	220	1212	46	349	872	0	137	200	194	138	108	42
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	1840	70	451	2049	638	298	313	266	330	179	152
Arrive On Green	0.09	0.37	0.37	0.13	0.40	0.00	0.17	0.17	0.17	0.10	0.10	0.10
Sat Flow, veh/h	3442	5028	191	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	220	817	441	349	872	0	137	200	194	138	108	42
Grp Sat Flow(s),veh/h/ln	1721	1695	1829	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	4.7	15.2	15.2	7.4	9.3	0.0	5.2	7.5	8.7	2.8	4.2	1.9
Cycle Q Clear(g_c), s	4.7	15.2	15.2	7.4	9.3	0.0	5.2	7.5	8.7	2.8	4.2	1.9
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	1240	669	451	2049	638	298	313	266	330	179	152
V/C Ratio(X)	0.68	0.66	0.66	0.77	0.43	0.00	0.46	0.64	0.73	0.42	0.60	0.28
Avail Cap(c_a), veh/h	754	2093	1129	617	2937	915	577	606	515	1028	557	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	19.9	19.9	31.6	16.2	0.0	28.2	29.2	29.7	32.1	32.7	31.6
Incr Delay (d2), s/veh	2.5	0.6	1.1	4.2	0.1	0.0	1.1	2.2	3.8	0.8	3.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	7.1	7.8	3.8	4.4	0.0	2.6	4.1	4.1	1.4	2.3	0.8
LnGrp Delay(d),s/veh	35.5	20.5	21.1	35.8	16.3	0.0	29.3	31.4	33.5	32.9	35.9	32.6
LnGrp LOS	D	C	C	D	B		C	C	C	C	D	C
Approach Vol, veh/h		1478			1221			531			288	
Approach Delay, s/veh		22.9			21.9			31.6			34.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		11.7	14.4	32.1		17.2	11.6	34.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		22.5	13.5	46.5		24.5	16.5	43.5
Max Q Clear Time (g_c+I1), s		6.2	9.4	17.2		10.7	6.7	11.3
Green Ext Time (p_c), s		1.0	0.5	10.4		1.9	0.5	7.2

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1267	527	22	3	95	94	13	15	11	236	14	761
Future Volume (veh/h)	1267	527	22	3	95	94	13	15	11	236	14	761
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1377	573	24	3	95	94	13	15	11	246	0	761
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1519	997	848	7	347	155	45	53	39	517	0	1859
Arrive On Green	0.44	0.54	0.54	0.00	0.10	0.10	0.04	0.04	0.04	0.15	0.00	0.15
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1146	1344	1001	3548	0	3167
Grp Volume(v), veh/h	1377	573	24	3	95	94	20	0	19	246	0	761
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1805	0	1686	1774	0	1583
Q Serve(g_s), s	23.7	13.1	0.5	0.1	1.6	3.6	0.7	0.0	0.7	4.0	0.0	0.0
Cycle Q Clear(g_c), s	23.7	13.1	0.5	0.1	1.6	3.6	0.7	0.0	0.7	4.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.63		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	1519	997	848	7	347	155	71	0	66	517	0	1859
V/C Ratio(X)	0.91	0.57	0.03	0.42	0.27	0.60	0.29	0.00	0.28	0.48	0.00	0.41
Avail Cap(c_a), veh/h	1519	997	848	140	1003	449	512	0	478	894	0	2195
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	9.9	7.0	31.5	26.5	27.5	29.6	0.0	29.6	24.9	0.0	7.1
Incr Delay (d2), s/veh	9.4	2.4	0.1	34.1	0.4	3.7	2.2	0.0	2.3	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	7.4	0.2	0.1	0.8	1.7	0.4	0.0	0.4	2.0	0.0	3.5
LnGrp Delay(d),s/veh	25.9	12.3	7.0	65.7	27.0	31.2	31.9	0.0	31.9	25.6	0.0	7.3
LnGrp LOS	C	B	A	E	C	C	C		C	C		A
Approach Vol, veh/h		1974			192			39			1007	
Approach Delay, s/veh		21.7			29.6			31.9			11.7	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		7.0	4.8	38.5		13.3	32.5	10.7
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.5
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.0	20.5	18.0
Max Q Clear Time (g_c+I1), s		2.7	2.1	15.1		6.0	25.7	5.6
Green Ext Time (p_c), s		0.1	0.0	3.8		3.2	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	419	10	473	5	6	5	1026	324	11	14	531	76
Future Volume (veh/h)	419	10	473	5	6	5	1026	324	11	14	531	76
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	0	157	5	6	5	1026	324	11	14	531	76
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	661	0	295	10	12	10	1211	1877	64	30	717	321
Arrive On Green	0.19	0.00	0.19	0.02	0.02	0.02	0.35	0.54	0.54	0.02	0.20	0.20
Sat Flow, veh/h	3548	0	1583	544	652	544	3442	3493	118	1774	3539	1583
Grp Volume(v), veh/h	495	0	157	16	0	0	1026	164	171	14	531	76
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1740	0	0	1721	1770	1842	1774	1770	1583
Q Serve(g_s), s	9.9	0.0	6.7	0.7	0.0	0.0	20.6	3.5	3.6	0.6	10.5	3.0
Cycle Q Clear(g_c), s	9.9	0.0	6.7	0.7	0.0	0.0	20.6	3.5	3.6	0.6	10.5	3.0
Prop In Lane	1.00		1.00	0.31		0.31	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	661	0	295	33	0	0	1211	951	990	30	717	321
V/C Ratio(X)	0.75	0.00	0.53	0.49	0.00	0.00	0.85	0.17	0.17	0.47	0.74	0.24
Avail Cap(c_a), veh/h	1208	0	539	418	0	0	1678	1265	1316	118	1040	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	27.5	36.4	0.0	0.0	22.4	8.8	8.8	36.5	28.0	25.0
Incr Delay (d2), s/veh	1.7	0.0	1.5	10.7	0.0	0.0	3.1	0.1	0.1	10.9	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	3.0	0.4	0.0	0.0	10.2	1.8	1.8	0.4	5.3	1.3
LnGrp Delay(d),s/veh	30.5	0.0	29.0	47.1	0.0	0.0	25.5	8.9	8.9	47.4	29.7	25.4
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		652			16			1361			621	
Approach Delay, s/veh		30.2			47.1			21.4			29.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	44.7		5.9	30.8	19.7		18.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	53.5		18.0	36.5	22.0		25.5
Max Q Clear Time (g_c+I1), s	2.6	5.6		2.7	22.6	12.5		11.9
Green Ext Time (p_c), s	0.0	2.1		0.0	3.7	2.6		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	163	64	155	91	67	0	891	163	115	856	23
Future Volume (vph)	25	163	64	155	91	67	0	891	163	115	856	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1850	1583		1806	1583		3539	1583		3507	
Flt Permitted		0.94	1.00		0.59	1.00		1.00	1.00		0.72	
Satd. Flow (perm)		1754	1583		1100	1583		3539	1583		2533	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	163	64	155	91	67	0	891	163	115	856	23
RTOR Reduction (vph)	0	0	46	0	0	43	0	0	58	0	2	0
Lane Group Flow (vph)	0	188	18	0	246	24	0	891	105	0	992	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8			2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		506	457		317	457		2280	1020		1632	
v/s Ratio Prot								0.25				
v/s Ratio Perm		0.11	0.01		c0.22	0.01			0.07		c0.39	
v/c Ratio		0.37	0.04		0.78	0.05		0.39	0.10		0.61	
Uniform Delay, d1		25.5	23.0		29.3	23.1		7.6	6.1		9.4	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.1	0.2		16.9	0.2		0.5	0.2		1.7	
Delay (s)		27.6	23.2		46.2	23.3		8.1	6.3		11.0	
Level of Service		C	C		D	C		A	A		B	
Approach Delay (s)		26.5			41.3			7.8			11.0	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1387	553	271	605	0	0	0	0	400	21	920
Future Volume (vph)	0	1387	553	271	605	0	0	0	0	400	21	920
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	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)		4748	1362	3433	3539						1778	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4748	1362	3433	3539						1778	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1387	553	271	605	0	0	0	0	400	21	920
RTOR Reduction (vph)	0	8	134	0	0	0	0	0	0	0	0	15
Lane Group Flow (vph)	0	1501	297	271	605	0	0	0	0	0	421	905
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		40.9	40.9	23.1	23.1						35.1	80.5
Effective Green, g (s)		40.9	40.9	23.1	23.1						35.1	80.5
Actuated g/C Ratio		0.36	0.36	0.21	0.21						0.31	0.71
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1724	494	704	726						554	2580
v/s Ratio Prot		c0.32		0.08	c0.17						c0.24	0.25
v/s Ratio Perm			0.22									
v/c Ratio		0.87	0.60	0.38	0.83						0.76	0.35
Uniform Delay, d1		33.4	29.2	38.6	42.9						34.9	6.1
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		6.3	5.3	0.4	8.1						5.9	0.1
Delay (s)		39.7	34.5	39.0	51.0						40.9	6.2
Level of Service		D	C	D	D						D	A
Approach Delay (s)		38.6			47.3			0.0			17.1	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	112.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	648	844	0	444	796	94
Future Volume (veh/h)	648	844	0	444	796	94
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	648	0	0	444	796	61
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1411	631	0	1411	1390	639
Arrive On Green	0.40	0.00	0.00	0.40	0.40	0.40
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	648	0	0	444	796	61
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	4.1	0.0	0.0	2.6	5.4	0.7
Cycle Q Clear(g_c), s	4.1	0.0	0.0	2.6	5.4	0.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1411	631	0	1411	1390	639
V/C Ratio(X)	0.46	0.00	0.00	0.31	0.57	0.10
Avail Cap(c_a), veh/h	3380	1512	0	3380	3400	1564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.7	0.0	0.0	6.3	7.0	5.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.3	2.6	0.3
LnGrp Delay(d),s/veh	7.0	0.0	0.0	6.4	7.4	5.7
LnGrp LOS	A			A	A	A
Approach Vol, veh/h	648			444	857	
Approach Delay, s/veh	7.0			6.4	7.3	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		15.3		15.1				15.1
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		28.5		27.5				27.5
Max Q Clear Time (g_c+I1), s		7.4		6.1				4.6
Green Ext Time (p_c), s		3.3		4.5				3.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1184	1187	66	406	912
Future Volume (veh/h)	0	1184	1187	66	406	912
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1184	1187	0	406	896
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2303	2303	0	754	1347
Arrive On Green	0.00	0.45	0.45	0.00	0.43	0.43
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1184	1187	0	406	896
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	8.2	8.2	0.0	8.4	11.2
Cycle Q Clear(g_c), s	0.0	8.2	8.2	0.0	8.4	11.2
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2303	2303	0	754	1347
V/C Ratio(X)	0.00	0.51	0.52	0.00	0.54	0.67
Avail Cap(c_a), veh/h	0	4543	4543	0	2341	4180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.6	9.6	0.0	10.5	11.3
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	3.8	0.0	4.2	5.0
LnGrp Delay(d),s/veh	0.0	9.8	9.8	0.0	11.1	11.9
LnGrp LOS		A	A		B	B
Approach Vol, veh/h		1184	1187		1302	
Approach Delay, s/veh		9.8	9.8		11.7	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				25.3		23.9		25.3
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				42.5		63.5		42.5
Max Q Clear Time (g_c+I1), s				10.2		13.2		10.2
Green Ext Time (p_c), s				10.6		6.3		10.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	1051	354	314	1552	317	456	86	528	569	99	372
Future Volume (veh/h)	189	1051	354	314	1552	317	456	86	528	569	99	372
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	189	1051	193	314	1552	66	456	86	314	569	99	345
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	1314	409	771	1770	551	560	303	612	864	467	397
Arrive On Green	0.13	0.26	0.26	0.22	0.35	0.35	0.16	0.16	0.16	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	189	1051	193	314	1552	66	456	86	314	569	99	345
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	11.9	22.2	11.8	9.0	32.9	3.3	14.7	4.7	0.0	17.1	4.8	24.0
Cycle Q Clear(g_c), s	11.9	22.2	11.8	9.0	32.9	3.3	14.7	4.7	0.0	17.1	4.8	24.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	1314	409	771	1770	551	560	303	612	864	467	397
V/C Ratio(X)	0.79	0.80	0.47	0.41	0.88	0.12	0.81	0.28	0.51	0.66	0.21	0.87
Avail Cap(c_a), veh/h	262	1427	444	771	1812	564	580	314	621	915	495	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	39.9	36.0	38.1	35.2	25.5	46.5	42.3	27.0	38.7	34.1	41.3
Incr Delay (d2), s/veh	14.3	3.1	0.8	0.3	5.1	0.1	8.5	0.5	0.7	1.6	0.2	16.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	10.8	5.3	4.3	16.2	1.4	7.6	2.5	7.7	8.3	2.5	12.3
LnGrp Delay(d),s/veh	62.5	43.0	36.9	38.5	40.3	25.6	55.0	42.8	27.7	40.3	34.3	58.0
LnGrp LOS	E	D	D	D	D	C	E	D	C	D	C	E
Approach Vol, veh/h		1433			1932			856			1013	
Approach Delay, s/veh		44.8			39.5			43.8			45.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		31.9	28.8	32.7		21.7	18.4	43.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.1	24.2	30.8		17.9	15.5	39.5
Max Q Clear Time (g_c+I1), s		26.0	11.0	24.2		16.7	13.9	34.9
Green Ext Time (p_c), s		1.4	0.9	4.0		0.5	0.1	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	339	36	604	666	1193	58	690	729	784	803	66
Future Volume (veh/h)	132	339	36	604	666	1193	58	690	729	784	803	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	132	339	36	604	666	1109	58	690	685	784	803	66
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	864	91	666	1099	825	74	1214	575	830	2094	171
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.04	0.24	0.24	0.24	0.44	0.44
Sat Flow, veh/h	1774	3189	335	5003	3539	1429	1774	5085	1527	3442	4781	391
Grp Volume(v), veh/h	132	186	189	604	666	1109	58	690	685	784	568	301
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1668	1770	1429	1774	1695	1527	1721	1695	1782
Q Serve(g_s), s	11.3	13.3	13.6	18.4	24.8	48.1	5.0	18.5	37.0	34.7	17.5	17.7
Cycle Q Clear(g_c), s	11.3	13.3	13.6	18.4	24.8	48.1	5.0	18.5	37.0	34.7	17.5	17.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	166	480	475	666	1099	825	74	1214	575	830	1485	781
V/C Ratio(X)	0.80	0.39	0.40	0.91	0.61	1.34	0.78	0.57	1.19	0.94	0.38	0.39
Avail Cap(c_a), veh/h	203	480	475	666	1099	825	121	1214	575	855	1485	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.47	0.47	0.47	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	46.0	46.2	66.2	45.4	35.8	73.6	52.0	48.9	57.8	29.4	29.4
Incr Delay (d2), s/veh	16.3	2.4	2.5	8.7	1.2	158.5	11.7	1.3	97.7	18.5	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	6.8	6.9	9.0	12.3	71.5	2.7	8.8	40.3	18.7	8.4	9.0
LnGrp Delay(d),s/veh	85.1	48.4	48.6	75.0	46.6	194.3	85.3	53.3	146.6	76.3	30.1	30.9
LnGrp LOS	F	D	D	E	D	F	F	D	F	E	C	C
Approach Vol, veh/h		507			2379			1433			1653	
Approach Delay, s/veh		58.0			122.7			99.2			52.2	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.9	41.5	25.1	46.5	11.0	72.4	19.0	52.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	37.0	19.5	42.0	10.6	64.9	17.7	43.8
Max Q Clear Time (g_c+I1), s	36.7	39.0	20.4	15.6	7.0	19.7	13.3	50.1
Green Ext Time (p_c), s	0.7	0.0	0.0	2.3	0.0	7.0	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	92.0
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	0	201	10	12	3	137	261	1	0	120	159
Future Vol, veh/h	90	0	201	10	12	3	137	261	1	0	120	159
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	0	201	10	12	3	137	261	1	0	120	159

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	743	736	200	836	815	262	279	0	0	262	0	0
Stage 1	200	200	-	536	536	-	-	-	-	-	-	-
Stage 2	543	536	-	300	279	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	331	346	841	287	312	777	1284	-	-	1302	-	-
Stage 1	802	736	-	529	523	-	-	-	-	-	-	-
Stage 2	524	523	-	709	680	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	293	309	841	201	279	777	1284	-	-	1302	-	-
Mov Cap-2 Maneuver	293	309	-	201	279	-	-	-	-	-	-	-
Stage 1	716	736	-	472	467	-	-	-	-	-	-	-
Stage 2	454	467	-	540	680	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	20.4	2.8	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1284	-	-	293	841	259	1302	-	-
HCM Lane V/C Ratio	0.107	-	-	0.307	0.239	0.097	-	-	-
HCM Control Delay (s)	8.1	-	-	22.6	10.6	20.4	0	-	-
HCM Lane LOS	A	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1.3	0.9	0.3	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	90	73	52	100	266	76	886	51	268	1164	239
Future Volume (veh/h)	263	90	73	52	100	266	76	886	51	268	1164	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	263	90	73	52	100	266	76	886	51	268	1164	239
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	178	145	236	489	321	108	1305	406	321	1916	597
Arrive On Green	0.19	0.19	0.18	0.20	0.20	0.20	0.06	0.26	0.26	0.18	0.38	0.38
Sat Flow, veh/h	1774	953	773	1163	2412	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	263	0	163	81	71	266	76	886	51	268	1164	239
Grp Sat Flow(s),veh/h/ln	1774	0	1726	1805	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	13.1	0.0	7.9	3.5	3.1	14.9	3.9	14.5	2.3	13.5	17.1	10.3
Cycle Q Clear(g_c), s	13.1	0.0	7.9	3.5	3.1	14.9	3.9	14.5	2.3	13.5	17.1	10.3
Prop In Lane	1.00		0.45	0.64		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	0	323	366	359	321	108	1305	406	321	1916	597
V/C Ratio(X)	0.79	0.00	0.50	0.22	0.20	0.83	0.71	0.68	0.13	0.84	0.61	0.40
Avail Cap(c_a), veh/h	728	0	708	555	544	487	268	2168	675	728	3485	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	33.9	30.8	30.7	35.4	42.7	31.0	26.4	36.6	23.3	21.2
Incr Delay (d2), s/veh	4.3	0.0	1.2	0.3	0.3	7.2	8.1	0.6	0.1	5.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	3.9	1.8	1.5	7.1	2.1	6.9	1.0	7.1	8.0	4.5
LnGrp Delay(d),s/veh	40.2	0.0	35.1	31.1	31.0	42.6	50.8	31.6	26.6	42.3	23.6	21.6
LnGrp LOS	D		D	C	C	D	D	C	C	D	C	C
Approach Vol, veh/h		426			418			1013			1671	
Approach Delay, s/veh		38.3			38.4			32.8			26.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.8	27.8		21.3	9.6	38.9		22.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	39.0		37.5	13.5	63.0		28.0
Max Q Clear Time (g_c+I1), s	15.5	16.5		15.1	5.9	19.1		16.9
Green Ext Time (p_c), s	0.8	6.8		1.7	0.1	12.6		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	0	211	3	4	1	198	327	0	0	200	131
Future Vol, veh/h	71	0	211	3	4	1	198	327	0	0	200	131
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	0	211	3	4	1	198	327	0	0	200	131

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	992	989	266	1094	1054	327	331	0	0	327	0	0
Stage 1	266	266	-	723	723	-	-	-	-	-	-	-
Stage 2	726	723	-	371	331	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	225	247	773	191	226	714	1228	-	-	1233	-	-
Stage 1	739	689	-	417	431	-	-	-	-	-	-	-
Stage 2	416	431	-	649	645	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	194	207	773	122	190	714	1228	-	-	1233	-	-
Mov Cap-2 Maneuver	194	207	-	122	190	-	-	-	-	-	-	-
Stage 1	620	689	-	350	362	-	-	-	-	-	-	-
Stage 2	345	362	-	472	645	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.1	27.2	3.2	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1228	-	-	194	773	170	1233	-	-
HCM Lane V/C Ratio	0.161	-	-	0.366	0.273	0.047	-	-	-
HCM Control Delay (s)	8.5	-	-	33.9	11.4	27.2	0	-	-
HCM Lane LOS	A	-	-	D	B	D	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	1.6	1.1	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	168	233	42	239	58	236	740	40	74	814	206
Future Volume (veh/h)	296	168	233	42	239	58	236	740	40	74	814	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	232	257	233	42	239	58	236	740	26	74	814	206
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	431	366	70	413	104	317	1922	598	130	1386	818
Arrive On Green	0.23	0.23	0.22	0.15	0.16	0.14	0.18	0.38	0.38	0.07	0.27	0.28
Sat Flow, veh/h	1774	1863	1583	430	2523	638	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	232	257	233	180	0	159	236	740	26	74	814	206
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1841	0	1750	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.0	9.6	10.4	7.1	0.0	6.5	9.8	8.3	0.8	3.1	10.8	5.6
Cycle Q Clear(g_c), s	9.0	9.6	10.4	7.1	0.0	6.5	9.8	8.3	0.8	3.1	10.8	5.6
Prop In Lane	1.00		1.00	0.23		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	431	366	301	0	286	317	1922	598	130	1386	818
V/C Ratio(X)	0.57	0.60	0.64	0.60	0.00	0.56	0.75	0.39	0.04	0.57	0.59	0.25
Avail Cap(c_a), veh/h	910	955	812	909	0	864	910	4010	1249	478	2771	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	26.7	27.2	30.3	0.0	30.3	30.4	17.7	15.3	35.0	24.6	10.5
Incr Delay (d2), s/veh	1.2	1.3	1.8	1.9	0.0	1.7	3.5	0.1	0.0	3.9	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	5.1	4.7	3.8	0.0	3.3	5.1	3.9	0.4	1.7	5.1	3.7
LnGrp Delay(d),s/veh	27.7	28.0	29.1	32.2	0.0	31.9	33.8	17.8	15.4	38.9	25.0	10.6
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		722			339			1002			1094	
Approach Delay, s/veh		28.3			32.1			21.5			23.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.7	32.5		21.0	16.9	24.3		15.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	19.5	60.0		38.5	38.5	41.0		37.0
Max Q Clear Time (g_c+I1), s	5.1	10.3		12.4	11.8	12.8		9.1
Green Ext Time (p_c), s	0.1	6.0		4.2	0.7	6.9		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	356	66	358	566	633	126	380	441	395	396	55
Future Volume (veh/h)	15	356	66	358	566	633	126	380	441	395	396	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	15	356	66	358	566	633	126	380	0	395	396	55
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	358	66	649	681	579	122	1034	463	450	567	79
Arrive On Green	0.12	0.12	0.12	0.37	0.37	0.37	0.07	0.29	0.00	0.13	0.35	0.35
Sat Flow, veh/h	1774	2987	548	1774	1863	1583	1774	3539	1583	3442	1601	222
Grp Volume(v), veh/h	15	209	213	358	566	633	126	380	0	395	0	451
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1863	1583	1774	1770	1583	1721	0	1824
Q Serve(g_s), s	1.3	20.7	21.0	28.1	48.4	64.0	12.0	14.9	0.0	19.7	0.0	37.1
Cycle Q Clear(g_c), s	1.3	20.7	21.0	28.1	48.4	64.0	12.0	14.9	0.0	19.7	0.0	37.1
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	213	212	212	649	681	579	122	1034	463	450	0	646
V/C Ratio(X)	0.07	0.99	1.00	0.55	0.83	1.09	1.04	0.37	0.00	0.88	0.00	0.70
Avail Cap(c_a), veh/h	213	212	212	649	681	579	122	1034	463	531	0	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	68.3	76.9	77.1	44.1	50.6	55.5	81.5	49.1	0.0	74.7	0.0	48.5
Incr Delay (d2), s/veh	0.1	57.7	62.6	1.0	8.6	65.3	91.5	1.0	0.0	13.8	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	13.5	13.9	13.9	26.6	38.5	9.0	7.4	0.0	10.2	0.0	19.8
LnGrp Delay(d),s/veh	68.5	134.5	139.7	45.1	59.1	120.8	173.5	50.1	0.0	88.5	0.0	54.7
LnGrp LOS	E	F	F	D	E	F	F	D		F		D
Approach Vol, veh/h		437			1557			506			846	
Approach Delay, s/veh		134.8			81.0			80.8			70.4	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.9	55.1		25.0	16.0	66.0		68.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	21.7	16.9		23.0	14.0	39.1		66.0
Green Ext Time (p_c), s	0.7	2.7		0.0	0.0	2.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	85.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	944	70	603	1234	158	51	69	260	343	243	230
Future Volume (veh/h)	185	944	70	603	1234	158	51	69	260	343	243	230
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	185	944	70	603	1234	0	51	69	-17	343	243	161
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	300	1425	105	775	2201	685	118	124	105	676	366	311
Arrive On Green	0.09	0.29	0.29	0.23	0.43	0.00	0.07	0.07	0.00	0.20	0.20	0.20
Sat Flow, veh/h	3442	4832	358	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	185	662	352	603	1234	0	51	69	-17	343	243	161
Grp Sat Flow(s),veh/h/ln	1721	1695	1800	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.8	12.6	12.7	12.1	13.4	0.0	2.0	2.6	0.0	6.6	8.9	6.7
Cycle Q Clear(g_c), s	3.8	12.6	12.7	12.1	13.4	0.0	2.0	2.6	0.0	6.6	8.9	6.7
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	300	999	531	775	2201	685	118	124	105	676	366	311
V/C Ratio(X)	0.62	0.66	0.66	0.78	0.56	0.00	0.43	0.56	-0.16	0.51	0.66	0.52
Avail Cap(c_a), veh/h	514	1519	806	1309	3453	1075	458	481	409	1355	734	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	22.8	22.8	26.8	15.6	0.0	33.0	33.3	0.0	26.4	27.3	26.5
Incr Delay (d2), s/veh	2.1	0.8	1.4	1.7	0.2	0.0	2.5	3.9	0.0	0.6	2.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.0	6.5	6.0	6.2	0.0	1.1	1.5	0.0	3.2	4.7	3.0
LnGrp Delay(d),s/veh	34.5	23.5	24.3	28.5	15.9	0.0	35.5	37.2	0.0	27.0	29.4	27.8
LnGrp LOS	C	C	C	C	B		D	D		C	C	C
Approach Vol, veh/h		1199			1837			103			747	
Approach Delay, s/veh		25.4			20.0			42.5			28.0	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		18.5	20.6	25.7		8.9	10.4	35.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	27.5	32.5		18.5	10.5	49.5
Max Q Clear Time (g_c+I1), s		10.9	14.1	14.7		4.6	5.8	15.4
Green Ext Time (p_c), s		3.1	2.0	6.6		0.3	0.2	11.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	938	266	14	3	245	165	12	12	6	173	8	1216
Future Volume (veh/h)	938	266	14	3	245	165	12	12	6	173	8	1216
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1020	289	15	3	245	165	12	12	6	179	0	1216
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1167	1036	881	20	835	374	54	56	29	531	0	1572
Arrive On Green	0.34	0.56	0.56	0.01	0.24	0.24	0.04	0.04	0.03	0.15	0.00	0.16
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1369	1430	729	3548	0	3167
Grp Volume(v), veh/h	1020	289	15	3	245	165	16	0	14	179	0	1216
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1794	0	1734	1774	0	1583
Q Serve(g_s), s	18.9	5.5	0.3	0.1	3.9	6.0	0.6	0.0	0.5	3.1	0.0	0.0
Cycle Q Clear(g_c), s	18.9	5.5	0.3	0.1	3.9	6.0	0.6	0.0	0.5	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.76		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	1167	1036	881	20	835	374	70	0	68	531	0	1572
V/C Ratio(X)	0.87	0.28	0.02	0.15	0.29	0.44	0.22	0.00	0.21	0.34	0.00	0.77
Avail Cap(c_a), veh/h	1167	1036	881	144	835	374	489	0	473	863	0	1868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	7.9	6.7	33.2	21.3	22.1	31.6	0.0	31.7	25.8	0.0	14.0
Incr Delay (d2), s/veh	9.2	0.7	0.0	3.3	0.9	3.8	1.6	0.0	1.5	0.4	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	3.0	0.1	0.1	2.0	3.0	0.3	0.0	0.3	1.5	0.0	9.5
LnGrp Delay(d),s/veh	30.2	8.6	6.8	36.5	22.2	25.9	33.2	0.0	33.2	26.2	0.0	15.7
LnGrp LOS	C	A	A	D	C	C	C		C	C		B
Approach Vol, veh/h		1324			413			30			1395	
Approach Delay, s/veh		25.2			23.7			33.2			17.1	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		6.7	4.8	42.2		14.2	27.0	20.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.5	22.5	16.0
Max Q Clear Time (g_c+I1), s		2.6	2.1	7.5		5.1	20.9	8.0
Green Ext Time (p_c), s		0.1	0.0	1.8		5.1	0.8	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	13	534	20	13	8	796	282	21	11	834	227
Future Volume (veh/h)	219	13	534	20	13	8	796	282	21	11	834	227
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	276	0	114	20	13	8	796	282	21	11	834	227
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	450	0	201	41	26	16	974	1884	139	38	1069	478
Arrive On Green	0.13	0.00	0.13	0.05	0.05	0.04	0.28	0.56	0.56	0.02	0.30	0.30
Sat Flow, veh/h	3548	0	1583	858	558	343	3442	3341	247	1774	3539	1583
Grp Volume(v), veh/h	276	0	114	41	0	0	796	149	154	11	834	227
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1759	0	0	1721	1770	1819	1774	1770	1583
Q Serve(g_s), s	4.9	0.0	4.5	1.5	0.0	0.0	14.3	2.7	2.7	0.4	14.3	7.8
Cycle Q Clear(g_c), s	4.9	0.0	4.5	1.5	0.0	0.0	14.3	2.7	2.7	0.4	14.3	7.8
Prop In Lane	1.00		1.00	0.49		0.20	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	450	0	201	83	0	0	974	998	1026	38	1069	478
V/C Ratio(X)	0.61	0.00	0.57	0.49	0.00	0.00	0.82	0.15	0.15	0.29	0.78	0.47
Avail Cap(c_a), veh/h	987	0	440	489	0	0	1242	1104	1135	147	1224	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	0.0	27.3	30.9	0.0	0.0	22.2	6.9	6.9	32.1	21.2	18.9
Incr Delay (d2), s/veh	1.4	0.0	2.5	4.4	0.0	0.0	3.5	0.1	0.1	4.2	2.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	2.1	0.8	0.0	0.0	7.2	1.3	1.4	0.2	7.4	3.5
LnGrp Delay(d),s/veh	28.8	0.0	29.8	35.4	0.0	0.0	25.7	7.0	7.0	36.2	24.1	19.6
LnGrp LOS	C		C	D			C	A	A	D	C	B
Approach Vol, veh/h		390			41			1099			1072	
Approach Delay, s/veh		29.1			35.4			20.5			23.3	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	41.5		7.2	22.8	24.1		12.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	41.0		18.0	23.5	22.5		18.0
Max Q Clear Time (g_c+I1), s	2.4	4.7		3.5	16.3	16.3		6.9
Green Ext Time (p_c), s	0.0	1.9		0.1	2.0	3.3		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	117	34	154	80	67	2	972	174	119	828	33
Future Volume (vph)	16	117	34	154	80	67	2	972	174	119	828	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1852	1583		1803	1583		3539	1583		3500	
Flt Permitted		0.96	1.00		0.68	1.00		0.95	1.00		0.69	
Satd. Flow (perm)		1780	1583		1257	1583		3376	1583		2414	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	16	117	34	154	80	67	2	972	174	119	828	33
RTOR Reduction (vph)	0	0	24	0	0	46	0	0	62	0	3	0
Lane Group Flow (vph)	0	133	10	0	234	21	0	974	112	0	977	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		514	457		363	457		2175	1020		1555	
v/s Ratio Prot												
v/s Ratio Perm		0.07	0.01		c0.19	0.01		0.29	0.07		c0.40	
v/c Ratio		0.26	0.02		0.64	0.05		0.45	0.11		0.63	
Uniform Delay, d1		24.6	22.9		28.0	23.1		8.0	6.1		9.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.2	0.1		8.5	0.2		0.7	0.2		1.9	
Delay (s)		25.8	23.0		36.5	23.3		8.7	6.3		11.5	
Level of Service		C	C		D	C		A	A		B	
Approach Delay (s)		25.2			33.6			8.3			11.5	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	997	653	595	837	0	0	0	0	212	1	1080
Future Volume (vph)	0	997	653	595	837	0	0	0	0	212	1	1080
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
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	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)		4647	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4647	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	997	653	595	837	0	0	0	0	212	1	1080
RTOR Reduction (vph)	0	53	240	0	0	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	1225	132	595	837	0	0	0	0	0	213	1058
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		31.5	31.5	26.5	26.5						18.5	54.5
Effective Green, g (s)		32.0	32.0	27.0	27.0						19.0	55.0
Actuated g/C Ratio		0.36	0.36	0.30	0.30						0.21	0.61
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1652	484	1029	1061						374	2206
v/s Ratio Prot		c0.26		0.17	c0.24						c0.12	0.29
v/s Ratio Perm			0.10									
v/c Ratio		0.74	0.27	0.58	0.79						0.57	0.48
Uniform Delay, d1		25.4	20.7	26.7	28.9						31.8	9.6
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.8	0.3	0.8	6.0						6.2	0.2
Delay (s)		27.2	21.0	27.5	34.9						38.0	9.8
Level of Service		C	C	C	C						D	A
Approach Delay (s)		25.8			31.8			0.0			14.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1115	0	0	205	990	69
Future Volume (veh/h)	1115	0	0	205	990	69
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	1115	0	0	205	990	36
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1672	748	0	1672	1371	631
Arrive On Green	0.47	0.00	0.00	0.47	0.40	0.40
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	1115	0	0	205	990	36
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	11.3	0.0	0.0	1.5	11.3	0.6
Cycle Q Clear(g_c), s	11.3	0.0	0.0	1.5	11.3	0.6
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1672	748	0	1672	1371	631
V/C Ratio(X)	0.67	0.00	0.00	0.12	0.72	0.06
Avail Cap(c_a), veh/h	2287	1023	0	2287	2150	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	0.0	0.0	6.9	11.8	8.6
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.0	0.7	5.4	0.3
LnGrp Delay(d),s/veh	9.9	0.0	0.0	6.9	12.5	8.6
LnGrp LOS	A			A	B	A
Approach Vol, veh/h	1115			205	1026	
Approach Delay, s/veh	9.9			6.9	12.4	
Approach LOS	A			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		21.5		24.9				24.9
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		27.5		28.5				28.5
Max Q Clear Time (g_c+I1), s		13.3		13.3				3.5
Green Ext Time (p_c), s		3.7		7.2				1.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1263	1183	0	677	1069
Future Volume (veh/h)	0	1263	1183	0	677	1069
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1263	1183	0	577	1160
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2086	2086	0	881	1573
Arrive On Green	0.00	0.41	0.41	0.00	0.50	0.50
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1263	1183	0	577	1160
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	12.6	11.5	0.0	15.6	18.8
Cycle Q Clear(g_c), s	0.0	12.6	11.5	0.0	15.6	18.8
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2086	2086	0	881	1573
V/C Ratio(X)	0.00	0.61	0.57	0.00	0.65	0.74
Avail Cap(c_a), veh/h	0	3233	3233	0	1870	3339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.9	14.6	0.0	12.1	12.9
Incr Delay (d2), s/veh	0.0	0.3	0.2	0.0	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	5.4	0.0	7.7	8.2
LnGrp Delay(d),s/veh	0.0	15.2	14.9	0.0	12.9	13.6
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1263	1183		1737	
Approach Delay, s/veh		15.2	14.9		13.4	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				29.5		35.0		29.5
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				39.5		66.5		39.5
Max Q Clear Time (g_c+I1), s				14.6		20.8		13.5
Green Ext Time (p_c), s				10.4		9.8		9.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	1435	352	414	1012	662	180	173	282	245	47	141
Future Volume (veh/h)	556	1435	352	414	1012	662	180	173	282	245	47	141
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	556	1435	191	414	1012	411	180	173	68	245	47	114
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	582	1977	615	918	1664	518	353	191	585	410	222	188
Arrive On Green	0.33	0.39	0.39	0.27	0.33	0.33	0.10	0.10	0.10	0.12	0.12	0.12
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	556	1435	191	414	1012	411	180	173	68	245	47	114
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	29.9	23.4	8.2	9.8	16.3	23.0	4.8	9.0	0.0	6.6	2.2	6.7
Cycle Q Clear(g_c), s	29.9	23.4	8.2	9.8	16.3	23.0	4.8	9.0	0.0	6.6	2.2	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	582	1977	615	918	1664	518	353	191	585	410	222	188
V/C Ratio(X)	0.96	0.73	0.31	0.45	0.61	0.79	0.51	0.91	0.12	0.60	0.21	0.61
Avail Cap(c_a), veh/h	582	2388	744	918	1851	576	353	191	585	1076	583	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	25.4	20.7	29.8	27.6	29.8	41.4	43.3	20.3	40.7	38.8	40.8
Incr Delay (d2), s/veh	26.5	0.9	0.3	0.3	0.5	6.8	1.2	39.8	0.1	1.4	0.5	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	11.1	3.6	4.7	7.7	11.0	2.4	6.7	1.2	3.2	1.2	3.1
LnGrp Delay(d),s/veh	58.5	26.3	21.0	30.1	28.0	36.6	42.7	83.1	20.4	42.1	39.3	43.9
LnGrp LOS	E	C	C	C	C	D	D	F	C	D	D	D
Approach Vol, veh/h		2182			1837			421			406	
Approach Delay, s/veh		34.0			30.4			55.7			42.3	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		14.6	29.0	40.9		13.0	35.0	34.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.0	20.2	44.3		8.5	30.5	34.0
Max Q Clear Time (g_c+I1), s		8.7	11.8	25.4		11.0	31.9	25.0
Green Ext Time (p_c), s		1.4	1.0	11.0		0.0	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	663	45	472	313	900	31	458	833	913	823	40
Future Volume (veh/h)	115	663	45	472	313	900	31	458	833	913	823	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	115	663	45	472	313	816	31	458	789	913	823	40
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	940	64	833	1123	766	42	1214	628	677	2043	99
Arrive On Green	0.13	0.28	0.28	0.17	0.32	0.32	0.02	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3334	226	5003	3539	1432	1774	5085	1527	3442	4963	240
Grp Volume(v), veh/h	115	351	357	472	313	816	31	458	789	913	561	302
Grp Sat Flow(s),veh/h/ln	1774	1770	1791	1668	1770	1432	1774	1695	1527	1721	1695	1813
Q Serve(g_s), s	9.3	27.6	27.7	13.5	10.3	49.2	2.7	11.7	37.0	30.5	18.1	18.2
Cycle Q Clear(g_c), s	9.3	27.6	27.7	13.5	10.3	49.2	2.7	11.7	37.0	30.5	18.1	18.2
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	232	499	505	833	1123	766	42	1214	628	677	1396	746
V/C Ratio(X)	0.49	0.70	0.71	0.57	0.28	1.07	0.74	0.38	1.26	1.35	0.40	0.40
Avail Cap(c_a), veh/h	232	499	505	888	1123	766	80	1214	628	677	1396	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.79	0.79	0.79	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	49.9	49.9	59.5	39.6	38.6	75.2	49.4	46.4	62.2	32.1	32.2
Incr Delay (d2), s/veh	1.6	8.1	8.1	0.6	0.5	47.9	16.4	0.7	124.8	166.4	0.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	14.6	14.8	6.3	5.1	42.8	1.5	5.5	48.7	30.1	8.7	9.5
LnGrp Delay(d),s/veh	64.2	58.0	58.0	60.0	40.1	86.5	91.6	50.0	171.1	228.6	33.0	33.8
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	C
Approach Vol, veh/h		823			1601			1278			1776	
Approach Delay, s/veh		58.8			69.6			125.8			133.7	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	30.3	48.2	8.2	68.3	24.8	53.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.5	37.0	27.5	42.0	7.0	60.5	20.3	49.2
Max Q Clear Time (g_c+I1), s	32.5	39.0	15.5	29.7	4.7	20.2	11.3	51.2
Green Ext Time (p_c), s	0.0	0.0	1.5	3.6	0.0	6.8	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	101.9
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	93	4	276	5	6	1	80	198	7	2	137	87
Future Vol, veh/h	93	4	276	5	6	1	80	198	7	2	137	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	4	276	5	6	1	80	198	7	2	137	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	550	550	181	687	590	202	224	0	0	205	0	0
Stage 1	185	185	-	362	362	-	-	-	-	-	-	-
Stage 2	365	365	-	325	228	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	446	443	862	361	420	839	1345	-	-	1366	-	-
Stage 1	817	747	-	657	625	-	-	-	-	-	-	-
Stage 2	654	623	-	687	715	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	420	416	862	232	394	839	1345	-	-	1366	-	-
Mov Cap-2 Maneuver	420	416	-	232	394	-	-	-	-	-	-	-
Stage 1	769	746	-	618	588	-	-	-	-	-	-	-
Stage 2	608	586	-	464	714	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	16.8	2.2	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1345	-	-	420	849	316	1366	-	-
HCM Lane V/C Ratio	0.059	-	-	0.221	0.33	0.038	0.001	-	-
HCM Control Delay (s)	7.8	-	-	16	11.3	16.8	7.6	0	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.8	1.4	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	128	47	21	73	159	42	873	36	259	952	339
Future Volume (veh/h)	292	128	47	21	73	159	42	873	36	259	952	339
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	292	128	47	21	73	159	42	873	36	259	952	339
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	268	98	99	369	206	67	1359	423	310	2056	640
Arrive On Green	0.21	0.21	0.21	0.13	0.13	0.13	0.04	0.27	0.27	0.17	0.40	0.40
Sat Flow, veh/h	1774	1301	478	763	2831	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	292	0	175	50	44	159	42	873	36	259	952	339
Grp Sat Flow(s),veh/h/ln	1774	0	1778	1825	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	12.7	0.0	7.0	2.0	1.8	7.9	1.9	12.3	1.4	11.4	11.1	13.2
Cycle Q Clear(g_c), s	12.7	0.0	7.0	2.0	1.8	7.9	1.9	12.3	1.4	11.4	11.1	13.2
Prop In Lane	1.00		0.27	0.42		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	0	366	238	230	206	67	1359	423	310	2056	640
V/C Ratio(X)	0.80	0.00	0.48	0.21	0.19	0.77	0.63	0.64	0.09	0.84	0.46	0.53
Avail Cap(c_a), veh/h	1105	0	1108	461	447	400	252	2979	927	930	4923	1533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	0.0	28.4	31.5	31.5	34.1	38.5	26.3	22.3	32.3	17.7	18.3
Incr Delay (d2), s/veh	4.1	0.0	1.0	0.4	0.4	6.0	9.3	0.5	0.1	5.9	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	3.5	1.0	0.9	3.8	1.1	5.8	0.6	6.1	5.2	5.9
LnGrp Delay(d),s/veh	34.7	0.0	29.3	32.0	31.8	40.1	47.7	26.8	22.4	38.2	17.9	19.0
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	B
Approach Vol, veh/h		467			253			951			1550	
Approach Delay, s/veh		32.7			37.1			27.5			21.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.7	26.2		21.2	7.6	37.3		15.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	42.5	47.5		50.5	11.5	78.5		20.5
Max Q Clear Time (g_c+I1), s	13.4	14.3		14.7	3.9	15.2		9.9
Green Ext Time (p_c), s	0.8	7.4		2.0	0.0	10.8		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	1	347	2	2	0	132	215	2	1	326	92
Future Vol, veh/h	70	1	347	2	2	0	132	215	2	1	326	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	1	347	2	2	0	132	215	2	1	326	92

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	855	855	372	1028	900	216	418	0	0	217	0	0
Stage 1	374	374	-	480	480	-	-	-	-	-	-	-
Stage 2	481	481	-	548	420	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	278	296	674	212	278	824	1141	-	-	1353	-	-
Stage 1	647	618	-	567	554	-	-	-	-	-	-	-
Stage 2	566	554	-	521	589	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	252	261	674	93	245	824	1141	-	-	1353	-	-
Mov Cap-2 Maneuver	252	261	-	93	245	-	-	-	-	-	-	-
Stage 1	572	617	-	501	490	-	-	-	-	-	-	-
Stage 2	498	490	-	252	588	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.4	32.5	3.2	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	252	674	135	1353	-	-
HCM Lane V/C Ratio	0.116	-	-	0.282	0.515	0.03	0.001	-	-
HCM Control Delay (s)	8.6	-	-	24.8	15.9	32.5	7.7	0	-
HCM Lane LOS	A	-	-	C	C	D	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	1.1	3	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	213	222	26	172	42	263	543	64	141	650	218
Future Volume (veh/h)	220	213	222	26	172	42	263	543	64	141	650	218
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	218	215	222	26	172	42	263	543	64	141	650	218
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	438	372	52	355	90	358	1631	508	220	1234	685
Arrive On Green	0.24	0.24	0.24	0.12	0.14	0.12	0.20	0.32	0.32	0.12	0.24	0.22
Sat Flow, veh/h	1774	1863	1583	377	2565	650	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	218	215	222	127	0	113	263	543	64	141	650	218
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1844	0	1748	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	7.1	6.6	8.2	4.2	0.0	4.0	9.2	5.4	1.9	5.0	7.3	6.0
Cycle Q Clear(g_c), s	7.1	6.6	8.2	4.2	0.0	4.0	9.2	5.4	1.9	5.0	7.3	6.0
Prop In Lane	1.00		1.00	0.20		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	438	372	256	0	242	358	1631	508	220	1234	685
V/C Ratio(X)	0.52	0.49	0.60	0.50	0.00	0.47	0.73	0.33	0.13	0.64	0.53	0.32
Avail Cap(c_a), veh/h	1154	1211	1030	1115	0	1057	1207	4537	1413	510	2538	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	21.9	22.5	26.5	0.0	26.5	24.7	17.1	15.9	27.6	21.7	12.3
Incr Delay (d2), s/veh	1.0	0.9	1.5	1.5	0.0	1.4	2.9	0.1	0.1	3.1	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.5	3.7	2.3	0.0	2.0	4.7	2.5	0.8	2.6	3.5	3.6
LnGrp Delay(d),s/veh	23.1	22.7	24.0	28.0	0.0	27.9	27.6	17.2	16.0	30.7	22.1	12.6
LnGrp LOS	C	C	C	C		C	C	B	B	C	C	B
Approach Vol, veh/h		655			240			870			1009	
Approach Delay, s/veh		23.3			27.9			20.3			21.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	24.2		18.6	16.4	19.0		12.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.5	57.5		41.5	43.5	31.5		38.5
Max Q Clear Time (g_c+I1), s	7.0	7.4		10.2	11.2	9.3		6.2
Green Ext Time (p_c), s	0.2	4.3		3.8	0.8	5.2		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	424	46	270	383	385	51	306	556	384	396	37
Future Volume (veh/h)	5	424	46	270	383	385	51	306	556	384	396	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	5	424	46	270	383	385	51	306	0	384	396	37
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	499	54	453	476	405	66	1150	514	451	703	66
Arrive On Green	0.15	0.15	0.15	0.26	0.26	0.26	0.04	0.32	0.00	0.13	0.42	0.42
Sat Flow, veh/h	1774	3223	348	1774	1863	1583	1774	3539	1583	3442	1678	157
Grp Volume(v), veh/h	5	232	238	270	383	385	51	306	0	384	0	433
Grp Sat Flow(s),veh/h/ln	1774	1770	1801	1774	1863	1583	1774	1770	1583	1721	0	1835
Q Serve(g_s), s	0.3	17.1	17.3	18.0	25.9	32.2	3.8	8.6	0.0	14.7	0.0	24.1
Cycle Q Clear(g_c), s	0.3	17.1	17.3	18.0	25.9	32.2	3.8	8.6	0.0	14.7	0.0	24.1
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	275	274	279	453	476	405	66	1150	514	451	0	769
V/C Ratio(X)	0.02	0.85	0.85	0.60	0.80	0.95	0.78	0.27	0.00	0.85	0.00	0.56
Avail Cap(c_a), veh/h	339	338	344	455	478	406	125	1150	514	653	0	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.2	55.3	55.3	43.9	46.9	49.2	64.2	33.5	0.0	57.1	0.0	29.7
Incr Delay (d2), s/veh	0.0	15.1	15.8	2.1	9.7	32.3	17.4	0.1	0.0	7.3	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.5	9.8	9.0	14.6	17.7	2.2	4.2	0.0	7.4	0.0	12.9
LnGrp Delay(d),s/veh	48.2	70.4	71.1	46.0	56.6	81.6	81.6	33.7	0.0	64.4	0.0	32.7
LnGrp LOS	D	E	E	D	E	F	F	C		E		C
Approach Vol, veh/h		475			1038			357			817	
Approach Delay, s/veh		70.5			63.1			40.5			47.6	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.1	48.2		25.3	9.5	60.8		38.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	25.5	40.3		25.7	9.5	56.3		34.5
Max Q Clear Time (g_c+I1), s	16.7	10.6		19.3	5.8	26.1		34.2
Green Ext Time (p_c), s	0.9	2.1		1.5	0.0	3.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	56.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	1220	46	349	895	332	137	200	471	138	108	111
Future Volume (veh/h)	220	1220	46	349	895	332	137	200	471	138	108	111
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	220	1220	46	349	895	0	137	200	194	138	108	42
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	1848	70	451	2056	640	298	313	266	330	178	152
Arrive On Green	0.09	0.37	0.37	0.13	0.40	0.00	0.17	0.17	0.17	0.10	0.10	0.10
Sat Flow, veh/h	3442	5030	190	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	220	822	444	349	895	0	137	200	194	138	108	42
Grp Sat Flow(s),veh/h/ln	1721	1695	1829	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	4.7	15.3	15.3	7.4	9.6	0.0	5.3	7.6	8.8	2.9	4.2	1.9
Cycle Q Clear(g_c), s	4.7	15.3	15.3	7.4	9.6	0.0	5.3	7.6	8.8	2.9	4.2	1.9
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	1245	672	451	2056	640	298	313	266	330	178	152
V/C Ratio(X)	0.68	0.66	0.66	0.77	0.44	0.00	0.46	0.64	0.73	0.42	0.61	0.28
Avail Cap(c_a), veh/h	751	2085	1125	615	2926	911	575	604	513	1024	554	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	20.0	20.0	31.8	16.3	0.0	28.4	29.3	29.8	32.2	32.8	31.8
Incr Delay (d2), s/veh	2.5	0.6	1.1	4.2	0.1	0.0	1.1	2.2	3.8	0.8	3.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	7.2	7.9	3.8	4.5	0.0	2.7	4.1	4.1	1.4	2.3	0.9
LnGrp Delay(d),s/veh	35.7	20.6	21.1	36.0	16.4	0.0	29.5	31.5	33.7	33.0	36.1	32.7
LnGrp LOS	D	C	C	D	B		C	C	C	C	D	C
Approach Vol, veh/h		1486			1244			531			288	
Approach Delay, s/veh		23.0			21.9			31.8			34.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		11.7	14.4	32.3		17.2	11.6	35.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		22.5	13.5	46.5		24.5	16.5	43.5
Max Q Clear Time (g_c+I1), s		6.2	9.4	17.3		10.8	6.7	11.6
Green Ext Time (p_c), s		1.0	0.5	10.5		1.9	0.5	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1267	527	22	3	95	94	13	15	11	236	14	784
Future Volume (veh/h)	1267	527	22	3	95	94	13	15	11	236	14	784
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1377	573	24	3	95	94	13	15	11	246	0	784
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1517	996	847	7	347	155	45	53	39	521	0	1860
Arrive On Green	0.44	0.53	0.53	0.00	0.10	0.10	0.04	0.04	0.04	0.15	0.00	0.15
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1146	1344	1001	3548	0	3167
Grp Volume(v), veh/h	1377	573	24	3	95	94	20	0	19	246	0	784
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1805	0	1686	1774	0	1583
Q Serve(g_s), s	23.7	13.1	0.5	0.1	1.6	3.6	0.7	0.0	0.7	4.0	0.0	0.0
Cycle Q Clear(g_c), s	23.7	13.1	0.5	0.1	1.6	3.6	0.7	0.0	0.7	4.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.63		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	1517	996	847	7	347	155	71	0	66	521	0	1860
V/C Ratio(X)	0.91	0.58	0.03	0.42	0.27	0.60	0.29	0.00	0.28	0.47	0.00	0.42
Avail Cap(c_a), veh/h	1517	996	847	140	1002	448	511	0	477	893	0	2192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	9.9	7.0	31.6	26.6	27.5	29.7	0.0	29.7	24.9	0.0	7.2
Incr Delay (d2), s/veh	9.5	2.4	0.1	34.1	0.4	3.8	2.2	0.0	2.3	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	7.4	0.2	0.1	0.8	1.7	0.4	0.0	0.4	2.0	0.0	3.6
LnGrp Delay(d),s/veh	26.1	12.4	7.1	65.7	27.0	31.2	31.9	0.0	32.0	25.5	0.0	7.3
LnGrp LOS	C	B	A	E	C	C	C		C	C		A
Approach Vol, veh/h		1974			192			39			1030	
Approach Delay, s/veh		21.9			29.7			31.9			11.7	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		7.0	4.8	38.5		13.3	32.5	10.7
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.5
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.0	20.5	18.0
Max Q Clear Time (g_c+I1), s		2.7	2.1	15.1		6.0	25.7	5.6
Green Ext Time (p_c), s		0.1	0.0	3.8		3.3	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	419	10	496	5	6	5	1026	324	11	14	531	76
Future Volume (veh/h)	419	10	496	5	6	5	1026	324	11	14	531	76
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	502	0	172	5	6	5	1026	324	11	14	531	76
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	670	0	299	10	12	10	1209	1874	63	30	715	320
Arrive On Green	0.19	0.00	0.19	0.02	0.02	0.02	0.35	0.54	0.54	0.02	0.20	0.20
Sat Flow, veh/h	3548	0	1583	544	652	544	3442	3493	118	1774	3539	1583
Grp Volume(v), veh/h	502	0	172	16	0	0	1026	164	171	14	531	76
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1740	0	0	1721	1770	1842	1774	1770	1583
Q Serve(g_s), s	10.1	0.0	7.4	0.7	0.0	0.0	20.8	3.6	3.6	0.6	10.6	3.0
Cycle Q Clear(g_c), s	10.1	0.0	7.4	0.7	0.0	0.0	20.8	3.6	3.6	0.6	10.6	3.0
Prop In Lane	1.00		1.00	0.31		0.31	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	670	0	299	33	0	0	1209	949	988	30	715	320
V/C Ratio(X)	0.75	0.00	0.58	0.49	0.00	0.00	0.85	0.17	0.17	0.47	0.74	0.24
Avail Cap(c_a), veh/h	1201	0	536	416	0	0	1668	1257	1308	118	1034	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	27.8	36.6	0.0	0.0	22.6	8.9	8.9	36.7	28.2	25.2
Incr Delay (d2), s/veh	1.7	0.0	1.7	10.7	0.0	0.0	3.2	0.1	0.1	10.9	1.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	3.4	0.4	0.0	0.0	10.4	1.8	1.8	0.4	5.3	1.4
LnGrp Delay(d),s/veh	30.6	0.0	29.6	47.3	0.0	0.0	25.7	9.0	9.0	47.6	29.9	25.6
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		674			16			1361			621	
Approach Delay, s/veh		30.3			47.3			21.6			29.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	44.9		5.9	31.0	19.7		18.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	53.5		18.0	36.5	22.0		25.5
Max Q Clear Time (g_c+I1), s	2.6	5.6		2.7	22.8	12.6		12.1
Green Ext Time (p_c), s	0.0	2.1		0.0	3.7	2.6		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	163	64	155	91	67	0	908	163	115	862	23
Future Volume (vph)	25	163	64	155	91	67	0	908	163	115	862	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1850	1583		1806	1583		3539	1583		3507	
Flt Permitted		0.94	1.00		0.59	1.00		1.00	1.00		0.71	
Satd. Flow (perm)		1754	1583		1100	1583		3539	1583		2519	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	163	64	155	91	67	0	908	163	115	862	23
RTOR Reduction (vph)	0	0	46	0	0	43	0	0	58	0	2	0
Lane Group Flow (vph)	0	188	18	0	246	24	0	908	105	0	998	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8			2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		506	457		317	457		2280	1020		1623	
v/s Ratio Prot								0.26				
v/s Ratio Perm		0.11	0.01		c0.22	0.01			0.07		c0.40	
v/c Ratio		0.37	0.04		0.78	0.05		0.40	0.10		0.62	
Uniform Delay, d1		25.5	23.0		29.3	23.1		7.7	6.1		9.4	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.1	0.2		16.9	0.2		0.5	0.2		1.8	
Delay (s)		27.6	23.2		46.2	23.3		8.2	6.3		11.2	
Level of Service		C	C		D	C		A	A		B	
Approach Delay (s)		26.5			41.3			7.9			11.2	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1387	561	271	628	0	0	0	0	400	21	920
Future Volume (vph)	0	1387	561	271	628	0	0	0	0	400	21	920
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	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)		4747	1362	3433	3539						1778	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4747	1362	3433	3539						1778	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1387	561	271	628	0	0	0	0	400	21	920
RTOR Reduction (vph)	0	8	137	0	0	0	0	0	0	0	0	13
Lane Group Flow (vph)	0	1502	301	271	628	0	0	0	0	0	421	907
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		40.8	40.8	23.5	23.5						35.2	80.5
Effective Green, g (s)		40.8	40.8	23.5	23.5						35.2	80.5
Actuated g/C Ratio		0.36	0.36	0.21	0.21						0.31	0.71
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1713	491	713	735						553	2571
v/s Ratio Prot		c0.32		0.08	c0.18						c0.24	0.25
v/s Ratio Perm			0.22									
v/c Ratio		0.88	0.61	0.38	0.85						0.76	0.35
Uniform Delay, d1		33.8	29.6	38.5	43.1						35.1	6.2
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		6.7	5.6	0.3	9.5						6.1	0.1
Delay (s)		40.4	35.2	38.8	52.6						41.2	6.3
Level of Service		D	D	D	D						D	A
Approach Delay (s)		39.3			48.5			0.0			17.3	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	113.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	648	0	0	444	799	94
Future Volume (veh/h)	648	0	0	444	799	94
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	648	0	0	444	799	61
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1409	630	0	1409	1393	641
Arrive On Green	0.40	0.00	0.00	0.40	0.40	0.40
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	648	0	0	444	799	61
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	4.1	0.0	0.0	2.6	5.5	0.7
Cycle Q Clear(g_c), s	4.1	0.0	0.0	2.6	5.5	0.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1409	630	0	1409	1393	641
V/C Ratio(X)	0.46	0.00	0.00	0.32	0.57	0.10
Avail Cap(c_a), veh/h	3374	1509	0	3374	3394	1561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.7	0.0	0.0	6.3	7.0	5.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.3	2.6	0.3
LnGrp Delay(d),s/veh	7.0	0.0	0.0	6.4	7.4	5.7
LnGrp LOS	A			A	A	A
Approach Vol, veh/h	648			444	860	
Approach Delay, s/veh	7.0			6.4	7.3	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		15.3		15.1				15.1
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		28.5		27.5				27.5
Max Q Clear Time (g_c+I1), s		7.5		6.1				4.6
Green Ext Time (p_c), s		3.3		4.5				3.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1211	1190	0	406	921
Future Volume (veh/h)	0	1211	1190	0	406	921
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1211	1190	0	406	905
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2315	2315	0	755	1347
Arrive On Green	0.00	0.46	0.46	0.00	0.43	0.43
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1211	1190	0	406	905
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	8.6	8.4	0.0	8.6	11.6
Cycle Q Clear(g_c), s	0.0	8.6	8.4	0.0	8.6	11.6
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2315	2315	0	755	1347
V/C Ratio(X)	0.00	0.52	0.51	0.00	0.54	0.67
Avail Cap(c_a), veh/h	0	4446	4446	0	2292	4090
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	9.8	9.7	0.0	10.8	11.6
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	3.9	0.0	4.3	5.1
LnGrp Delay(d),s/veh	0.0	10.0	9.9	0.0	11.4	12.2
LnGrp LOS		A	A		B	B
Approach Vol, veh/h		1211	1190		1311	
Approach Delay, s/veh		10.0	9.9		12.0	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				25.9		24.4		25.9
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				42.5		63.5		42.5
Max Q Clear Time (g_c+I1), s				10.6		13.6		10.4
Green Ext Time (p_c), s				10.8		6.3		10.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	1087	354	314	1565	317	456	86	528	569	99	372
Future Volume (veh/h)	189	1087	354	314	1565	317	456	86	528	569	99	372
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	189	1087	193	314	1565	66	456	86	314	569	99	345
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	1335	416	758	1773	552	559	303	606	863	467	397
Arrive On Green	0.13	0.26	0.26	0.22	0.35	0.35	0.16	0.16	0.16	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	189	1087	193	314	1565	66	456	86	314	569	99	345
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	11.9	23.1	11.8	9.0	33.4	3.3	14.7	4.7	0.0	17.1	4.8	24.1
Cycle Q Clear(g_c), s	11.9	23.1	11.8	9.0	33.4	3.3	14.7	4.7	0.0	17.1	4.8	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	1335	416	758	1773	552	559	303	606	863	467	397
V/C Ratio(X)	0.79	0.81	0.46	0.41	0.88	0.12	0.82	0.28	0.52	0.66	0.21	0.87
Avail Cap(c_a), veh/h	262	1425	444	767	1809	563	579	314	615	914	494	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	39.9	35.7	38.6	35.3	25.5	46.6	42.4	27.4	38.8	34.2	41.4
Incr Delay (d2), s/veh	14.3	3.6	0.8	0.4	5.5	0.1	8.6	0.5	0.7	1.6	0.2	16.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	11.2	5.2	4.3	16.5	1.4	7.7	2.5	7.8	8.3	2.5	12.3
LnGrp Delay(d),s/veh	62.7	43.4	36.5	38.9	40.8	25.6	55.2	42.9	28.1	40.4	34.4	58.2
LnGrp LOS	E	D	D	D	D	C	E	D	C	D	C	E
Approach Vol, veh/h		1469			1945			856			1013	
Approach Delay, s/veh		45.0			40.0			44.0			45.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		31.9	28.4	33.2		21.7	18.5	43.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.1	24.2	30.8		17.9	15.5	39.5
Max Q Clear Time (g_c+I1), s		26.1	11.0	25.1		16.7	13.9	35.4
Green Ext Time (p_c), s		1.3	0.9	3.6		0.5	0.1	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	43.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	339	37	614	666	1196	59	703	765	784	812	66
Future Volume (veh/h)	132	339	37	614	666	1196	59	703	765	784	812	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	132	339	37	614	666	1112	59	703	721	784	812	66
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	861	93	666	1099	825	75	1214	575	830	2093	169
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.04	0.24	0.24	0.24	0.44	0.44
Sat Flow, veh/h	1774	3179	343	5003	3539	1429	1774	5085	1527	3442	4786	387
Grp Volume(v), veh/h	132	187	189	614	666	1112	59	703	721	784	574	304
Grp Sat Flow(s),veh/h/ln	1774	1770	1752	1668	1770	1429	1774	1695	1527	1721	1695	1783
Q Serve(g_s), s	11.3	13.3	13.7	18.8	24.8	48.1	5.1	18.9	37.0	34.7	17.8	17.9
Cycle Q Clear(g_c), s	11.3	13.3	13.7	18.8	24.8	48.1	5.1	18.9	37.0	34.7	17.8	17.9
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	166	480	475	666	1099	825	75	1214	575	830	1483	780
V/C Ratio(X)	0.80	0.39	0.40	0.92	0.61	1.35	0.78	0.58	1.25	0.94	0.39	0.39
Avail Cap(c_a), veh/h	203	480	475	666	1099	825	121	1214	575	855	1483	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.46	0.67	0.67	0.67	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	46.1	46.2	66.4	45.4	35.8	73.5	52.1	48.9	57.8	29.5	29.6
Incr Delay (d2), s/veh	16.3	2.4	2.5	10.0	1.2	160.0	11.3	1.4	123.5	18.5	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	6.9	6.9	9.3	12.3	71.9	2.7	9.0	44.4	18.7	8.4	9.2
LnGrp Delay(d),s/veh	85.1	48.4	48.7	76.4	46.5	195.9	84.8	53.5	172.5	76.3	30.3	31.0
LnGrp LOS	F	D	D	E	D	F	F	D	F	E	C	C
Approach Vol, veh/h		508			2392			1483			1662	
Approach Delay, s/veh		58.0			123.6			112.6			52.2	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.9	41.5	25.1	46.5	11.1	72.3	19.0	52.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	37.0	19.5	42.0	10.6	64.9	17.7	43.8
Max Q Clear Time (g_c+I1), s	36.7	39.0	20.8	15.7	7.1	19.9	13.3	50.1
Green Ext Time (p_c), s	0.7	0.0	0.0	2.3	0.0	7.1	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	95.8
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	0	208	10	12	3	159	267	1	0	123	159
Future Vol, veh/h	90	0	208	10	12	3	159	267	1	0	123	159
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	0	208	10	12	3	159	267	1	0	123	159

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	796	789	203	893	868	268	282	0	0	268	0	0
Stage 1	203	203	-	586	586	-	-	-	-	-	-	-
Stage 2	593	586	-	307	282	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	305	323	838	262	290	771	1280	-	-	1296	-	-
Stage 1	799	733	-	496	497	-	-	-	-	-	-	-
Stage 2	492	497	-	703	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	265	283	838	178	254	771	1280	-	-	1296	-	-
Mov Cap-2 Maneuver	265	283	-	178	254	-	-	-	-	-	-	-
Stage 1	700	733	-	434	435	-	-	-	-	-	-	-
Stage 2	417	435	-	529	678	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	22.3	3.1	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	265	838	233	1296	-	-
HCM Lane V/C Ratio	0.124	-	-	0.34	0.248	0.107	-	-	-
HCM Control Delay (s)	8.2	-	-	25.4	10.7	22.3	0	-	-
HCM Lane LOS	A	-	-	D	B	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1.4	1	0.4	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	90	73	52	100	288	76	914	51	275	1177	239
Future Volume (veh/h)	263	90	73	52	100	288	76	914	51	275	1177	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	263	90	73	52	100	288	76	914	51	275	1177	239
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	176	143	134	634	338	107	1307	407	325	1931	601
Arrive On Green	0.18	0.18	0.18	0.21	0.21	0.21	0.06	0.26	0.26	0.18	0.38	0.38
Sat Flow, veh/h	1774	953	773	627	2974	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	263	0	163	152	0	288	76	914	51	275	1177	239
Grp Sat Flow(s),veh/h/ln	1774	0	1726	1831	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	14.0	0.0	8.4	7.0	0.0	17.3	4.2	16.1	2.4	14.8	18.4	10.9
Cycle Q Clear(g_c), s	14.0	0.0	8.4	7.0	0.0	17.3	4.2	16.1	2.4	14.8	18.4	10.9
Prop In Lane	1.00		0.45	0.34		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	0	319	390	377	338	107	1307	407	325	1931	601
V/C Ratio(X)	0.80	0.00	0.51	0.39	0.00	0.85	0.71	0.70	0.13	0.85	0.61	0.40
Avail Cap(c_a), veh/h	683	0	665	529	511	457	252	2036	634	683	3272	1019
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	36.3	33.3	0.0	37.3	45.5	33.2	28.1	39.0	24.7	22.4
Incr Delay (d2), s/veh	4.6	0.0	1.3	0.6	0.0	11.1	8.4	0.7	0.1	6.1	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	4.1	3.6	0.0	8.6	2.3	7.6	1.1	7.8	8.7	4.9
LnGrp Delay(d),s/veh	43.1	0.0	37.6	33.9	0.0	48.5	53.9	33.9	28.3	45.1	25.0	22.8
LnGrp LOS	D		D	C		D	D	C	C	D	C	C
Approach Vol, veh/h		426			440			1041			1691	
Approach Delay, s/veh		41.0			43.4			35.1			28.0	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.1	29.4		22.2	10.0	41.5		25.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	39.0		37.5	13.5	63.0		28.0
Max Q Clear Time (g_c+I1), s	16.8	18.1		16.0	6.2	20.4		19.3
Green Ext Time (p_c), s	0.8	6.8		1.7	0.1	12.7		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	0	232	3	4	1	218	356	0	0	210	131
Future Vol, veh/h	71	0	232	3	4	1	218	356	0	0	210	131
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	0	232	3	4	1	218	356	0	0	210	131

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1071	1068	276	1184	1133	356	341	0	0	356	0	0
Stage 1	276	276	-	792	792	-	-	-	-	-	-	-
Stage 2	795	792	-	392	341	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	198	222	763	166	203	688	1218	-	-	1203	-	-
Stage 1	730	682	-	382	401	-	-	-	-	-	-	-
Stage 2	381	401	-	633	639	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	168	182	763	100	167	688	1218	-	-	1203	-	-
Mov Cap-2 Maneuver	168	182	-	100	167	-	-	-	-	-	-	-
Stage 1	599	682	-	314	329	-	-	-	-	-	-	-
Stage 2	309	329	-	441	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.7	31.5	3.3	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	168	763	144	1203	-	-
HCM Lane V/C Ratio	0.179	-	-	0.423	0.304	0.056	-	-	-
HCM Control Delay (s)	8.6	-	-	41.3	11.8	31.5	0	-	-
HCM Lane LOS	A	-	-	E	B	D	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	1.9	1.3	0.2	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	176	233	52	258	86	236	740	40	87	814	206
Future Volume (veh/h)	296	176	233	52	258	86	236	740	40	87	814	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	235	261	233	52	258	86	236	740	26	87	814	206
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	404	425	361	82	418	146	313	1841	573	145	1359	803
Arrive On Green	0.23	0.23	0.22	0.17	0.18	0.16	0.18	0.36	0.36	0.08	0.27	0.27
Sat Flow, veh/h	1774	1863	1583	452	2306	803	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	235	261	233	212	0	184	236	740	26	87	814	206
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1840	0	1721	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.6	10.3	10.9	8.7	0.0	8.1	10.3	8.9	0.9	3.9	11.4	6.0
Cycle Q Clear(g_c), s	9.6	10.3	10.9	8.7	0.0	8.1	10.3	8.9	0.9	3.9	11.4	6.0
Prop In Lane	1.00		1.00	0.25		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	404	425	361	334	0	312	313	1841	573	145	1359	803
V/C Ratio(X)	0.58	0.61	0.65	0.63	0.00	0.59	0.75	0.40	0.05	0.60	0.60	0.26
Avail Cap(c_a), veh/h	869	913	776	868	0	812	869	3832	1193	456	2648	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	28.3	28.8	31.0	0.0	31.0	31.9	19.4	16.9	36.2	26.1	11.4
Incr Delay (d2), s/veh	1.3	1.4	1.9	2.0	0.0	1.8	3.7	0.1	0.0	3.9	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	5.5	4.9	4.6	0.0	4.0	5.4	4.1	0.4	2.0	5.4	3.9
LnGrp Delay(d),s/veh	29.4	29.7	30.7	33.0	0.0	32.8	35.6	19.6	16.9	40.1	26.5	11.6
LnGrp LOS	C	C	C	C		C	D	B	B	D	C	B
Approach Vol, veh/h		729			396			1002			1107	
Approach Delay, s/veh		29.9			32.9			23.3			24.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.7	32.5		21.6	17.4	24.8		17.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	19.5	60.0		38.5	38.5	41.0		37.0
Max Q Clear Time (g_c+I1), s	5.9	10.9		12.9	12.3	13.4		10.7
Green Ext Time (p_c), s	0.1	6.0		4.2	0.7	6.9		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	356	66	358	566	641	126	380	441	417	396	55
Future Volume (veh/h)	15	356	66	358	566	641	126	380	441	417	396	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	15	356	66	358	566	641	126	380	0	417	396	55
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	358	66	649	681	579	122	1013	453	470	567	79
Arrive On Green	0.12	0.12	0.12	0.37	0.37	0.37	0.07	0.29	0.00	0.14	0.35	0.35
Sat Flow, veh/h	1774	2987	548	1774	1863	1583	1774	3539	1583	3442	1601	222
Grp Volume(v), veh/h	15	209	213	358	566	641	126	380	0	417	0	451
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1863	1583	1774	1770	1583	1721	0	1824
Q Serve(g_s), s	1.3	20.7	21.0	28.1	48.4	64.0	12.0	15.0	0.0	20.8	0.0	37.1
Cycle Q Clear(g_c), s	1.3	20.7	21.0	28.1	48.4	64.0	12.0	15.0	0.0	20.8	0.0	37.1
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	213	212	212	649	681	579	122	1013	453	470	0	646
V/C Ratio(X)	0.07	0.99	1.00	0.55	0.83	1.11	1.04	0.38	0.00	0.89	0.00	0.70
Avail Cap(c_a), veh/h	213	212	212	649	681	579	122	1013	453	531	0	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	68.3	76.9	77.1	44.1	50.6	55.5	81.5	49.9	0.0	74.2	0.0	48.5
Incr Delay (d2), s/veh	0.1	57.7	62.6	1.0	8.6	70.2	91.5	1.1	0.0	15.3	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	13.5	13.9	13.9	26.6	39.3	9.0	7.5	0.0	10.9	0.0	19.8
LnGrp Delay(d),s/veh	68.5	134.5	139.7	45.1	59.1	125.7	173.5	51.0	0.0	89.5	0.0	54.7
LnGrp LOS	E	F	F	D	E	F	F	D		F		D
Approach Vol, veh/h		437			1565			506			868	
Approach Delay, s/veh		134.8			83.2			81.5			71.4	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.9	54.1		25.0	16.0	66.0		68.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	26.5	46.5		20.5	11.5	61.5		63.5
Max Q Clear Time (g_c+I1), s	23.8	17.0		23.0	14.0	39.1		66.0
Green Ext Time (p_c), s	0.6	2.7		0.0	0.0	2.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	86.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	966	70	603	1242	158	51	69	260	343	243	230
Future Volume (veh/h)	185	966	70	603	1242	158	51	69	260	343	243	230
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	185	966	70	603	1242	0	51	69	-17	343	243	161
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	1445	104	773	2218	691	117	123	105	673	364	310
Arrive On Green	0.09	0.30	0.29	0.22	0.44	0.00	0.07	0.07	0.00	0.20	0.20	0.20
Sat Flow, veh/h	3442	4841	350	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	185	676	360	603	1242	0	51	69	-17	343	243	161
Grp Sat Flow(s),veh/h/ln	1721	1695	1801	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.9	13.0	13.0	12.2	13.5	0.0	2.1	2.7	0.0	6.6	9.0	6.8
Cycle Q Clear(g_c), s	3.9	13.0	13.0	12.2	13.5	0.0	2.1	2.7	0.0	6.6	9.0	6.8
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	299	1012	537	773	2218	691	117	123	105	673	364	310
V/C Ratio(X)	0.62	0.67	0.67	0.78	0.56	0.00	0.44	0.56	-0.16	0.51	0.67	0.52
Avail Cap(c_a), veh/h	509	1505	799	1296	3420	1065	453	476	405	1343	727	618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	22.9	22.9	27.1	15.6	0.0	33.4	33.7	0.0	26.7	27.7	26.8
Incr Delay (d2), s/veh	2.1	0.8	1.5	1.8	0.2	0.0	2.5	4.0	0.0	0.6	2.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.1	6.7	6.0	6.4	0.0	1.1	1.5	0.0	3.2	4.8	3.1
LnGrp Delay(d),s/veh	34.8	23.6	24.4	28.8	15.9	0.0	35.9	37.6	0.0	27.3	29.8	28.1
LnGrp LOS	C	C	C	C	B		D	D		C	C	C
Approach Vol, veh/h		1221			1845			103			747	
Approach Delay, s/veh		25.5			20.1			43.0			28.3	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		18.5	20.7	26.2		8.9	10.5	36.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	27.5	32.5		18.5	10.5	49.5
Max Q Clear Time (g_c+I1), s		11.0	14.2	15.0		4.7	5.9	15.5
Green Ext Time (p_c), s		3.1	2.0	6.6		0.3	0.2	11.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	938	266	14	3	245	165	12	12	6	173	8	1224
Future Volume (veh/h)	938	266	14	3	245	165	12	12	6	173	8	1224
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1020	289	15	3	245	165	12	12	6	179	0	1224
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1167	1036	880	20	835	373	54	56	29	533	0	1572
Arrive On Green	0.34	0.56	0.56	0.01	0.24	0.24	0.04	0.04	0.03	0.15	0.00	0.16
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1369	1430	729	3548	0	3167
Grp Volume(v), veh/h	1020	289	15	3	245	165	16	0	14	179	0	1224
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1794	0	1734	1774	0	1583
Q Serve(g_s), s	18.9	5.5	0.3	0.1	3.9	6.0	0.6	0.0	0.5	3.1	0.0	0.0
Cycle Q Clear(g_c), s	18.9	5.5	0.3	0.1	3.9	6.0	0.6	0.0	0.5	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.76		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	1167	1036	880	20	835	373	70	0	68	533	0	1572
V/C Ratio(X)	0.87	0.28	0.02	0.15	0.29	0.44	0.22	0.00	0.21	0.34	0.00	0.78
Avail Cap(c_a), veh/h	1167	1036	880	144	835	373	489	0	473	863	0	1867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.1	7.9	6.8	33.2	21.3	22.1	31.6	0.0	31.7	25.8	0.0	14.0
Incr Delay (d2), s/veh	9.2	0.7	0.0	3.3	0.9	3.8	1.6	0.0	1.5	0.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	3.0	0.1	0.1	2.0	3.0	0.3	0.0	0.3	1.5	0.0	9.6
LnGrp Delay(d),s/veh	30.3	8.6	6.8	36.5	22.2	25.9	33.2	0.0	33.2	26.2	0.0	15.8
LnGrp LOS	C	A	A	D	C	C	C		C	C		B
Approach Vol, veh/h		1324			413			30			1403	
Approach Delay, s/veh		25.3			23.8			33.2			17.2	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		6.7	4.8	42.2		14.2	27.0	20.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.5	22.5	16.0
Max Q Clear Time (g_c+I1), s		2.6	2.1	7.5		5.1	20.9	8.0
Green Ext Time (p_c), s		0.1	0.0	1.8		5.1	0.8	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	13	542	20	13	8	796	282	21	11	834	227
Future Volume (veh/h)	219	13	542	20	13	8	796	282	21	11	834	227
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	278	0	120	20	13	8	796	282	21	11	834	227
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	453	0	202	41	26	16	974	1882	139	38	1068	478
Arrive On Green	0.13	0.00	0.13	0.05	0.05	0.04	0.28	0.56	0.56	0.02	0.30	0.30
Sat Flow, veh/h	3548	0	1583	858	558	343	3442	3341	247	1774	3539	1583
Grp Volume(v), veh/h	278	0	120	41	0	0	796	149	154	11	834	227
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1759	0	0	1721	1770	1819	1774	1770	1583
Q Serve(g_s), s	4.9	0.0	4.8	1.5	0.0	0.0	14.4	2.7	2.7	0.4	14.3	7.8
Cycle Q Clear(g_c), s	4.9	0.0	4.8	1.5	0.0	0.0	14.4	2.7	2.7	0.4	14.3	7.8
Prop In Lane	1.00		1.00	0.49		0.20	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	453	0	202	83	0	0	974	997	1025	38	1068	478
V/C Ratio(X)	0.61	0.00	0.59	0.49	0.00	0.00	0.82	0.15	0.15	0.29	0.78	0.48
Avail Cap(c_a), veh/h	985	0	440	488	0	0	1240	1102	1133	146	1222	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	0.0	27.4	31.0	0.0	0.0	22.3	6.9	7.0	32.1	21.2	19.0
Incr Delay (d2), s/veh	1.4	0.0	2.8	4.4	0.0	0.0	3.5	0.1	0.1	4.2	2.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	2.2	0.8	0.0	0.0	7.2	1.3	1.4	0.2	7.4	3.5
LnGrp Delay(d),s/veh	28.9	0.0	30.2	35.4	0.0	0.0	25.8	7.0	7.0	36.3	24.2	19.7
LnGrp LOS	C		C	D			C	A	A	D	C	B
Approach Vol, veh/h		398			41			1099			1072	
Approach Delay, s/veh		29.3			35.4			20.6			23.3	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	41.5		7.2	22.8	24.1		12.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	41.0		18.0	23.5	22.5		18.0
Max Q Clear Time (g_c+I1), s	2.4	4.7		3.5	16.4	16.3		6.9
Green Ext Time (p_c), s	0.0	1.9		0.1	2.0	3.3		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	117	34	154	80	67	2	981	174	119	847	34
Future Volume (vph)	17	117	34	154	80	67	2	981	174	119	847	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		0.99	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		0.99	
Satd. Flow (prot)		1851	1583		1803	1583		3539	1583		3500	
Flt Permitted		0.95	1.00		0.67	1.00		0.95	1.00		0.69	
Satd. Flow (perm)		1774	1583		1254	1583		3376	1583		2413	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	117	34	154	80	67	2	981	174	119	847	34
RTOR Reduction (vph)	0	0	24	0	0	46	0	0	62	0	3	0
Lane Group Flow (vph)	0	134	10	0	234	21	0	983	112	0	997	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		512	457		362	457		2175	1020		1555	
v/s Ratio Prot												
v/s Ratio Perm		0.08	0.01		c0.19	0.01		0.29	0.07		c0.41	
v/c Ratio		0.26	0.02		0.65	0.05		0.45	0.11		0.64	
Uniform Delay, d1		24.6	22.9		28.0	23.1		8.0	6.1		9.7	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.2	0.1		8.6	0.2		0.7	0.2		2.0	
Delay (s)		25.9	23.0		36.6	23.3		8.7	6.3		11.7	
Level of Service		C	C		D	C		A	A		B	
Approach Delay (s)		25.3			33.6			8.4			11.7	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	997	675	595	845	0	0	0	0	212	1	1080
Future Volume (vph)	0	997	675	595	845	0	0	0	0	212	1	1080
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
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	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)		4643	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4643	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	997	675	595	845	0	0	0	0	212	1	1080
RTOR Reduction (vph)	0	55	248	0	0	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	1232	137	595	845	0	0	0	0	0	213	1059
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		31.5	31.5	26.5	26.5						18.5	54.5
Effective Green, g (s)		32.0	32.0	27.0	27.0						19.0	55.0
Actuated g/C Ratio		0.36	0.36	0.30	0.30						0.21	0.61
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1650	484	1029	1061						374	2206
v/s Ratio Prot		c0.27		0.17	c0.24						c0.12	0.29
v/s Ratio Perm			0.10									
v/c Ratio		0.75	0.28	0.58	0.80						0.57	0.48
Uniform Delay, d1		25.4	20.8	26.7	29.0						31.8	9.6
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.9	0.3	0.8	6.2						6.2	0.2
Delay (s)		27.3	21.1	27.5	35.2						38.0	9.8
Level of Service		C	C	C	D						D	A
Approach Delay (s)		25.9			32.0			0.0			14.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1151	0	0	214	1014	76
Future Volume (veh/h)	1151	0	0	214	1014	76
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	1151	0	0	214	1014	43
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1666	745	0	1666	1389	639
Arrive On Green	0.47	0.00	0.00	0.47	0.40	0.40
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	1151	0	0	214	1014	43
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	12.2	0.0	0.0	1.6	11.9	0.8
Cycle Q Clear(g_c), s	12.2	0.0	0.0	1.6	11.9	0.8
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1666	745	0	1666	1389	639
V/C Ratio(X)	0.69	0.00	0.00	0.13	0.73	0.07
Avail Cap(c_a), veh/h	2148	961	0	2148	2161	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	0.0	0.0	7.1	12.0	8.7
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	0.8	5.6	0.4
LnGrp Delay(d),s/veh	10.6	0.0	0.0	7.2	12.8	8.8
LnGrp LOS	B			A	B	A
Approach Vol, veh/h	1151			214	1057	
Approach Delay, s/veh	10.6			7.2	12.6	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.3		25.5				25.5
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		28.5		27.5				27.5
Max Q Clear Time (g_c+I1), s		13.9		14.2				3.6
Green Ext Time (p_c), s		3.9		6.8				1.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1253	1117	0	694	1100
Future Volume (veh/h)	0	1253	1117	0	694	1100
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1253	1117	0	593	1193
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2042	2042	0	900	1606
Arrive On Green	0.00	0.40	0.40	0.00	0.51	0.51
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1253	1117	0	593	1193
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	12.9	11.1	0.0	16.3	19.6
Cycle Q Clear(g_c), s	0.0	12.9	11.1	0.0	16.3	19.6
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2042	2042	0	900	1606
V/C Ratio(X)	0.00	0.61	0.55	0.00	0.66	0.74
Avail Cap(c_a), veh/h	0	3093	3093	0	1861	3322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.6	15.1	0.0	12.0	12.8
Incr Delay (d2), s/veh	0.0	0.3	0.2	0.0	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.0	5.2	0.0	8.1	8.6
LnGrp Delay(d),s/veh	0.0	15.9	15.3	0.0	12.8	13.5
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1253	1117		1786	
Approach Delay, s/veh		15.9	15.3		13.3	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				29.4		36.4		29.4
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				38.5		67.5		38.5
Max Q Clear Time (g_c+I1), s				14.9		21.6		13.1
Green Ext Time (p_c), s				10.0		10.3		9.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	1423	352	414	975	662	180	173	282	245	47	141
Future Volume (veh/h)	556	1423	352	414	975	662	180	173	282	245	47	141
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	556	1423	191	414	975	411	180	173	68	245	47	114
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	583	1966	612	924	1660	517	353	191	588	410	222	189
Arrive On Green	0.33	0.39	0.39	0.27	0.33	0.33	0.10	0.10	0.10	0.12	0.12	0.12
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	556	1423	191	414	975	411	180	173	68	245	47	114
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	29.8	23.2	8.2	9.7	15.6	23.0	4.8	8.9	0.0	6.6	2.2	6.7
Cycle Q Clear(g_c), s	29.8	23.2	8.2	9.7	15.6	23.0	4.8	8.9	0.0	6.6	2.2	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	1966	612	924	1660	517	353	191	588	410	222	189
V/C Ratio(X)	0.95	0.72	0.31	0.45	0.59	0.80	0.51	0.90	0.12	0.60	0.21	0.60
Avail Cap(c_a), veh/h	583	2387	743	924	1854	577	353	191	588	1078	583	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	25.4	20.8	29.6	27.3	29.8	41.4	43.2	20.1	40.7	38.8	40.7
Incr Delay (d2), s/veh	26.1	0.9	0.3	0.3	0.4	6.9	1.2	39.4	0.1	1.4	0.5	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.8	11.0	3.6	4.6	7.3	11.0	2.4	6.7	1.2	3.2	1.2	3.1
LnGrp Delay(d),s/veh	58.1	26.3	21.1	30.0	27.7	36.7	42.6	82.7	20.2	42.1	39.2	43.8
LnGrp LOS	E	C	C	C	C	D	D	F	C	D	D	D
Approach Vol, veh/h		2170			1800			421			406	
Approach Delay, s/veh		34.0			30.3			55.4			42.2	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		14.6	29.1	40.6		13.0	35.0	34.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.0	20.3	44.2		8.5	30.5	34.0
Max Q Clear Time (g_c+I1), s		8.7	11.7	25.2		10.9	31.8	25.0
Green Ext Time (p_c), s		1.4	1.0	10.9		0.0	0.0	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	749	47	505	336	945	38	548	896	996	921	43
Future Volume (veh/h)	125	749	47	505	336	945	38	548	896	996	921	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	125	749	47	505	336	861	38	548	852	996	921	43
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	925	58	863	1105	758	49	1214	638	677	2028	95
Arrive On Green	0.14	0.28	0.28	0.17	0.31	0.31	0.03	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3354	210	5003	3539	1430	1774	5085	1527	3442	4973	232
Grp Volume(v), veh/h	125	395	401	505	336	861	38	548	852	996	627	337
Grp Sat Flow(s),veh/h/ln	1774	1770	1795	1668	1770	1430	1774	1695	1527	1721	1695	1815
Q Serve(g_s), s	10.1	32.2	32.3	14.4	11.2	48.4	3.3	14.3	37.0	30.5	20.8	20.9
Cycle Q Clear(g_c), s	10.1	32.2	32.3	14.4	11.2	48.4	3.3	14.3	37.0	30.5	20.8	20.9
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	241	488	495	863	1105	758	49	1214	638	677	1383	740
V/C Ratio(X)	0.52	0.81	0.81	0.58	0.30	1.14	0.78	0.45	1.34	1.47	0.45	0.45
Avail Cap(c_a), veh/h	241	488	495	888	1105	758	102	1214	638	677	1383	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	52.3	52.3	59.0	40.5	39.0	74.9	50.3	45.9	62.2	33.3	33.4
Incr Delay (d2), s/veh	1.9	13.5	13.4	0.8	0.6	74.3	16.5	0.8	158.7	219.8	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	17.6	17.9	6.7	5.5	47.9	1.9	6.8	55.4	35.2	10.0	10.9
LnGrp Delay(d),s/veh	64.2	65.8	65.7	59.8	41.1	113.3	91.4	51.2	204.6	282.1	34.4	35.4
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	D
Approach Vol, veh/h		921			1702			1438			1960	
Approach Delay, s/veh		65.6			83.2			143.1			160.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	31.2	47.3	8.8	67.7	25.6	52.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.5	37.0	27.5	42.0	8.9	58.6	21.1	48.4
Max Q Clear Time (g_c+I1), s	12.1	39.0	16.4	34.3	5.3	22.9	12.1	50.4
Green Ext Time (p_c), s	0.0	0.0	1.5	3.0	0.0	7.7	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.9
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	5	300	6	7	1	78	207	8	2	137	50
Future Vol, veh/h	50	5	300	6	7	1	78	207	8	2	137	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	5	300	6	7	1	78	207	8	2	137	50

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	537	537	162	686	558	211	187	0	0	215	0	0
Stage 1	166	166	-	367	367	-	-	-	-	-	-	-
Stage 2	371	371	-	319	191	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	455	450	883	362	438	829	1387	-	-	1355	-	-
Stage 1	836	761	-	653	622	-	-	-	-	-	-	-
Stage 2	649	620	-	693	742	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	429	424	883	226	413	829	1387	-	-	1355	-	-
Mov Cap-2 Maneuver	429	424	-	226	413	-	-	-	-	-	-	-
Stage 1	789	759	-	616	587	-	-	-	-	-	-	-
Stage 2	604	585	-	454	741	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	17	2.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1387	-	-	429	868	313	1355	-	-
HCM Lane V/C Ratio	0.056	-	-	0.117	0.351	0.045	0.001	-	-
HCM Control Delay (s)	7.8	-	-	14.5	11.4	17	7.7	0	-
HCM Lane LOS	A	-	-	B	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	1.6	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	149	56	13	85	128	50	947	31	234	1049	394
Future Volume (veh/h)	332	149	56	13	85	128	50	947	31	234	1049	394
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	332	149	56	13	85	128	50	947	31	234	1049	394
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	297	111	50	346	174	73	1452	452	282	2052	639
Arrive On Green	0.23	0.23	0.23	0.11	0.11	0.11	0.04	0.29	0.29	0.16	0.40	0.40
Sat Flow, veh/h	1774	1292	485	456	3153	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	332	0	205	52	46	128	50	947	31	234	1049	394
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	14.8	0.0	8.4	2.2	2.0	6.5	2.3	13.6	1.2	10.6	12.9	16.5
Cycle Q Clear(g_c), s	14.8	0.0	8.4	2.2	2.0	6.5	2.3	13.6	1.2	10.6	12.9	16.5
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	0	408	202	194	174	73	1452	452	282	2052	639
V/C Ratio(X)	0.81	0.00	0.50	0.26	0.23	0.74	0.68	0.65	0.07	0.83	0.51	0.62
Avail Cap(c_a), veh/h	1118	0	1120	431	414	371	245	3022	941	841	4732	1473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	0.0	27.9	34.0	33.9	35.9	39.4	26.1	21.7	33.9	18.7	19.7
Incr Delay (d2), s/veh	4.0	0.0	1.0	0.7	0.6	6.0	10.8	0.5	0.1	6.2	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	4.2	1.1	1.0	3.1	1.4	6.5	0.5	5.7	6.1	7.3
LnGrp Delay(d),s/veh	34.4	0.0	28.9	34.7	34.5	41.9	50.2	26.6	21.8	40.1	18.9	20.7
LnGrp LOS	C		C	C	C	D	D	C	C	D	B	C
Approach Vol, veh/h		537			226			1028			1677	
Approach Delay, s/veh		32.3			38.7			27.6			22.3	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.8	28.3		23.6	7.9	38.1		13.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	39.5	49.5		52.5	11.5	77.5		19.5
Max Q Clear Time (g_c+I1), s	12.6	15.6		16.8	4.3	18.5		8.5
Green Ext Time (p_c), s	0.7	8.2		2.4	0.0	12.7		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	1	363	2	2	0	149	232	2	1	346	96
Future Vol, veh/h	61	1	363	2	2	0	149	232	2	1	346	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	1	363	2	2	0	149	232	2	1	346	96

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	928	928	394	1109	975	233	442	0	0	234	0	0
Stage 1	396	396	-	531	531	-	-	-	-	-	-	-
Stage 2	532	532	-	578	444	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	248	268	655	187	251	806	1118	-	-	1333	-	-
Stage 1	629	604	-	532	526	-	-	-	-	-	-	-
Stage 2	531	526	-	501	575	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	221	232	655	75	217	806	1118	-	-	1333	-	-
Mov Cap-2 Maneuver	221	232	-	75	217	-	-	-	-	-	-	-
Stage 1	545	603	-	461	456	-	-	-	-	-	-	-
Stage 2	458	456	-	223	574	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.6	38.6	3.4	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1118	-	-	221	655	111	1333	-	-
HCM Lane V/C Ratio	0.133	-	-	0.281	0.554	0.036	0.001	-	-
HCM Control Delay (s)	8.7	-	-	27.5	17.1	38.6	7.7	0	-
HCM Lane LOS	A	-	-	D	C	E	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	1.1	3.4	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	220	231	11	196	27	269	1094	49	124	889	323
Future Volume (veh/h)	282	220	231	11	196	27	269	1094	49	124	889	323
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	273	231	11	196	27	269	1094	49	124	889	323
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	442	362	21	378	54	349	1953	608	191	1500	776
Arrive On Green	0.23	0.23	0.23	0.11	0.12	0.11	0.20	0.38	0.38	0.11	0.29	0.28
Sat Flow, veh/h	1774	1899	1553	165	3039	436	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	244	268	236	123	0	111	269	1094	49	124	889	323
Grp Sat Flow(s),veh/h/ln	1774	1863	1589	1854	0	1786	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	9.7	10.2	10.6	5.0	0.0	4.6	11.4	13.4	1.6	5.3	11.9	10.4
Cycle Q Clear(g_c), s	9.7	10.2	10.6	5.0	0.0	4.6	11.4	13.4	1.6	5.3	11.9	10.4
Prop In Lane	1.00		0.98	0.09		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	434	370	230	0	222	349	1953	608	191	1500	776
V/C Ratio(X)	0.59	0.62	0.64	0.54	0.00	0.50	0.77	0.56	0.08	0.65	0.59	0.42
Avail Cap(c_a), veh/h	916	962	820	899	0	866	894	3874	1206	469	2658	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	27.3	27.4	32.7	0.0	32.6	30.2	19.2	15.5	34.0	23.9	13.0
Incr Delay (d2), s/veh	1.3	1.4	1.8	1.9	0.0	1.7	3.6	0.3	0.1	3.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	5.5	4.9	2.7	0.0	2.4	6.0	6.3	0.7	2.8	5.6	6.4
LnGrp Delay(d),s/veh	28.4	28.7	29.3	34.6	0.0	34.4	33.8	19.4	15.6	37.7	24.3	13.3
LnGrp LOS	C	C	C	C		C	C	B	B	D	C	B
Approach Vol, veh/h		748			234			1412			1336	
Approach Delay, s/veh		28.8			34.5			22.0			22.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.6	33.5		21.5	18.6	26.4		12.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	19.5	59.0		39.5	38.5	40.0		37.0
Max Q Clear Time (g_c+I1), s	7.3	15.4		12.6	13.4	13.9		7.0
Green Ext Time (p_c), s	0.2	9.9		4.3	0.8	8.1		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	424	46	270	383	362	51	306	556	376	396	37
Future Volume (veh/h)	5	424	46	270	383	362	51	306	556	376	396	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	5	424	46	270	383	362	51	306	0	376	396	37
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	534	58	307	541	460	66	1255	561	456	755	71
Arrive On Green	0.05	0.17	0.17	0.17	0.29	0.29	0.04	0.35	0.00	0.13	0.45	0.45
Sat Flow, veh/h	1774	3223	348	1774	1863	1583	1774	3539	1583	3442	1678	157
Grp Volume(v), veh/h	5	232	238	270	383	362	51	306	0	376	0	433
Grp Sat Flow(s),veh/h/ln	1774	1770	1801	1774	1863	1583	1774	1770	1583	1721	0	1835
Q Serve(g_s), s	0.3	13.0	13.1	15.3	19.0	21.7	2.9	6.3	0.0	11.0	0.0	17.5
Cycle Q Clear(g_c), s	0.3	13.0	13.1	15.3	19.0	21.7	2.9	6.3	0.0	11.0	0.0	17.5
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	86	293	298	307	541	460	66	1255	561	456	0	825
V/C Ratio(X)	0.06	0.79	0.80	0.88	0.71	0.79	0.77	0.24	0.00	0.83	0.00	0.52
Avail Cap(c_a), veh/h	309	429	436	456	605	514	156	1269	568	617	0	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	41.3	41.4	41.6	32.7	33.7	49.2	23.5	0.0	43.6	0.0	20.5
Incr Delay (d2), s/veh	0.3	6.1	6.4	12.5	3.4	7.2	17.1	0.1	0.0	6.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.9	7.1	8.6	10.3	10.4	1.8	3.1	0.0	5.6	0.0	9.4
LnGrp Delay(d),s/veh	47.1	47.5	47.8	54.2	36.1	40.9	66.4	23.6	0.0	50.3	0.0	22.8
LnGrp LOS	D	D	D	D	D	D	E	C		D		C
Approach Vol, veh/h		475			1015			357			809	
Approach Delay, s/veh		47.6			42.6			29.7			35.6	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	41.1	22.4	21.6	8.3	50.9	9.5	34.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	37.0	26.5	25.0	9.1	46.4	18.0	33.5
Max Q Clear Time (g_c+I1), s	13.0	8.3	17.3	15.1	4.9	19.5	2.3	23.7
Green Ext Time (p_c), s	0.7	2.1	0.5	2.0	0.0	2.9	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	1355	34	336	882	298	170	232	389	114	109	89
Future Volume (veh/h)	237	1355	34	336	882	298	170	232	389	114	109	89
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	237	1355	34	336	882	0	170	232	112	114	109	20
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	1986	50	432	2119	660	296	311	264	318	172	146
Arrive On Green	0.10	0.39	0.39	0.13	0.42	0.00	0.17	0.17	0.17	0.09	0.09	0.09
Sat Flow, veh/h	3442	5102	128	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	237	900	489	336	882	0	170	232	112	114	109	20
Grp Sat Flow(s),veh/h/ln	1721	1695	1840	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.3	17.6	17.6	7.5	9.7	0.0	7.0	9.4	5.0	2.5	4.5	0.9
Cycle Q Clear(g_c), s	5.3	17.6	17.6	7.5	9.7	0.0	7.0	9.4	5.0	2.5	4.5	0.9
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	337	1319	716	432	2119	660	296	311	264	318	172	146
V/C Ratio(X)	0.70	0.68	0.68	0.78	0.42	0.00	0.57	0.75	0.42	0.36	0.63	0.14
Avail Cap(c_a), veh/h	713	1980	1075	584	2779	865	546	573	487	973	526	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	20.2	20.2	33.7	16.4	0.0	30.5	31.5	29.7	33.9	34.8	33.2
Incr Delay (d2), s/veh	2.7	0.6	1.2	4.7	0.1	0.0	1.8	3.6	1.1	0.7	3.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.2	9.1	3.9	4.6	0.0	3.6	5.1	2.3	1.2	2.5	0.4
LnGrp Delay(d),s/veh	37.5	20.9	21.4	38.4	16.5	0.0	32.3	35.1	30.8	34.6	38.7	33.6
LnGrp LOS	D	C	C	D	B		C	D	C	C	D	C
Approach Vol, veh/h		1626			1218			514			243	
Approach Delay, s/veh		23.4			22.6			33.2			36.4	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		11.8	14.5	35.5		17.8	12.3	37.7
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		22.5	13.5	46.5		24.5	16.5	43.5
Max Q Clear Time (g_c+I1), s		6.5	9.5	19.6		11.4	7.3	11.7
Green Ext Time (p_c), s		0.9	0.5	11.4		1.9	0.5	7.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1260	616	49	2	181	86	31	20	9	226	11	670
Future Volume (veh/h)	1260	616	49	2	181	86	31	20	9	226	11	670
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1370	670	53	2	181	86	31	20	9	234	0	670
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1503	994	845	5	354	158	90	63	29	488	0	1818
Arrive On Green	0.44	0.53	0.53	0.00	0.10	0.10	0.05	0.05	0.05	0.14	0.00	0.14
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1751	1233	556	3548	0	3167
Grp Volume(v), veh/h	1370	670	53	2	181	86	31	0	29	234	0	670
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1775	0	1765	1774	0	1583
Q Serve(g_s), s	23.7	16.7	1.0	0.1	3.1	3.3	1.1	0.0	1.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	23.7	16.7	1.0	0.1	3.1	3.3	1.1	0.0	1.0	3.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.99		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	1503	994	845	5	354	158	91	0	91	488	0	1818
V/C Ratio(X)	0.91	0.67	0.06	0.41	0.51	0.54	0.34	0.00	0.32	0.48	0.00	0.37
Avail Cap(c_a), veh/h	1503	994	845	139	1000	447	502	0	499	891	0	2178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	10.8	7.2	31.7	27.2	27.3	29.2	0.0	29.1	25.4	0.0	7.3
Incr Delay (d2), s/veh	9.9	3.6	0.1	47.9	1.1	2.9	2.2	0.0	2.0	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	9.4	0.5	0.1	1.6	1.6	0.6	0.0	0.5	1.9	0.0	3.1
LnGrp Delay(d),s/veh	26.7	14.5	7.3	79.6	28.3	30.2	31.4	0.0	31.1	26.1	0.0	7.5
LnGrp LOS	C	B	A	E	C	C	C		C	C		A
Approach Vol, veh/h		2093			269			60			904	
Approach Delay, s/veh		22.3			29.3			31.3			12.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		7.8	4.7	38.5		12.8	32.3	10.9
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.5
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.0	20.5	18.0
Max Q Clear Time (g_c+I1), s		3.1	2.1	18.7		5.9	25.7	5.3
Green Ext Time (p_c), s		0.2	0.0	4.3		2.9	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	419	10	473	5	6	5	1026	324	11	14	531	76
Future Volume (veh/h)	419	10	473	5	6	5	1026	324	11	14	531	76
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	0	157	5	6	5	1026	324	11	14	531	76
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	661	0	295	10	12	10	1211	1877	64	30	717	321
Arrive On Green	0.19	0.00	0.19	0.02	0.02	0.02	0.35	0.54	0.54	0.02	0.20	0.20
Sat Flow, veh/h	3548	0	1583	544	652	544	3442	3493	118	1774	3539	1583
Grp Volume(v), veh/h	495	0	157	16	0	0	1026	164	171	14	531	76
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1740	0	0	1721	1770	1842	1774	1770	1583
Q Serve(g_s), s	9.9	0.0	6.7	0.7	0.0	0.0	20.6	3.5	3.6	0.6	10.5	3.0
Cycle Q Clear(g_c), s	9.9	0.0	6.7	0.7	0.0	0.0	20.6	3.5	3.6	0.6	10.5	3.0
Prop In Lane	1.00		1.00	0.31		0.31	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	661	0	295	33	0	0	1211	951	990	30	717	321
V/C Ratio(X)	0.75	0.00	0.53	0.49	0.00	0.00	0.85	0.17	0.17	0.47	0.74	0.24
Avail Cap(c_a), veh/h	1208	0	539	418	0	0	1678	1265	1316	118	1040	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	27.5	36.4	0.0	0.0	22.4	8.8	8.8	36.5	28.0	25.0
Incr Delay (d2), s/veh	1.7	0.0	1.5	10.7	0.0	0.0	3.1	0.1	0.1	10.9	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	3.0	0.4	0.0	0.0	10.2	1.8	1.8	0.4	5.3	1.3
LnGrp Delay(d),s/veh	30.5	0.0	29.0	47.1	0.0	0.0	25.5	8.9	8.9	47.4	29.7	25.4
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		652			16			1361			621	
Approach Delay, s/veh		30.2			47.1			21.4			29.5	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	44.7		5.9	30.8	19.7		18.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	53.5		18.0	36.5	22.0		25.5
Max Q Clear Time (g_c+I1), s	2.6	5.6		2.7	22.6	12.5		11.9
Green Ext Time (p_c), s	0.0	2.1		0.0	3.7	2.6		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	183	71	128	89	82	0	1345	252	99	1229	27
Future Volume (vph)	18	183	71	128	89	82	0	1345	252	99	1229	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		1.00	1.00		0.97	1.00		1.00	1.00		1.00	
Satd. Flow (prot)		1854	1583		1809	1583		3539	1583		3516	
Flt Permitted		0.97	1.00		0.61	1.00		1.00	1.00		0.67	
Satd. Flow (perm)		1799	1583		1141	1583		3539	1583		2354	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	183	71	128	89	82	0	1345	252	99	1229	27
RTOR Reduction (vph)	0	0	50	0	0	48	0	0	71	0	1	0
Lane Group Flow (vph)	0	201	21	0	217	34	0	1345	181	0	1354	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8			2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		519	457		329	457		2280	1020		1517	
v/s Ratio Prot								0.38				
v/s Ratio Perm		0.11	0.01		c0.19	0.02			0.11		c0.58	
v/c Ratio		0.39	0.04		0.66	0.08		0.59	0.18		0.89	
Uniform Delay, d1		25.6	23.1		28.1	23.3		9.2	6.4		13.4	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.2	0.2		10.0	0.3		1.1	0.4		8.4	
Delay (s)		27.8	23.2		38.1	23.6		10.3	6.8		21.8	
Level of Service		C	C		D	C		B	A		C	
Approach Delay (s)		26.6			34.1			9.8			21.8	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1387	553	271	605	0	0	0	0	400	21	920
Future Volume (vph)	0	1387	553	271	605	0	0	0	0	400	21	920
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	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)		4748	1362	3433	3539						1778	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4748	1362	3433	3539						1778	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1387	553	271	605	0	0	0	0	400	21	920
RTOR Reduction (vph)	0	8	134	0	0	0	0	0	0	0	0	15
Lane Group Flow (vph)	0	1501	297	271	605	0	0	0	0	0	421	905
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		40.9	40.9	23.1	23.1						35.1	80.5
Effective Green, g (s)		40.9	40.9	23.1	23.1						35.1	80.5
Actuated g/C Ratio		0.36	0.36	0.21	0.21						0.31	0.71
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1724	494	704	726						554	2580
v/s Ratio Prot		c0.32		0.08	c0.17						c0.24	0.25
v/s Ratio Perm			0.22									
v/c Ratio		0.87	0.60	0.38	0.83						0.76	0.35
Uniform Delay, d1		33.4	29.2	38.6	42.9						34.9	6.1
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		6.3	5.3	0.4	8.1						5.9	0.1
Delay (s)		39.7	34.5	39.0	51.0						40.9	6.2
Level of Service		D	C	D	D						D	A
Approach Delay (s)		38.6			47.3			0.0			17.1	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	112.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	654	0	0	449	803	95
Future Volume (veh/h)	654	0	0	449	803	95
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	654	0	0	449	803	62
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1418	634	0	1418	1389	639
Arrive On Green	0.40	0.00	0.00	0.40	0.40	0.40
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	654	0	0	449	803	62
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	4.2	0.0	0.0	2.7	5.6	0.7
Cycle Q Clear(g_c), s	4.2	0.0	0.0	2.7	5.6	0.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1418	634	0	1418	1389	639
V/C Ratio(X)	0.46	0.00	0.00	0.32	0.58	0.10
Avail Cap(c_a), veh/h	3462	1549	0	3462	3254	1497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	6.3	7.1	5.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.3	2.6	0.3
LnGrp Delay(d),s/veh	7.0	0.0	0.0	6.4	7.5	5.7
LnGrp LOS	A			A	A	A
Approach Vol, veh/h	654			449	865	
Approach Delay, s/veh	7.0			6.4	7.4	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		15.4		15.3				15.3
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		27.5		28.5				28.5
Max Q Clear Time (g_c+I1), s		7.6		6.2				4.7
Green Ext Time (p_c), s		3.3		4.6				3.1

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1292	1079	0	462	980
Future Volume (veh/h)	0	1292	1079	0	462	980
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1292	1079	0	462	964
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2316	2316	0	775	1384
Arrive On Green	0.00	0.46	0.46	0.00	0.44	0.44
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1292	1079	0	462	964
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	10.4	8.2	0.0	11.1	13.7
Cycle Q Clear(g_c), s	0.0	10.4	8.2	0.0	11.1	13.7
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2316	2316	0	775	1384
V/C Ratio(X)	0.00	0.56	0.47	0.00	0.60	0.70
Avail Cap(c_a), veh/h	0	4010	4010	0	2067	3689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	11.1	10.5	0.0	12.0	12.7
Incr Delay (d2), s/veh	0.0	0.2	0.1	0.0	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.8	3.8	0.0	5.5	6.0
LnGrp Delay(d),s/veh	0.0	11.3	10.6	0.0	12.7	13.4
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1292	1079		1426	
Approach Delay, s/veh		11.3	10.6		13.1	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				28.4		27.4		28.4
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				42.5		63.5		42.5
Max Q Clear Time (g_c+I1), s				12.4		15.7		10.2
Green Ext Time (p_c), s				11.6		7.1		9.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	1051	354	314	1552	317	456	86	528	569	99	372
Future Volume (veh/h)	189	1051	354	314	1552	317	456	86	528	569	99	372
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	189	1051	193	314	1552	66	456	86	314	569	99	345
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	1261	393	822	1817	566	535	290	625	873	473	402
Arrive On Green	0.13	0.25	0.25	0.24	0.36	0.36	0.16	0.16	0.16	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	189	1051	193	314	1552	66	456	86	314	569	99	345
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	12.0	22.7	12.1	8.8	32.7	3.2	14.9	4.7	0.0	17.1	4.8	24.1
Cycle Q Clear(g_c), s	12.0	22.7	12.1	8.8	32.7	3.2	14.9	4.7	0.0	17.1	4.8	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	1261	393	822	1817	566	535	290	625	873	473	402
V/C Ratio(X)	0.82	0.83	0.49	0.38	0.85	0.12	0.85	0.30	0.50	0.65	0.21	0.86
Avail Cap(c_a), veh/h	230	1318	410	833	1890	588	535	290	625	952	515	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	41.2	37.3	36.9	34.4	24.9	47.6	43.3	26.5	38.6	34.0	41.2
Incr Delay (d2), s/veh	20.7	4.6	1.0	0.3	3.9	0.1	12.5	0.6	0.6	1.4	0.2	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	11.1	5.4	4.2	15.9	1.4	8.0	2.5	7.7	8.3	2.5	12.1
LnGrp Delay(d),s/veh	69.7	45.8	38.2	37.2	38.3	25.0	60.0	43.8	27.1	40.0	34.2	55.9
LnGrp LOS	E	D	D	D	D	C	E	D	C	D	C	E
Approach Vol, veh/h		1433			1932			856			1013	
Approach Delay, s/veh		47.9			37.7			46.3			44.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.4	30.6	31.7		21.0	18.0	44.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		30.5	26.5	28.5		16.5	13.5	41.5
Max Q Clear Time (g_c+I1), s		26.1	10.8	24.7		16.9	14.0	34.7
Green Ext Time (p_c), s		1.8	1.0	2.5		0.0	0.0	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	43.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	355	40	642	702	1245	66	741	761	819	871	70
Future Volume (veh/h)	137	355	40	642	702	1245	66	741	761	819	871	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	355	40	642	702	1161	66	741	717	819	871	70
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	858	95	631	1087	831	84	1214	564	854	2106	169
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.05	0.24	0.24	0.25	0.44	0.44
Sat Flow, veh/h	1774	3166	352	5003	3539	1427	1774	5085	1527	3442	4790	384
Grp Volume(v), veh/h	137	197	198	642	702	1161	66	741	717	819	615	326
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1668	1770	1427	1774	1695	1527	1721	1695	1784
Q Serve(g_s), s	11.8	14.1	14.5	19.6	26.6	47.6	5.7	20.1	37.0	36.4	19.3	19.4
Cycle Q Clear(g_c), s	11.8	14.1	14.5	19.6	26.6	47.6	5.7	20.1	37.0	36.4	19.3	19.4
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	160	480	474	631	1087	831	84	1214	564	854	1491	784
V/C Ratio(X)	0.86	0.41	0.42	1.02	0.65	1.40	0.79	0.61	1.27	0.96	0.41	0.42
Avail Cap(c_a), veh/h	207	480	474	631	1087	831	141	1214	564	855	1491	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.49	0.49	0.49	0.67	0.67	0.67	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.6	46.3	46.5	67.7	46.4	35.6	73.1	52.6	49.5	57.5	29.7	29.8
Incr Delay (d2), s/veh	23.4	2.6	2.7	29.3	1.5	182.3	10.6	1.5	131.1	21.4	0.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	7.2	7.4	10.7	13.2	77.4	3.1	9.6	44.8	19.8	9.2	9.9
LnGrp Delay(d),s/veh	93.0	48.9	49.2	97.1	47.9	217.9	83.7	54.1	180.6	79.0	30.6	31.4
LnGrp LOS	F	D	D	F	D	F	F	D	F	E	C	C
Approach Vol, veh/h		532			2505			1524			1760	
Approach Delay, s/veh		60.4			139.3			114.9			53.2	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.9	41.5	24.1	46.5	11.8	72.6	18.4	52.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.5	37.0	19.5	42.0	12.3	63.2	18.1	43.4
Max Q Clear Time (g_c+I1), s	38.4	39.0	21.6	16.5	7.7	21.4	13.8	49.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	7.7	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	102.8
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	0	201	10	12	3	137	261	1	0	120	159
Future Vol, veh/h	90	0	201	10	12	3	137	261	1	0	120	159
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	0	201	10	12	3	137	261	1	0	120	159

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	743	736	200	836	815	262	279	0	0	262	0	0
Stage 1	200	200	-	536	536	-	-	-	-	-	-	-
Stage 2	543	536	-	300	279	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	331	346	841	287	312	777	1284	-	-	1302	-	-
Stage 1	802	736	-	529	523	-	-	-	-	-	-	-
Stage 2	524	523	-	709	680	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	293	309	841	201	279	777	1284	-	-	1302	-	-
Mov Cap-2 Maneuver	293	309	-	201	279	-	-	-	-	-	-	-
Stage 1	716	736	-	472	467	-	-	-	-	-	-	-
Stage 2	454	467	-	540	680	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	20.4	2.8	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1284	-	-	293	841	259	1302	-	-
HCM Lane V/C Ratio	0.107	-	-	0.307	0.239	0.097	-	-	-
HCM Control Delay (s)	8.1	-	-	22.6	10.6	20.4	0	-	-
HCM Lane LOS	A	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1.3	0.9	0.3	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	103	86	40	113	220	89	963	52	273	1284	263
Future Volume (veh/h)	296	103	86	40	113	220	89	963	52	273	1284	263
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	296	103	86	40	113	220	89	963	52	273	1284	263
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	194	162	152	460	270	124	1393	434	324	1967	612
Arrive On Green	0.21	0.21	0.20	0.17	0.17	0.17	0.07	0.27	0.27	0.18	0.39	0.39
Sat Flow, veh/h	1774	940	785	892	2695	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	296	0	189	81	72	220	89	963	52	273	1284	263
Grp Sat Flow(s),veh/h/ln	1774	0	1724	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	15.3	0.0	9.4	3.7	3.4	12.8	4.7	16.3	2.4	14.3	19.9	11.7
Cycle Q Clear(g_c), s	15.3	0.0	9.4	3.7	3.4	12.8	4.7	16.3	2.4	14.3	19.9	11.7
Prop In Lane	1.00		0.46	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	0	355	311	302	270	124	1393	434	324	1967	612
V/C Ratio(X)	0.81	0.00	0.53	0.26	0.24	0.81	0.72	0.69	0.12	0.84	0.65	0.43
Avail Cap(c_a), veh/h	739	0	718	454	442	396	296	2224	693	702	3389	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	34.1	34.6	34.4	38.3	43.7	31.2	26.2	37.9	24.2	21.6
Incr Delay (d2), s/veh	4.3	0.0	1.2	0.4	0.4	8.0	7.6	0.6	0.1	5.9	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	4.6	1.9	1.7	6.2	2.6	7.7	1.1	7.5	9.3	5.2
LnGrp Delay(d),s/veh	40.6	0.0	35.3	35.0	34.8	46.4	51.4	31.8	26.3	43.8	24.5	22.1
LnGrp LOS	D		D	D	C	D	D	C	C	D	C	C
Approach Vol, veh/h		485			373			1104			1820	
Approach Delay, s/veh		38.6			41.7			33.2			27.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.5	30.3		23.8	10.7	41.1		20.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	16.3	18.3		17.3	6.7	21.9		14.8
Green Ext Time (p_c), s	0.8	7.5		2.0	0.1	14.4		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	0	247	4	5	1	232	373	0	0	220	127
Future Vol, veh/h	67	0	247	4	5	1	232	373	0	0	220	127
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	0	247	4	5	1	232	373	0	0	220	127

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1124	1121	284	1244	1184	373	347	0	0	373	0	0
Stage 1	284	284	-	837	837	-	-	-	-	-	-	-
Stage 2	840	837	-	407	347	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	183	206	755	151	189	673	1212	-	-	1185	-	-
Stage 1	723	676	-	361	382	-	-	-	-	-	-	-
Stage 2	360	382	-	621	635	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	152	167	755	87	153	673	1212	-	-	1185	-	-
Mov Cap-2 Maneuver	152	167	-	87	153	-	-	-	-	-	-	-
Stage 1	585	676	-	292	309	-	-	-	-	-	-	-
Stage 2	286	309	-	418	635	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.4	36.3	3.3	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1212	-	-	152	755	125	1185	-	-
HCM Lane V/C Ratio	0.191	-	-	0.441	0.327	0.08	-	-	-
HCM Control Delay (s)	8.7	-	-	46.1	12.1	36.3	0	-	-
HCM Lane LOS	A	-	-	E	B	E	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	2	1.4	0.3	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	184	239	22	229	115	267	986	24	113	1247	277
Future Volume (veh/h)	250	184	239	22	229	115	267	986	24	113	1247	277
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	224	220	239	22	229	115	267	986	10	113	1247	277
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	386	328	32	337	176	325	2210	688	165	1751	888
Arrive On Green	0.21	0.21	0.20	0.15	0.15	0.14	0.18	0.43	0.43	0.09	0.34	0.35
Sat Flow, veh/h	1774	1863	1583	206	2172	1136	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	224	220	239	198	0	168	267	986	10	113	1247	277
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1852	0	1662	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	12.4	11.5	15.3	11.0	0.0	10.4	15.7	14.7	0.4	6.7	23.1	10.1
Cycle Q Clear(g_c), s	12.4	11.5	15.3	11.0	0.0	10.4	15.7	14.7	0.4	6.7	23.1	10.1
Prop In Lane	1.00		1.00	0.11		0.68	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	367	386	328	287	0	258	325	2210	688	165	1751	888
V/C Ratio(X)	0.61	0.57	0.73	0.69	0.00	0.65	0.82	0.45	0.01	0.69	0.71	0.31
Avail Cap(c_a), veh/h	630	661	562	658	0	590	556	3038	946	314	2344	1072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	38.7	40.4	43.4	0.0	43.6	42.6	21.5	17.4	47.7	30.9	12.7
Incr Delay (d2), s/veh	1.6	1.3	3.1	2.9	0.0	2.8	5.2	0.1	0.0	5.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	6.1	7.0	5.8	0.0	4.9	8.2	6.9	0.2	3.5	11.0	6.6
LnGrp Delay(d),s/veh	40.7	40.0	43.5	46.3	0.0	46.4	47.8	21.6	17.5	52.7	31.6	12.9
LnGrp LOS	D	D	D	D		D	D	C	B	D	C	B
Approach Vol, veh/h		683			366			1263			1637	
Approach Delay, s/veh		41.4			46.4			27.1			29.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	50.1		25.5	22.8	40.3		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.7	63.3		37.0	32.5	48.5		37.0
Max Q Clear Time (g_c+I1), s	8.7	16.7		17.3	17.7	25.1		13.0
Green Ext Time (p_c), s	0.2	8.5		3.6	0.7	10.7		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	356	66	358	566	633	126	380	441	395	396	55
Future Volume (veh/h)	15	356	66	358	566	633	126	380	441	395	396	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	15	356	66	358	566	633	126	380	0	395	396	55
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	628	115	402	721	613	160	994	445	476	526	73
Arrive On Green	0.05	0.21	0.21	0.23	0.39	0.39	0.09	0.28	0.00	0.14	0.33	0.32
Sat Flow, veh/h	1774	2987	548	1774	1863	1583	1774	3539	1583	3442	1601	222
Grp Volume(v), veh/h	15	209	213	358	566	633	126	380	0	395	0	451
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1863	1583	1774	1770	1583	1721	0	1824
Q Serve(g_s), s	0.9	11.8	12.0	21.7	29.7	43.0	7.7	9.6	0.0	12.4	0.0	24.5
Cycle Q Clear(g_c), s	0.9	11.8	12.0	21.7	29.7	43.0	7.7	9.6	0.0	12.4	0.0	24.5
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	88	372	371	402	721	613	160	994	445	476	0	599
V/C Ratio(X)	0.17	0.56	0.57	0.89	0.78	1.03	0.79	0.38	0.00	0.83	0.00	0.75
Avail Cap(c_a), veh/h	296	379	379	602	721	613	176	994	445	552	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	39.3	39.4	41.6	29.9	34.0	49.4	32.2	0.0	46.6	0.0	33.3
Incr Delay (d2), s/veh	0.9	1.8	2.0	10.9	5.7	44.9	19.1	1.1	0.0	9.2	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.9	6.1	11.9	16.4	26.4	4.6	4.9	0.0	6.5	0.0	13.7
LnGrp Delay(d),s/veh	51.5	41.1	41.4	52.5	35.6	79.0	68.5	33.3	0.0	55.8	0.0	41.8
LnGrp LOS	D	D	D	D	D	F	E	C		E		D
Approach Vol, veh/h		437			1557			506			846	
Approach Delay, s/veh		41.6			57.1			42.0			48.3	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	35.2	29.1	27.4	14.0	40.5	9.5	47.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	15.3	29.2	37.2	23.3	10.5	36.0	18.0	42.5
Max Q Clear Time (g_c+I1), s	14.4	11.6	23.7	14.0	9.7	26.5	2.9	45.0
Green Ext Time (p_c), s	0.4	2.3	0.9	1.7	0.0	2.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1036	52	618	1600	134	45	74	283	295	269	196
Future Volume (veh/h)	143	1036	52	618	1600	134	45	74	283	295	269	196
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	143	1036	52	618	1600	0	45	74	6	295	269	127
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	1481	74	798	2337	728	124	130	111	692	374	318
Arrive On Green	0.07	0.30	0.29	0.23	0.46	0.00	0.07	0.07	0.07	0.20	0.20	0.20
Sat Flow, veh/h	3442	4960	249	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	143	708	380	618	1600	0	45	74	6	295	269	127
Grp Sat Flow(s),veh/h/ln	1721	1695	1819	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.2	14.9	14.9	13.5	20.0	0.0	1.9	3.1	0.3	6.0	10.9	5.6
Cycle Q Clear(g_c), s	3.2	14.9	14.9	13.5	20.0	0.0	1.9	3.1	0.3	6.0	10.9	5.6
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	1012	543	798	2337	728	124	130	111	692	374	318
V/C Ratio(X)	0.59	0.70	0.70	0.77	0.68	0.00	0.36	0.57	0.05	0.43	0.72	0.40
Avail Cap(c_a), veh/h	470	1390	746	1198	3160	984	419	440	374	1240	671	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	25.0	25.1	28.9	17.1	0.0	35.7	36.2	34.9	28.1	30.0	27.9
Incr Delay (d2), s/veh	2.2	0.9	1.8	1.8	0.4	0.0	1.8	3.9	0.2	0.4	2.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	7.1	7.8	6.6	9.4	0.0	1.0	1.7	0.1	2.9	5.8	2.5
LnGrp Delay(d),s/veh	38.5	26.0	26.8	30.8	17.5	0.0	37.5	40.1	35.1	28.5	32.6	28.7
LnGrp LOS	D	C	C	C	B		D	D	D	C	C	C
Approach Vol, veh/h		1231			2218			125			691	
Approach Delay, s/veh		27.7			21.2			38.9			30.2	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.2	22.7	28.0		9.6	9.7	41.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	27.5	32.5		18.5	10.5	49.5
Max Q Clear Time (g_c+I1), s		12.9	15.5	16.9		5.1	5.2	22.0
Green Ext Time (p_c), s		2.8	1.9	6.6		0.4	0.2	14.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1001	370	59	2	379	145	44	25	5	124	10	1373
Future Volume (veh/h)	1001	370	59	2	379	145	44	25	5	124	10	1373
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1088	402	64	2	379	145	44	25	5	131	0	1373
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1116	993	844	17	798	357	108	92	18	581	0	1567
Arrive On Green	0.32	0.53	0.53	0.01	0.23	0.23	0.06	0.06	0.05	0.16	0.00	0.17
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1774	1508	302	3548	0	3167
Grp Volume(v), veh/h	1088	402	64	2	379	145	44	0	30	131	0	1373
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1774	0	1810	1774	0	1583
Q Serve(g_s), s	22.2	9.1	1.4	0.1	6.6	5.5	1.7	0.0	1.1	2.3	0.0	4.4
Cycle Q Clear(g_c), s	22.2	9.1	1.4	0.1	6.6	5.5	1.7	0.0	1.1	2.3	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	1116	993	844	17	798	357	108	0	111	581	0	1567
V/C Ratio(X)	0.98	0.40	0.08	0.12	0.47	0.41	0.41	0.00	0.27	0.23	0.00	0.88
Avail Cap(c_a), veh/h	1116	993	844	138	798	357	463	0	472	825	0	1785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	9.9	8.1	34.8	23.8	23.4	32.1	0.0	31.8	25.8	0.0	16.0
Incr Delay (d2), s/veh	21.6	1.2	0.2	2.9	2.0	3.4	2.4	0.0	1.3	0.2	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	5.0	0.6	0.1	3.4	2.8	0.9	0.0	0.6	1.1	0.0	11.9
LnGrp Delay(d),s/veh	45.3	11.1	8.2	37.7	25.8	26.8	34.5	0.0	33.1	26.0	0.0	20.8
LnGrp LOS	D	B	A	D	C	C	C		C	C		C
Approach Vol, veh/h		1554			526			74			1504	
Approach Delay, s/veh		34.9			26.2			33.9			21.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		8.3	4.7	42.3		15.6	27.0	20.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.5	22.5	16.0
Max Q Clear Time (g_c+I1), s		3.7	2.1	11.1		6.4	24.2	8.6
Green Ext Time (p_c), s		0.2	0.0	2.7		5.2	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	13	689	19	12	7	706	324	18	9	796	221
Future Volume (veh/h)	189	13	689	19	12	7	706	324	18	9	796	221
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	130	0	392	19	12	7	706	324	18	9	796	221
Adj No. of Lanes	1	0	2	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	0	548	40	25	15	883	1801	100	33	1028	460
Arrive On Green	0.17	0.00	0.17	0.04	0.04	0.04	0.26	0.53	0.52	0.02	0.29	0.29
Sat Flow, veh/h	1774	0	3167	881	556	324	3442	3410	189	1774	3539	1583
Grp Volume(v), veh/h	130	0	392	38	0	0	706	168	174	9	796	221
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1761	0	0	1721	1770	1829	1774	1770	1583
Q Serve(g_s), s	4.5	0.0	8.0	1.4	0.0	0.0	13.1	3.4	3.4	0.3	14.0	7.8
Cycle Q Clear(g_c), s	4.5	0.0	8.0	1.4	0.0	0.0	13.1	3.4	3.4	0.3	14.0	7.8
Prop In Lane	1.00		1.00	0.50		0.18	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	307	0	548	79	0	0	883	935	966	33	1028	460
V/C Ratio(X)	0.42	0.00	0.72	0.48	0.00	0.00	0.80	0.18	0.18	0.27	0.77	0.48
Avail Cap(c_a), veh/h	482	0	860	479	0	0	1213	1078	1115	143	1195	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	26.6	31.8	0.0	0.0	23.7	8.4	8.4	32.9	22.1	19.9
Incr Delay (d2), s/veh	0.9	0.0	1.8	4.4	0.0	0.0	2.7	0.1	0.1	4.2	2.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	3.6	0.8	0.0	0.0	6.5	1.7	1.7	0.2	7.3	3.5
LnGrp Delay(d),s/veh	26.1	0.0	28.3	36.2	0.0	0.0	26.4	8.5	8.5	37.2	24.9	20.7
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		522			38			1048			1026	
Approach Delay, s/veh		27.8			36.2			20.6			24.1	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	40.0		7.1	21.5	23.8		15.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	41.0		18.0	23.5	22.5		18.0
Max Q Clear Time (g_c+I1), s	2.3	5.4		3.4	15.1	16.0		10.0
Green Ext Time (p_c), s	0.0	2.1		0.1	1.9	3.3		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	115	58	184	92	129	1	1414	161	110	1322	22
Future Volume (vph)	12	115	58	184	92	129	1	1414	161	110	1322	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		1.00	1.00		0.97	1.00		1.00	1.00		1.00	
Satd. Flow (prot)		1854	1583		1803	1583		3539	1583		3518	
Flt Permitted		0.96	1.00		0.67	1.00		0.95	1.00		0.63	
Satd. Flow (perm)		1796	1583		1251	1583		3378	1583		2234	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	115	58	184	92	129	1	1414	161	110	1322	22
RTOR Reduction (vph)	0	0	41	0	0	41	0	0	43	0	1	0
Lane Group Flow (vph)	0	127	17	0	276	88	0	1415	118	0	1453	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		518	457		361	457		2176	1020		1439	
v/s Ratio Prot												
v/s Ratio Perm		0.07	0.01		c0.22	0.06		0.42	0.07		c0.65	
v/c Ratio		0.25	0.04		0.76	0.19		0.65	0.12		1.01	
Uniform Delay, d1		24.5	23.0		29.2	24.1		9.8	6.1		16.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.1	0.1		14.3	0.9		1.5	0.2		26.1	
Delay (s)		25.6	23.1		43.5	25.0		11.3	6.4		42.1	
Level of Service		C	C		D	C		B	A		D	
Approach Delay (s)		24.8			37.6			10.8			42.1	
Approach LOS		C			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	111.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1111	582	578	1177	0	0	0	0	312	1	1068
Future Volume (vph)	0	1111	582	578	1177	0	0	0	0	312	1	1068
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
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	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)		4673	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4673	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1111	582	578	1177	0	0	0	0	312	1	1068
RTOR Reduction (vph)	0	36	214	0	0	0	0	0	0	0	0	7
Lane Group Flow (vph)	0	1325	118	578	1177	0	0	0	0	0	313	1061
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		31.5	31.5	26.5	26.5						18.5	54.5
Effective Green, g (s)		32.0	32.0	27.0	27.0						19.0	55.0
Actuated g/C Ratio		0.36	0.36	0.30	0.30						0.21	0.61
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1661	484	1029	1061						374	2206
v/s Ratio Prot		c0.28		0.17	c0.33						c0.18	0.29
v/s Ratio Perm			0.09									
v/c Ratio		0.80	0.24	0.56	1.11						0.84	0.48
Uniform Delay, d1		26.1	20.5	26.5	31.5						34.0	9.6
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		2.8	0.3	0.7	62.7						19.5	0.2
Delay (s)		28.8	20.7	27.2	94.2						53.5	9.8
Level of Service		C	C	C	F						D	A
Approach Delay (s)		27.3			72.1			0.0			19.7	
Approach LOS		C			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1151	0	0	214	1024	76
Future Volume (veh/h)	1151	0	0	214	1024	76
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	1151	0	0	214	1024	43
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1662	743	0	1662	1396	642
Arrive On Green	0.47	0.00	0.00	0.47	0.41	0.41
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	1151	0	0	214	1024	43
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	12.3	0.0	0.0	1.6	12.1	0.8
Cycle Q Clear(g_c), s	12.3	0.0	0.0	1.6	12.1	0.8
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1662	743	0	1662	1396	642
V/C Ratio(X)	0.69	0.00	0.00	0.13	0.73	0.07
Avail Cap(c_a), veh/h	2135	955	0	2135	2148	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	0.0	0.0	7.2	12.1	8.7
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	0.8	5.8	0.4
LnGrp Delay(d),s/veh	10.7	0.0	0.0	7.2	12.8	8.8
LnGrp LOS	B			A	B	A
Approach Vol, veh/h	1151			214	1067	
Approach Delay, s/veh	10.7			7.2	12.7	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.5		25.6				25.6
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		28.5		27.5				27.5
Max Q Clear Time (g_c+I1), s		14.1		14.3				3.6
Green Ext Time (p_c), s		3.9		6.8				1.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1262	1127	0	694	1127
Future Volume (veh/h)	0	1262	1127	0	694	1127
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1262	1127	0	602	1210
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2032	2032	0	907	1618
Arrive On Green	0.00	0.40	0.40	0.00	0.51	0.51
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1262	1127	0	602	1210
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	13.3	11.5	0.0	16.9	20.3
Cycle Q Clear(g_c), s	0.0	13.3	11.5	0.0	16.9	20.3
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2032	2032	0	907	1618
V/C Ratio(X)	0.00	0.62	0.55	0.00	0.66	0.75
Avail Cap(c_a), veh/h	0	3029	3029	0	1822	3253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.1	15.6	0.0	12.2	13.0
Incr Delay (d2), s/veh	0.0	0.3	0.2	0.0	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.3	5.4	0.0	8.4	8.9
LnGrp Delay(d),s/veh	0.0	16.4	15.8	0.0	13.0	13.7
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1262	1127		1812	
Approach Delay, s/veh		16.4	15.8		13.5	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				29.8		37.3		29.8
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				38.5		67.5		38.5
Max Q Clear Time (g_c+I1), s				15.3		22.3		13.5
Green Ext Time (p_c), s				10.0		10.5		9.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	1435	352	414	1012	662	180	173	282	245	47	141
Future Volume (veh/h)	556	1435	352	414	1012	662	180	173	282	245	47	141
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	556	1435	191	414	1012	411	180	173	68	245	47	114
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	582	1975	615	919	1664	518	353	191	585	410	222	188
Arrive On Green	0.33	0.39	0.39	0.27	0.33	0.33	0.10	0.10	0.10	0.12	0.12	0.12
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	556	1435	191	414	1012	411	180	173	68	245	47	114
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	29.9	23.4	8.2	9.8	16.3	23.0	4.8	9.0	0.0	6.6	2.2	6.7
Cycle Q Clear(g_c), s	29.9	23.4	8.2	9.8	16.3	23.0	4.8	9.0	0.0	6.6	2.2	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	582	1975	615	919	1664	518	353	191	585	410	222	188
V/C Ratio(X)	0.96	0.73	0.31	0.45	0.61	0.79	0.51	0.91	0.12	0.60	0.21	0.61
Avail Cap(c_a), veh/h	582	2383	742	919	1851	576	353	191	585	1076	583	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	25.4	20.7	29.8	27.6	29.8	41.4	43.3	20.2	40.7	38.8	40.8
Incr Delay (d2), s/veh	26.5	0.9	0.3	0.3	0.5	6.8	1.2	39.8	0.1	1.4	0.5	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	11.1	3.6	4.7	7.7	11.0	2.4	6.7	1.2	3.2	1.2	3.1
LnGrp Delay(d),s/veh	58.5	26.3	21.0	30.1	28.0	36.6	42.7	83.1	20.3	42.1	39.3	43.9
LnGrp LOS	E	C	C	C	C	D	D	F	C	D	D	D
Approach Vol, veh/h		2182			1837			421			406	
Approach Delay, s/veh		34.1			30.4			55.7			42.3	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		14.6	29.0	40.9		13.0	35.0	34.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.0	20.3	44.2		8.5	30.5	34.0
Max Q Clear Time (g_c+I1), s		8.7	11.8	25.4		11.0	31.9	25.0
Green Ext Time (p_c), s		1.4	1.0	10.9		0.0	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	749	47	534	336	953	38	552	908	996	938	43
Future Volume (veh/h)	125	749	47	534	336	953	38	552	908	996	938	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	125	749	47	534	336	869	38	552	864	996	938	43
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	909	57	888	1108	759	49	1214	645	677	2030	93
Arrive On Green	0.14	0.27	0.27	0.18	0.31	0.31	0.03	0.24	0.24	0.20	0.41	0.41
Sat Flow, veh/h	1774	3354	210	5003	3539	1430	1774	5085	1527	3442	4978	228
Grp Volume(v), veh/h	125	395	401	534	336	869	38	552	864	996	638	343
Grp Sat Flow(s),veh/h/ln	1774	1770	1794	1668	1770	1430	1774	1695	1527	1721	1695	1815
Q Serve(g_s), s	10.2	32.5	32.5	15.2	11.2	48.5	3.3	14.4	37.0	30.5	21.3	21.4
Cycle Q Clear(g_c), s	10.2	32.5	32.5	15.2	11.2	48.5	3.3	14.4	37.0	30.5	21.3	21.4
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	240	480	486	888	1108	759	49	1214	645	677	1383	740
V/C Ratio(X)	0.52	0.82	0.82	0.60	0.30	1.14	0.78	0.45	1.34	1.47	0.46	0.46
Avail Cap(c_a), veh/h	241	480	486	888	1108	759	102	1214	645	677	1383	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.79	0.79	0.79	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.3	53.0	53.0	58.7	40.4	39.0	74.9	50.4	45.5	62.2	33.5	33.5
Incr Delay (d2), s/veh	2.0	14.8	14.7	0.9	0.6	77.6	16.4	0.9	159.7	219.8	1.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	17.9	18.1	7.1	5.5	48.8	1.8	6.8	56.2	35.2	10.1	11.1
LnGrp Delay(d),s/veh	64.3	67.8	67.7	59.6	41.0	116.5	91.3	51.2	205.2	282.1	34.6	35.6
LnGrp LOS	E	E	E	E	D	F	F	D	F	F	C	D
Approach Vol, veh/h		921			1739			1454			1977	
Approach Delay, s/veh		67.3			84.5			143.8			159.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	41.5	32.0	46.5	8.8	67.7	25.5	53.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.5	37.0	27.5	42.0	8.9	58.6	21.1	48.4
Max Q Clear Time (g_c+I1), s	32.5	39.0	17.2	34.5	5.3	23.4	12.2	50.5
Green Ext Time (p_c), s	0.0	0.0	1.6	3.0	0.0	7.9	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	120.4
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	5	320	6	7	1	86	209	8	2	145	50
Future Vol, veh/h	50	5	320	6	7	1	86	209	8	2	145	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	5	320	6	7	1	86	209	8	2	145	50

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	563	563	170	722	584	213	195	0	0	217	0	0
Stage 1	174	174	-	385	385	-	-	-	-	-	-	-
Stage 2	389	389	-	337	199	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	437	435	874	342	423	827	1378	-	-	1353	-	-
Stage 1	828	755	-	638	611	-	-	-	-	-	-	-
Stage 2	635	608	-	677	736	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	409	407	874	204	396	827	1378	-	-	1353	-	-
Mov Cap-2 Maneuver	409	407	-	204	396	-	-	-	-	-	-	-
Stage 1	777	753	-	598	573	-	-	-	-	-	-	-
Stage 2	587	570	-	425	735	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	18	2.2	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1378	-	-	409	859	290	1353	-	-
HCM Lane V/C Ratio	0.062	-	-	0.122	0.378	0.048	0.001	-	-
HCM Control Delay (s)	7.8	-	-	15	11.7	18	7.7	0	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	1.8	0.2	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	149	56	13	85	136	50	956	31	254	1075	394
Future Volume (veh/h)	332	149	56	13	85	136	50	956	31	254	1075	394
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	332	149	56	13	85	136	50	956	31	254	1075	394
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	404	294	111	52	357	179	71	1439	448	301	2097	653
Arrive On Green	0.23	0.23	0.23	0.11	0.11	0.11	0.04	0.28	0.28	0.17	0.41	0.41
Sat Flow, veh/h	1774	1292	485	456	3153	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	332	0	205	52	46	136	50	956	31	254	1075	394
Grp Sat Flow(s),veh/h/ln	1774	0	1777	1840	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	15.5	0.0	8.8	2.3	2.0	7.3	2.4	14.5	1.2	12.1	13.7	17.0
Cycle Q Clear(g_c), s	15.5	0.0	8.8	2.3	2.0	7.3	2.4	14.5	1.2	12.1	13.7	17.0
Prop In Lane	1.00		0.27	0.25		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	404	0	405	209	201	179	71	1439	448	301	2097	653
V/C Ratio(X)	0.82	0.00	0.51	0.25	0.23	0.76	0.70	0.66	0.07	0.84	0.51	0.60
Avail Cap(c_a), veh/h	1067	0	1069	411	395	354	234	2885	898	803	4516	1406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	29.4	35.3	35.2	37.5	41.4	27.6	22.9	35.1	19.1	20.1
Incr Delay (d2), s/veh	4.2	0.0	1.0	0.6	0.6	6.4	11.7	0.5	0.1	6.4	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	4.4	1.2	1.0	3.5	1.4	6.8	0.6	6.5	6.4	7.5
LnGrp Delay(d),s/veh	36.2	0.0	30.4	35.9	35.8	43.9	53.1	28.2	22.9	41.5	19.3	21.0
LnGrp LOS	D		C	D	D	D	D	C	C	D	B	C
Approach Vol, veh/h		537			234			1037			1723	
Approach Delay, s/veh		34.0			40.5			29.2			22.9	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.3	29.2		24.4	8.0	40.5		14.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	39.5	49.5		52.5	11.5	77.5		19.5
Max Q Clear Time (g_c+I1), s	14.1	16.5		17.5	4.4	19.0		9.3
Green Ext Time (p_c), s	0.7	8.2		2.4	0.0	13.1		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	1	406	2	2	0	156	242	2	1	374	96
Future Vol, veh/h	61	1	406	2	2	0	156	242	2	1	374	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	1	406	2	2	0	156	242	2	1	374	96

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	980	980	422	1183	1027	243	470	0	0	244	0	0
Stage 1	424	424	-	555	555	-	-	-	-	-	-	-
Stage 2	556	556	-	628	472	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	229	250	632	166	234	796	1092	-	-	1322	-	-
Stage 1	608	587	-	516	513	-	-	-	-	-	-	-
Stage 2	515	513	-	471	559	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	202	214	632	53	200	796	1092	-	-	1322	-	-
Mov Cap-2 Maneuver	202	214	-	53	200	-	-	-	-	-	-	-
Stage 1	521	586	-	442	440	-	-	-	-	-	-	-
Stage 2	439	440	-	168	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.7	50	3.4	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1092	-	-	202	632	84	1322	-	-
HCM Lane V/C Ratio	0.143	-	-	0.307	0.642	0.048	0.001	-	-
HCM Control Delay (s)	8.8	-	-	30.5	20.4	50	7.7	0	-
HCM Lane LOS	A	-	-	D	C	F	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	1.2	4.6	0.1	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	237	231	14	202	36	269	1094	49	150	889	323
Future Volume (veh/h)	282	237	231	14	202	36	269	1094	49	150	889	323
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	250	282	231	14	202	36	269	1094	49	150	889	323
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	451	358	25	375	70	348	1853	577	219	1486	775
Arrive On Green	0.23	0.23	0.23	0.11	0.13	0.11	0.20	0.36	0.36	0.12	0.29	0.27
Sat Flow, veh/h	1774	1927	1529	195	2890	536	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	250	272	241	133	0	119	269	1094	49	150	889	323
Grp Sat Flow(s),veh/h/ln	1774	1863	1593	1853	0	1768	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	10.2	10.6	11.1	5.5	0.0	5.1	11.7	14.1	1.6	6.6	12.2	10.6
Cycle Q Clear(g_c), s	10.2	10.6	11.1	5.5	0.0	5.1	11.7	14.1	1.6	6.6	12.2	10.6
Prop In Lane	1.00		0.96	0.11		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	436	373	241	0	229	348	1853	577	219	1486	775
V/C Ratio(X)	0.60	0.62	0.65	0.55	0.00	0.52	0.77	0.59	0.08	0.68	0.60	0.42
Avail Cap(c_a), veh/h	897	942	806	880	0	840	875	3795	1182	460	2603	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	27.8	28.0	33.2	0.0	33.1	30.9	20.9	16.9	34.0	24.6	13.3
Incr Delay (d2), s/veh	1.4	1.5	1.9	2.0	0.0	1.8	3.7	0.3	0.1	3.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.6	5.0	2.9	0.0	2.6	6.0	6.6	0.7	3.4	5.7	6.6
LnGrp Delay(d),s/veh	29.1	29.3	29.9	35.1	0.0	34.9	34.6	21.2	17.0	37.7	25.0	13.6
LnGrp LOS	C	C	C	D		C	C	C	B	D	C	B
Approach Vol, veh/h		763			252			1412			1362	
Approach Delay, s/veh		29.4			35.0			23.6			23.7	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	32.5		22.0	18.9	26.7		13.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	19.5	59.0		39.5	38.5	40.0		37.0
Max Q Clear Time (g_c+I1), s	8.6	16.1		13.1	13.7	14.2		7.5
Green Ext Time (p_c), s	0.3	9.9		4.4	0.8	8.0		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	424	46	270	383	385	51	306	556	384	396	37
Future Volume (veh/h)	5	424	46	270	383	385	51	306	556	384	396	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	5	424	46	270	383	385	51	306	0	384	396	37
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	534	58	307	541	460	66	1247	558	463	755	71
Arrive On Green	0.05	0.17	0.17	0.17	0.29	0.29	0.04	0.35	0.00	0.13	0.45	0.45
Sat Flow, veh/h	1774	3223	348	1774	1863	1583	1774	3539	1583	3442	1678	157
Grp Volume(v), veh/h	5	232	238	270	383	385	51	306	0	384	0	433
Grp Sat Flow(s),veh/h/ln	1774	1770	1801	1774	1863	1583	1774	1770	1583	1721	0	1835
Q Serve(g_s), s	0.3	13.0	13.1	15.3	19.0	23.5	2.9	6.3	0.0	11.2	0.0	17.5
Cycle Q Clear(g_c), s	0.3	13.0	13.1	15.3	19.0	23.5	2.9	6.3	0.0	11.2	0.0	17.5
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	86	293	298	307	541	460	66	1247	558	463	0	825
V/C Ratio(X)	0.06	0.79	0.80	0.88	0.71	0.84	0.77	0.25	0.00	0.83	0.00	0.52
Avail Cap(c_a), veh/h	309	429	436	456	605	514	156	1269	568	617	0	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	41.3	41.4	41.6	32.7	34.3	49.2	23.7	0.0	43.5	0.0	20.5
Incr Delay (d2), s/veh	0.3	6.1	6.4	12.5	3.4	10.7	17.1	0.1	0.0	7.0	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.9	7.1	8.6	10.3	11.7	1.8	3.1	0.0	5.8	0.0	9.4
LnGrp Delay(d),s/veh	47.1	47.5	47.8	54.2	36.1	45.0	66.4	23.8	0.0	50.5	0.0	22.8
LnGrp LOS	D	D	D	D	D	D	E	C		D		C
Approach Vol, veh/h		475			1038			357			817	
Approach Delay, s/veh		47.6			44.1			29.9			35.8	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	40.8	22.4	21.6	8.3	50.9	9.5	34.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	37.0	26.5	25.0	9.1	46.4	18.0	33.5
Max Q Clear Time (g_c+I1), s	13.2	8.3	17.3	15.1	4.9	19.5	2.3	25.5
Green Ext Time (p_c), s	0.7	2.1	0.5	2.0	0.0	2.9	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	1363	34	336	905	298	170	232	389	114	109	89
Future Volume (veh/h)	237	1363	34	336	905	298	170	232	389	114	109	89
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	237	1363	34	336	905	0	170	232	112	114	109	20
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	1992	50	431	2125	662	296	311	264	317	172	146
Arrive On Green	0.10	0.39	0.39	0.13	0.42	0.00	0.17	0.17	0.17	0.09	0.09	0.09
Sat Flow, veh/h	3442	5103	127	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	237	905	492	336	905	0	170	232	112	114	109	20
Grp Sat Flow(s),veh/h/ln	1721	1695	1840	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	5.3	17.8	17.8	7.6	10.1	0.0	7.1	9.5	5.1	2.5	4.5	0.9
Cycle Q Clear(g_c), s	5.3	17.8	17.8	7.6	10.1	0.0	7.1	9.5	5.1	2.5	4.5	0.9
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	337	1324	718	431	2125	662	296	311	264	317	172	146
V/C Ratio(X)	0.70	0.68	0.68	0.78	0.43	0.00	0.57	0.75	0.42	0.36	0.64	0.14
Avail Cap(c_a), veh/h	711	1973	1071	581	2768	862	544	571	485	969	524	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	20.3	20.3	33.9	16.5	0.0	30.7	31.7	29.8	34.1	35.0	33.4
Incr Delay (d2), s/veh	2.7	0.6	1.2	4.7	0.1	0.0	1.8	3.6	1.1	0.7	3.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.4	9.2	3.9	4.7	0.0	3.6	5.1	2.3	1.2	2.5	0.4
LnGrp Delay(d),s/veh	37.6	20.9	21.4	38.6	16.6	0.0	32.4	35.3	30.9	34.7	38.8	33.8
LnGrp LOS	D	C	C	D	B		C	D	C	C	D	C
Approach Vol, veh/h		1634			1241			514			243	
Approach Delay, s/veh		23.5			22.6			33.4			36.5	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		11.9	14.5	35.7		17.8	12.3	37.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		22.5	13.5	46.5		24.5	16.5	43.5
Max Q Clear Time (g_c+I1), s		6.5	9.6	19.8		11.5	7.3	12.1
Green Ext Time (p_c), s		0.9	0.5	11.4		1.9	0.5	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1260	616	49	2	181	86	31	20	9	226	11	693
Future Volume (veh/h)	1260	616	49	2	181	86	31	20	9	226	11	693
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1370	670	53	2	181	86	31	20	9	234	0	693
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1500	993	844	5	353	158	90	63	29	492	0	1819
Arrive On Green	0.44	0.53	0.53	0.00	0.10	0.10	0.05	0.05	0.05	0.14	0.00	0.14
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1751	1233	556	3548	0	3167
Grp Volume(v), veh/h	1370	670	53	2	181	86	31	0	29	234	0	693
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1775	0	1765	1774	0	1583
Q Serve(g_s), s	23.8	16.7	1.0	0.1	3.1	3.3	1.1	0.0	1.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	23.8	16.7	1.0	0.1	3.1	3.3	1.1	0.0	1.0	3.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.99		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	1500	993	844	5	353	158	91	0	91	492	0	1819
V/C Ratio(X)	0.91	0.67	0.06	0.41	0.51	0.54	0.34	0.00	0.32	0.48	0.00	0.38
Avail Cap(c_a), veh/h	1500	993	844	139	999	447	501	0	498	890	0	2175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.9	10.9	7.2	31.8	27.2	27.3	29.2	0.0	29.2	25.3	0.0	7.4
Incr Delay (d2), s/veh	10.0	3.7	0.1	47.9	1.1	2.9	2.2	0.0	2.0	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	9.4	0.5	0.1	1.6	1.6	0.6	0.0	0.5	1.9	0.0	3.3
LnGrp Delay(d),s/veh	26.9	14.5	7.3	79.6	28.4	30.2	31.5	0.0	31.1	26.1	0.0	7.5
LnGrp LOS	C	B	A	E	C	C	C		C	C		A
Approach Vol, veh/h		2093			269			60			927	
Approach Delay, s/veh		22.4			29.3			31.3			12.2	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		7.8	4.7	38.5		12.8	32.3	10.9
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.5
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.0	20.5	18.0
Max Q Clear Time (g_c+I1), s		3.1	2.1	18.7		5.9	25.8	5.3
Green Ext Time (p_c), s		0.2	0.0	4.3		3.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	419	10	496	5	6	5	1026	324	11	14	531	76
Future Volume (veh/h)	419	10	496	5	6	5	1026	324	11	14	531	76
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	502	0	172	5	6	5	1026	324	11	14	531	76
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	670	0	299	10	12	10	1209	1874	63	30	715	320
Arrive On Green	0.19	0.00	0.19	0.02	0.02	0.02	0.35	0.54	0.54	0.02	0.20	0.20
Sat Flow, veh/h	3548	0	1583	544	652	544	3442	3493	118	1774	3539	1583
Grp Volume(v), veh/h	502	0	172	16	0	0	1026	164	171	14	531	76
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1740	0	0	1721	1770	1842	1774	1770	1583
Q Serve(g_s), s	10.1	0.0	7.4	0.7	0.0	0.0	20.8	3.6	3.6	0.6	10.6	3.0
Cycle Q Clear(g_c), s	10.1	0.0	7.4	0.7	0.0	0.0	20.8	3.6	3.6	0.6	10.6	3.0
Prop In Lane	1.00		1.00	0.31		0.31	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	670	0	299	33	0	0	1209	949	988	30	715	320
V/C Ratio(X)	0.75	0.00	0.58	0.49	0.00	0.00	0.85	0.17	0.17	0.47	0.74	0.24
Avail Cap(c_a), veh/h	1201	0	536	416	0	0	1668	1257	1308	118	1034	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	27.8	36.6	0.0	0.0	22.6	8.9	8.9	36.7	28.2	25.2
Incr Delay (d2), s/veh	1.7	0.0	1.7	10.7	0.0	0.0	3.2	0.1	0.1	10.9	1.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	3.4	0.4	0.0	0.0	10.4	1.8	1.8	0.4	5.3	1.4
LnGrp Delay(d),s/veh	30.6	0.0	29.6	47.3	0.0	0.0	25.7	9.0	9.0	47.6	29.9	25.6
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		674			16			1361			621	
Approach Delay, s/veh		30.3			47.3			21.6			29.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	44.9		5.9	31.0	19.7		18.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	53.5		18.0	36.5	22.0		25.5
Max Q Clear Time (g_c+I1), s	2.6	5.6		2.7	22.8	12.6		12.1
Green Ext Time (p_c), s	0.0	2.1		0.0	3.7	2.6		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	183	71	128	89	82	0	1362	252	99	1235	27
Future Volume (vph)	18	183	71	128	89	82	0	1362	252	99	1235	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		1.00	1.00		0.97	1.00		1.00	1.00		1.00	
Satd. Flow (prot)		1854	1583		1809	1583		3539	1583		3516	
Flt Permitted		0.97	1.00		0.61	1.00		1.00	1.00		0.66	
Satd. Flow (perm)		1799	1583		1141	1583		3539	1583		2341	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	18	183	71	128	89	82	0	1362	252	99	1235	27
RTOR Reduction (vph)	0	0	50	0	0	46	0	0	70	0	1	0
Lane Group Flow (vph)	0	201	21	0	217	36	0	1362	182	0	1360	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8			2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		519	457		329	457		2280	1020		1508	
v/s Ratio Prot								0.38				
v/s Ratio Perm		0.11	0.01		c0.19	0.02			0.11		c0.58	
v/c Ratio		0.39	0.04		0.66	0.08		0.60	0.18		0.90	
Uniform Delay, d1		25.6	23.1		28.1	23.3		9.2	6.4		13.6	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		2.2	0.2		10.0	0.3		1.2	0.4		9.1	
Delay (s)		27.8	23.2		38.1	23.6		10.4	6.8		22.7	
Level of Service		C	C		D	C		B	A		C	
Approach Delay (s)		26.6			34.1			9.9			22.7	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	111.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1387	561	271	628	0	0	0	0	400	21	920
Future Volume (vph)	0	1387	561	271	628	0	0	0	0	400	21	920
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.99	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)		4747	1362	3433	3539						1778	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4747	1362	3433	3539						1778	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1387	561	271	628	0	0	0	0	400	21	920
RTOR Reduction (vph)	0	8	137	0	0	0	0	0	0	0	0	13
Lane Group Flow (vph)	0	1502	301	271	628	0	0	0	0	0	421	907
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		40.8	40.8	23.5	23.5						35.2	80.5
Effective Green, g (s)		40.8	40.8	23.5	23.5						35.2	80.5
Actuated g/C Ratio		0.36	0.36	0.21	0.21						0.31	0.71
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1713	491	713	735						553	2571
v/s Ratio Prot		c0.32		0.08	c0.18						c0.24	0.25
v/s Ratio Perm			0.22									
v/c Ratio		0.88	0.61	0.38	0.85						0.76	0.35
Uniform Delay, d1		33.8	29.6	38.5	43.1						35.1	6.2
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		6.7	5.6	0.3	9.5						6.1	0.1
Delay (s)		40.4	35.2	38.8	52.6						41.2	6.3
Level of Service		D	D	D	D						D	A
Approach Delay (s)		39.3			48.5			0.0			17.3	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	113.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	654	0	0	449	806	95
Future Volume (veh/h)	654	0	0	449	806	95
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	654	0	0	449	806	62
Adj No. of Lanes	2	1	0	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	1417	634	0	1417	1392	640
Arrive On Green	0.40	0.00	0.00	0.40	0.40	0.40
Sat Flow, veh/h	3632	1583	0	3725	3442	1583
Grp Volume(v), veh/h	654	0	0	449	806	62
Grp Sat Flow(s),veh/h/ln	1770	1583	0	1770	1721	1583
Q Serve(g_s), s	4.2	0.0	0.0	2.7	5.6	0.7
Cycle Q Clear(g_c), s	4.2	0.0	0.0	2.7	5.6	0.7
Prop In Lane		1.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1417	634	0	1417	1392	640
V/C Ratio(X)	0.46	0.00	0.00	0.32	0.58	0.10
Avail Cap(c_a), veh/h	3456	1546	0	3456	3249	1495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	6.3	7.1	5.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	1.3	2.6	0.3
LnGrp Delay(d),s/veh	7.0	0.0	0.0	6.5	7.5	5.7
LnGrp LOS	A			A	A	A
Approach Vol, veh/h	654			449	868	
Approach Delay, s/veh	7.0			6.5	7.4	
Approach LOS	A			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		15.4		15.3				15.3
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		27.5		28.5				28.5
Max Q Clear Time (g_c+I1), s		7.6		6.2				4.7
Green Ext Time (p_c), s		3.3		4.6				3.1

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1319	1082	0	462	989
Future Volume (veh/h)	0	1319	1082	0	462	989
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	0	1319	1082	0	462	973
Adj No. of Lanes	0	3	3	0	1	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	2	2	2	2	2
Cap, veh/h	0	2328	2328	0	776	1385
Arrive On Green	0.00	0.46	0.46	0.00	0.44	0.44
Sat Flow, veh/h	0	5421	5421	0	1774	3167
Grp Volume(v), veh/h	0	1319	1082	0	462	973
Grp Sat Flow(s),veh/h/ln	0	1695	1695	0	1774	1583
Q Serve(g_s), s	0.0	10.8	8.4	0.0	11.3	14.3
Cycle Q Clear(g_c), s	0.0	10.8	8.4	0.0	11.3	14.3
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2328	2328	0	776	1385
V/C Ratio(X)	0.00	0.57	0.46	0.00	0.60	0.70
Avail Cap(c_a), veh/h	0	3918	3918	0	2019	3604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	11.3	10.7	0.0	12.2	13.1
Incr Delay (d2), s/veh	0.0	0.2	0.1	0.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.1	3.9	0.0	5.7	6.3
LnGrp Delay(d),s/veh	0.0	11.6	10.8	0.0	13.0	13.7
LnGrp LOS		B	B		B	B
Approach Vol, veh/h		1319	1082		1435	
Approach Delay, s/veh		11.6	10.8		13.5	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				29.1		28.0		29.1
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				42.5		63.5		42.5
Max Q Clear Time (g_c+I1), s				12.8		16.3		10.4
Green Ext Time (p_c), s				11.8		7.2		9.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	1087	354	314	1565	317	456	86	528	569	99	372
Future Volume (veh/h)	189	1087	354	314	1565	317	456	86	528	569	99	372
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	189	1087	193	314	1565	66	456	86	314	569	99	345
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	1277	398	813	1821	567	534	289	620	873	472	402
Arrive On Green	0.13	0.25	0.25	0.24	0.36	0.36	0.16	0.16	0.16	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	189	1087	193	314	1565	66	456	86	314	569	99	345
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1583	1721	1863	1583
Q Serve(g_s), s	12.0	23.6	12.0	8.9	33.1	3.2	15.0	4.7	0.0	17.1	4.9	24.1
Cycle Q Clear(g_c), s	12.0	23.6	12.0	8.9	33.1	3.2	15.0	4.7	0.0	17.1	4.9	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	1277	398	813	1821	567	534	289	620	873	472	402
V/C Ratio(X)	0.82	0.85	0.49	0.39	0.86	0.12	0.85	0.30	0.51	0.65	0.21	0.86
Avail Cap(c_a), veh/h	230	1316	410	831	1887	587	534	289	620	950	514	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	41.3	37.0	37.2	34.5	24.9	47.7	43.4	26.8	38.7	34.1	41.3
Incr Delay (d2), s/veh	20.9	5.4	0.9	0.3	4.2	0.1	12.6	0.6	0.7	1.4	0.2	14.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	11.7	5.4	4.3	16.2	1.4	8.0	2.5	7.7	8.3	2.5	12.1
LnGrp Delay(d),s/veh	70.1	46.7	37.9	37.5	38.6	25.0	60.3	43.9	27.4	40.1	34.3	56.1
LnGrp LOS	E	D	D	D	D	C	E	D	C	D	C	E
Approach Vol, veh/h		1469			1945			856			1013	
Approach Delay, s/veh		48.6			38.0			46.6			45.0	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.4	30.4	32.1		21.0	18.0	44.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		30.5	26.5	28.5		16.5	13.5	41.5
Max Q Clear Time (g_c+I1), s		26.1	10.9	25.6		17.0	14.0	35.1
Green Ext Time (p_c), s		1.8	1.0	2.0		0.0	0.0	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	43.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	355	41	652	702	1248	67	754	797	819	880	70
Future Volume (veh/h)	137	355	41	652	702	1248	67	754	797	819	880	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.90	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	355	41	652	702	1164	67	754	753	819	880	70
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	855	98	639	1094	832	85	1214	567	848	2097	166
Arrive On Green	0.09	0.27	0.27	0.13	0.31	0.31	0.05	0.24	0.24	0.25	0.44	0.44
Sat Flow, veh/h	1774	3156	360	5003	3539	1428	1774	5085	1527	3442	4794	380
Grp Volume(v), veh/h	137	197	199	652	702	1164	67	754	753	819	621	329
Grp Sat Flow(s),veh/h/ln	1774	1770	1746	1668	1770	1428	1774	1695	1527	1721	1695	1784
Q Serve(g_s), s	11.8	14.2	14.5	19.8	26.5	47.9	5.8	20.5	37.0	36.5	19.6	19.7
Cycle Q Clear(g_c), s	11.8	14.2	14.5	19.8	26.5	47.9	5.8	20.5	37.0	36.5	19.6	19.7
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	159	480	473	639	1094	832	85	1214	567	848	1483	781
V/C Ratio(X)	0.86	0.41	0.42	1.02	0.64	1.40	0.79	0.62	1.33	0.97	0.42	0.42
Avail Cap(c_a), veh/h	207	480	473	639	1094	832	141	1214	567	848	1483	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.48	0.48	0.48	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.6	46.4	46.5	67.6	46.1	35.5	73.0	52.7	49.3	57.7	30.0	30.1
Incr Delay (d2), s/veh	23.9	2.6	2.7	29.9	1.4	183.4	10.2	1.6	155.8	22.8	0.9	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	7.3	7.4	10.9	13.2	77.9	3.1	9.8	48.8	20.0	9.3	10.0
LnGrp Delay(d),s/veh	93.5	48.9	49.2	97.5	47.6	219.0	83.2	54.3	205.1	80.5	30.9	31.7
LnGrp LOS	F	D	D	F	D	F	F	D	F	F	C	C
Approach Vol, veh/h		533			2518			1574			1769	
Approach Delay, s/veh		60.5			139.7			127.7			54.0	
Approach LOS		E			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	42.7	41.5	24.3	46.5	11.9	72.3	18.4	52.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	38.2	37.0	19.8	42.0	12.3	62.9	18.1	43.7
Max Q Clear Time (g_c+I1), s	38.5	39.0	21.8	16.5	7.8	21.7	13.8	49.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.4	0.0	7.8	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	106.5
HCM 2010 LOS	F

Notes

User approved changes to right turn type.

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	0	208	10	12	3	159	267	1	0	123	159
Future Vol, veh/h	90	0	208	10	12	3	159	267	1	0	123	159
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	0	208	10	12	3	159	267	1	0	123	159

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	796	789	203	893	868	268	282	0	0	268	0	0
Stage 1	203	203	-	586	586	-	-	-	-	-	-	-
Stage 2	593	586	-	307	282	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	305	323	838	262	290	771	1280	-	-	1296	-	-
Stage 1	799	733	-	496	497	-	-	-	-	-	-	-
Stage 2	492	497	-	703	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	265	283	838	178	254	771	1280	-	-	1296	-	-
Mov Cap-2 Maneuver	265	283	-	178	254	-	-	-	-	-	-	-
Stage 1	700	733	-	434	435	-	-	-	-	-	-	-
Stage 2	417	435	-	529	678	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	22.3	3.1	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	265	838	233	1296	-	-
HCM Lane V/C Ratio	0.124	-	-	0.34	0.248	0.107	-	-	-
HCM Control Delay (s)	8.2	-	-	25.4	10.7	22.3	0	-	-
HCM Lane LOS	A	-	-	D	B	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1.4	1	0.4	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	103	86	40	113	242	89	991	52	280	1297	263
Future Volume (veh/h)	296	103	86	40	113	242	89	991	52	280	1297	263
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	296	103	86	40	113	242	89	991	52	280	1297	263
Adj No. of Lanes	1	1	0	0	2	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	191	160	162	488	287	123	1393	434	328	1981	617
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.07	0.27	0.27	0.18	0.39	0.39
Sat Flow, veh/h	1774	940	785	893	2695	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	296	0	189	81	72	242	89	991	52	280	1297	263
Grp Sat Flow(s),veh/h/ln	1774	0	1724	1818	1770	1583	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	16.3	0.0	10.0	3.9	3.5	15.1	5.0	18.0	2.5	15.6	21.4	12.4
Cycle Q Clear(g_c), s	16.3	0.0	10.0	3.9	3.5	15.1	5.0	18.0	2.5	15.6	21.4	12.4
Prop In Lane	1.00		0.46	0.49		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	0	351	330	321	287	123	1393	434	328	1981	617
V/C Ratio(X)	0.82	0.00	0.54	0.25	0.22	0.84	0.73	0.71	0.12	0.85	0.65	0.43
Avail Cap(c_a), veh/h	694	0	675	427	416	372	278	2090	651	660	3184	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	36.5	35.9	35.7	40.4	46.6	33.5	27.9	40.3	25.6	22.8
Incr Delay (d2), s/veh	4.6	0.0	1.3	0.4	0.3	12.9	7.9	0.7	0.1	6.3	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.0	4.9	2.0	1.8	7.6	2.7	8.5	1.1	8.2	10.0	5.5
LnGrp Delay(d),s/veh	43.6	0.0	37.8	36.3	36.1	53.4	54.5	34.1	28.0	46.6	25.9	23.3
LnGrp LOS	D		D	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		485			395			1132			1840	
Approach Delay, s/veh		41.3			46.7			35.5			28.7	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.9	32.0		24.8	11.1	43.8		22.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	37.5	41.5		39.5	15.5	63.5		23.5
Max Q Clear Time (g_c+I1), s	17.6	20.0		18.3	7.0	23.4		17.1
Green Ext Time (p_c), s	0.8	7.5		2.0	0.1	14.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	0	268	4	5	1	252	402	0	0	230	127
Future Vol, veh/h	67	0	268	4	5	1	252	402	0	0	230	127
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	0	268	4	5	1	252	402	0	0	230	127

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1203	1200	294	1334	1263	402	357	0	0	402	0	0
Stage 1	294	294	-	906	906	-	-	-	-	-	-	-
Stage 2	909	906	-	428	357	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	161	185	745	131	170	648	1202	-	-	1157	-	-
Stage 1	714	670	-	331	355	-	-	-	-	-	-	-
Stage 2	329	355	-	605	628	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	131	146	745	70	134	648	1202	-	-	1157	-	-
Mov Cap-2 Maneuver	131	146	-	70	134	-	-	-	-	-	-	-
Stage 1	564	670	-	261	280	-	-	-	-	-	-	-
Stage 2	255	280	-	387	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	43.3	3.4	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1202	-	-	131	745	104	1157	-	-
HCM Lane V/C Ratio	0.21	-	-	0.511	0.36	0.096	-	-	-
HCM Control Delay (s)	8.8	-	-	58.2	12.5	43.3	0	-	-
HCM Lane LOS	A	-	-	F	B	E	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	2.4	1.6	0.3	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	192	239	32	248	143	267	986	24	126	1247	277
Future Volume (veh/h)	250	192	239	32	248	143	267	986	24	126	1247	277
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	227	224	239	32	248	143	267	986	10	126	1247	277
Adj No. of Lanes	1	2	0	0	2	0	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	380	323	44	347	210	322	2132	664	176	1715	871
Arrive On Green	0.20	0.20	0.20	0.16	0.17	0.16	0.18	0.42	0.42	0.10	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	257	2020	1220	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	227	224	239	230	0	193	267	986	10	126	1247	277
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1850	0	1647	1774	1695	1583	1774	1695	1583
Q Serve(g_s), s	13.3	12.4	16.2	13.4	0.0	12.6	16.5	15.9	0.4	7.9	24.6	10.9
Cycle Q Clear(g_c), s	13.3	12.4	16.2	13.4	0.0	12.6	16.5	15.9	0.4	7.9	24.6	10.9
Prop In Lane	1.00		1.00	0.14		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	380	323	318	0	283	322	2132	664	176	1715	871
V/C Ratio(X)	0.63	0.59	0.74	0.72	0.00	0.68	0.83	0.46	0.02	0.71	0.73	0.32
Avail Cap(c_a), veh/h	599	629	535	625	0	556	529	2890	900	299	2230	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	41.0	42.8	44.7	0.0	44.8	45.0	23.9	19.4	49.8	33.2	14.0
Incr Delay (d2), s/veh	1.8	1.5	3.3	3.1	0.0	2.9	5.7	0.2	0.0	5.3	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	6.6	7.3	7.1	0.0	5.9	8.6	7.5	0.2	4.1	11.6	7.0
LnGrp Delay(d),s/veh	43.2	42.5	46.1	47.8	0.0	47.7	50.7	24.0	19.4	55.1	34.0	14.2
LnGrp LOS	D	D	D	D		D	D	C	B	E	C	B
Approach Vol, veh/h		690			423			1263			1650	
Approach Delay, s/veh		44.0			47.8			29.6			32.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.3	50.8		26.3	23.7	41.5		22.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.7	63.3		37.0	32.5	48.5		37.0
Max Q Clear Time (g_c+I1), s	9.9	17.9		18.2	18.5	26.6		15.4
Green Ext Time (p_c), s	0.2	8.5		3.6	0.6	10.4		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	356	66	358	566	641	126	380	441	417	396	55
Future Volume (veh/h)	15	356	66	358	566	641	126	380	441	417	396	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	15	356	66	358	566	641	126	380	0	417	396	55
Adj No. of Lanes	1	2	0	1	1	1	1	2	1	2	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	628	115	402	721	613	160	974	436	495	526	73
Arrive On Green	0.05	0.21	0.21	0.23	0.39	0.39	0.09	0.28	0.00	0.14	0.33	0.32
Sat Flow, veh/h	1774	2987	548	1774	1863	1583	1774	3539	1583	3442	1601	222
Grp Volume(v), veh/h	15	209	213	358	566	641	126	380	0	417	0	451
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1863	1583	1774	1770	1583	1721	0	1824
Q Serve(g_s), s	0.9	11.8	12.0	21.7	29.7	43.0	7.7	9.7	0.0	13.1	0.0	24.5
Cycle Q Clear(g_c), s	0.9	11.8	12.0	21.7	29.7	43.0	7.7	9.7	0.0	13.1	0.0	24.5
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	88	372	371	402	721	613	160	974	436	495	0	599
V/C Ratio(X)	0.17	0.56	0.57	0.89	0.78	1.05	0.79	0.39	0.00	0.84	0.00	0.75
Avail Cap(c_a), veh/h	296	379	379	602	721	613	176	974	436	552	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	39.3	39.4	41.6	29.9	34.0	49.4	32.7	0.0	46.3	0.0	33.3
Incr Delay (d2), s/veh	0.9	1.8	2.0	10.9	5.7	48.8	19.1	1.2	0.0	10.4	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.9	6.1	11.9	16.4	27.0	4.6	4.9	0.0	7.0	0.0	13.7
LnGrp Delay(d),s/veh	51.5	41.1	41.4	52.5	35.6	82.8	68.5	33.8	0.0	56.7	0.0	41.8
LnGrp LOS	D	D	D	D	D	F	E	C		E		D
Approach Vol, veh/h		437			1565			506			868	
Approach Delay, s/veh		41.6			58.8			42.5			48.9	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	34.6	29.1	27.4	14.0	40.5	9.5	47.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	15.5	29.2	37.2	23.3	10.5	36.0	18.0	42.5
Max Q Clear Time (g_c+I1), s	15.1	11.7	23.7	14.0	9.7	26.5	2.9	45.0
Green Ext Time (p_c), s	0.4	2.3	0.9	1.7	0.0	2.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1058	52	618	1608	134	45	74	283	295	269	196
Future Volume (veh/h)	143	1058	52	618	1608	134	45	74	283	295	269	196
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	143	1058	52	618	1608	0	45	74	6	295	269	127
Adj No. of Lanes	2	3	0	2	3	1	1	1	1	2	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	1502	74	788	2342	729	124	130	110	691	374	318
Arrive On Green	0.07	0.30	0.30	0.23	0.46	0.00	0.07	0.07	0.07	0.20	0.20	0.20
Sat Flow, veh/h	3442	4966	244	3442	5085	1583	1774	1863	1583	3442	1863	1583
Grp Volume(v), veh/h	143	722	388	618	1608	0	45	74	6	295	269	127
Grp Sat Flow(s),veh/h/ln	1721	1695	1820	1721	1695	1583	1774	1863	1583	1721	1863	1583
Q Serve(g_s), s	3.3	15.2	15.3	13.6	20.1	0.0	2.0	3.1	0.3	6.0	10.9	5.6
Cycle Q Clear(g_c), s	3.3	15.2	15.3	13.6	20.1	0.0	2.0	3.1	0.3	6.0	10.9	5.6
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1025	550	788	2342	729	124	130	110	691	374	318
V/C Ratio(X)	0.59	0.70	0.71	0.78	0.69	0.00	0.36	0.57	0.05	0.43	0.72	0.40
Avail Cap(c_a), veh/h	469	1386	744	1194	3149	980	417	438	373	1236	669	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	25.0	25.0	29.3	17.2	0.0	35.8	36.4	35.1	28.2	30.1	28.0
Incr Delay (d2), s/veh	2.2	1.0	1.9	2.0	0.4	0.0	1.8	3.9	0.2	0.4	2.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	7.3	8.0	6.7	9.5	0.0	1.0	1.7	0.1	2.9	5.9	2.5
LnGrp Delay(d),s/veh	38.6	26.0	26.9	31.3	17.6	0.0	37.6	40.3	35.3	28.6	32.7	28.8
LnGrp LOS	D	C	C	C	B		D	D	D	C	C	C
Approach Vol, veh/h		1253			2226			125			691	
Approach Delay, s/veh		27.7			21.4			39.1			30.3	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.2	22.5	28.4		9.6	9.7	41.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	27.5	32.5		18.5	10.5	49.5
Max Q Clear Time (g_c+I1), s		12.9	15.6	17.3		5.1	5.3	22.1
Green Ext Time (p_c), s		2.8	1.9	6.6		0.4	0.2	14.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1001	370	59	2	379	145	44	25	5	124	10	1381
Future Volume (veh/h)	1001	370	59	2	379	145	44	25	5	124	10	1381
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	1088	402	64	2	379	145	44	25	5	131	0	1381
Adj No. of Lanes	2	1	1	1	2	1	0	2	0	2	0	2
Peak Hour Factor	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1112	990	841	17	796	356	108	92	18	590	0	1572
Arrive On Green	0.32	0.53	0.53	0.01	0.22	0.22	0.06	0.06	0.05	0.17	0.00	0.17
Sat Flow, veh/h	3442	1863	1583	1774	3539	1583	1774	1508	302	3548	0	3167
Grp Volume(v), veh/h	1088	402	64	2	379	145	44	0	30	131	0	1381
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1583	1774	0	1810	1774	0	1583
Q Serve(g_s), s	22.3	9.2	1.4	0.1	6.6	5.6	1.7	0.0	1.1	2.3	0.0	4.7
Cycle Q Clear(g_c), s	22.3	9.2	1.4	0.1	6.6	5.6	1.7	0.0	1.1	2.3	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	1112	990	841	17	796	356	108	0	110	590	0	1572
V/C Ratio(X)	0.98	0.41	0.08	0.12	0.48	0.41	0.41	0.00	0.27	0.22	0.00	0.88
Avail Cap(c_a), veh/h	1112	990	841	137	796	356	461	0	470	823	0	1780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	10.0	8.1	34.9	23.9	23.5	32.2	0.0	31.9	25.7	0.0	16.0
Incr Delay (d2), s/veh	22.2	1.2	0.2	2.9	2.0	3.4	2.4	0.0	1.3	0.2	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	5.0	0.6	0.1	3.4	2.8	0.9	0.0	0.6	1.1	0.0	12.0
LnGrp Delay(d),s/veh	46.1	11.2	8.3	37.9	26.0	27.0	34.6	0.0	33.3	25.9	0.0	20.9
LnGrp LOS	D	B	A	D	C	C	C		C	C		C
Approach Vol, veh/h		1554			526			74			1512	
Approach Delay, s/veh		35.5			26.3			34.1			21.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		8.3	4.7	42.3		15.8	27.0	20.0
Change Period (Y+Rc), s		4.5	4.5	* 4.5		4.0	4.5	4.0
Max Green Setting (Gmax), s		18.0	5.0	* 34		16.5	22.5	16.0
Max Q Clear Time (g_c+I1), s		3.7	2.1	11.2		6.7	24.3	8.6
Green Ext Time (p_c), s		0.2	0.0	2.7		5.1	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	13	697	19	12	7	706	324	18	9	796	221
Future Volume (veh/h)	189	13	697	19	12	7	706	324	18	9	796	221
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	130	0	400	19	12	7	706	324	18	9	796	221
Adj No. of Lanes	1	0	2	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	0	555	40	25	15	882	1798	99	33	1026	459
Arrive On Green	0.18	0.00	0.18	0.04	0.04	0.04	0.26	0.53	0.52	0.02	0.29	0.29
Sat Flow, veh/h	1774	0	3167	881	556	324	3442	3410	189	1774	3539	1583
Grp Volume(v), veh/h	130	0	400	38	0	0	706	168	174	9	796	221
Grp Sat Flow(s),veh/h/ln	1774	0	1583	1761	0	0	1721	1770	1829	1774	1770	1583
Q Serve(g_s), s	4.5	0.0	8.2	1.4	0.0	0.0	13.1	3.4	3.4	0.3	14.1	7.9
Cycle Q Clear(g_c), s	4.5	0.0	8.2	1.4	0.0	0.0	13.1	3.4	3.4	0.3	14.1	7.9
Prop In Lane	1.00		1.00	0.50		0.18	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	311	0	555	79	0	0	882	933	965	33	1026	459
V/C Ratio(X)	0.42	0.00	0.72	0.48	0.00	0.00	0.80	0.18	0.18	0.27	0.78	0.48
Avail Cap(c_a), veh/h	480	0	856	476	0	0	1207	1073	1110	143	1190	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	26.6	31.9	0.0	0.0	23.8	8.4	8.5	33.1	22.3	20.0
Incr Delay (d2), s/veh	0.9	0.0	1.8	4.5	0.0	0.0	2.8	0.1	0.1	4.3	2.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	3.7	0.8	0.0	0.0	6.5	1.7	1.7	0.2	7.3	3.5
LnGrp Delay(d),s/veh	26.0	0.0	28.4	36.4	0.0	0.0	26.6	8.5	8.6	37.4	25.1	20.8
LnGrp LOS	C		C	D			C	A	A	D	C	C
Approach Vol, veh/h		530			38			1048			1026	
Approach Delay, s/veh		27.8			36.4			20.7			24.3	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	40.1		7.1	21.5	23.8		16.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	41.0		18.0	23.5	22.5		18.0
Max Q Clear Time (g_c+I1), s	2.3	5.4		3.4	15.1	16.1		10.2
Green Ext Time (p_c), s	0.0	2.1		0.1	1.9	3.2		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	115	58	184	92	129	1	1423	161	110	1341	23
Future Volume (vph)	13	115	58	184	92	129	1	1423	161	110	1341	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	
Lane Util. Factor		1.00	1.00		1.00	1.00		0.95	1.00		0.95	
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	
Flt Protected		0.99	1.00		0.97	1.00		1.00	1.00		1.00	
Satd. Flow (prot)		1853	1583		1803	1583		3539	1583		3518	
Flt Permitted		0.96	1.00		0.67	1.00		0.95	1.00		0.63	
Satd. Flow (perm)		1790	1583		1248	1583		3378	1583		2230	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	115	58	184	92	129	1	1423	161	110	1341	23
RTOR Reduction (vph)	0	0	41	0	0	41	0	0	43	0	1	0
Lane Group Flow (vph)	0	128	17	0	276	88	0	1424	118	0	1473	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)		24.5	24.5		24.5	24.5		56.5	56.5		56.5	
Effective Green, g (s)		26.0	26.0		26.0	26.0		58.0	58.0		58.0	
Actuated g/C Ratio		0.29	0.29		0.29	0.29		0.64	0.64		0.64	
Clearance Time (s)		4.5	4.5		4.5	4.5		4.5	4.5		4.5	
Lane Grp Cap (vph)		517	457		360	457		2176	1020		1437	
v/s Ratio Prot												
v/s Ratio Perm		0.07	0.01		c0.22	0.06		0.42	0.07		c0.66	
v/c Ratio		0.25	0.04		0.77	0.19		0.65	0.12		1.03	
Uniform Delay, d1		24.5	23.0		29.2	24.1		9.8	6.1		16.0	
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		1.1	0.1		14.4	0.9		1.6	0.2		30.3	
Delay (s)		25.7	23.1		43.7	25.0		11.4	6.4		46.3	
Level of Service		C	C		D	C		B	A		D	
Approach Delay (s)		24.9			37.7			10.9			46.3	
Approach LOS		C			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	112.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1111	604	578	1185	0	0	0	0	312	1	1068
Future Volume (vph)	0	1111	604	578	1185	0	0	0	0	312	1	1068
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
Lane Util. Factor		0.86	0.86	0.97	0.95						1.00	0.76
Frt		0.97	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)		4669	1362	3433	3539						1774	3610
Flt Permitted		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (perm)		4669	1362	3433	3539						1774	3610
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	1111	604	578	1185	0	0	0	0	312	1	1068
RTOR Reduction (vph)	0	39	222	0	0	0	0	0	0	0	0	7
Lane Group Flow (vph)	0	1332	122	578	1185	0	0	0	0	0	313	1061
Turn Type		NA	Perm	Prot	NA					Split	NA	custom
Protected Phases		2		3	8					6	6	2 6
Permitted Phases			2									
Actuated Green, G (s)		31.5	31.5	26.5	26.5						18.5	54.5
Effective Green, g (s)		32.0	32.0	27.0	27.0						19.0	55.0
Actuated g/C Ratio		0.36	0.36	0.30	0.30						0.21	0.61
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)		1660	484	1029	1061						374	2206
v/s Ratio Prot		c0.29		0.17	c0.33						c0.18	0.29
v/s Ratio Perm			0.09									
v/c Ratio		0.80	0.25	0.56	1.12						0.84	0.48
Uniform Delay, d1		26.2	20.5	26.5	31.5						34.0	9.6
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		2.9	0.3	0.7	65.6						19.5	0.2
Delay (s)		29.1	20.8	27.2	97.1						53.5	9.8
Level of Service		C	C	C	F						D	A
Approach Delay (s)		27.4			74.2			0.0			19.7	
Approach LOS		C			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Appendix C

Peak-Hour Signal Warrant Analysis

1766 El Camino Real Project

California Ave & Trousdale Dr **AM PEAK PERIOD**

Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)*.

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

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	California Ave	X		692	723	737	768	826	871		
Minor Street - Highest Approach	Trousdale Dr	X		356	375	399	418	425	468		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

1766 El Camino Real Project

California Ave & Trousdale Dr **PM PEAK HOUR**

Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California)*.

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

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Background	Ex+Project	Bkgd+Project	Cumulative	Cum+Project		
Major Street - Both Approaches	California Ave	X		812	856	871	915	952	1011		
Minor Street - Highest Approach	Trousdale Dr	X		268	282	289	303	314	335		
Signal Warranted Based on Part B - Peak-Hour Volumes?				**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**		

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: March 24, 2022

To: Greg Pasquali, Carmel Partners

From: Gary Black
Daniel Choi

Subject: Transportation Analysis for Updated Project at 1766 El Camino Real in Burlingame, California

Hexagon Transportation Consultants, Inc. has completed a trip generation analysis, VMT analysis, and site plan review for the proposed project at 1766 El Camino Real in Burlingame, California. Hexagon previously completed a TIA for a mixed-use development at the project site. Since then, the project description has been revised to consist of only residential apartment units. The project site plan and access points have also been revised.

The project would consist of 311 apartment units in an eight-story building with 2.5 levels of underground parking. The site plan shows that access to the underground parking garage would be provided via a driveway along El Camino Real and a driveway along California Drive. The proposed site plan is attached to this memo.

Vehicle Miles Traveled

Since the City of Burlingame has not formally established a policy related to analyzing transportation impacts related to Vehicle Miles Traveled (VMT), the project was evaluated using the technical advisory released by the Office of Planning and Research (OPR). The OPR advisory provides screening criteria for projects that would be expected to cause a less-than-significant impact. The screening criteria include:

(1) Screening for Small Projects – Projects that would generate or attract fewer than 110 trips per day

(2) Map Based Screening – Maps created with VMT data can illustrate areas that are currently below threshold VMT. New developments in such locations would result in a similar level of VMT

(3) Presumption of Less Than Significant Impact Near Transit Stations - The CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects) proposed within a half mile of an existing major transit stop or an existing stop along a high quality transit corridor will have a less-than-significant impact on VMT. The presumption may not be appropriate if the project:

- Has a Floor Area Ratio of less than 0.75
- Includes more parking for use by residents than required by the jurisdiction
- Is inconsistent with the applicable Sustainable Communities Strategy

- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

(4) Presumption of Less Than Significant Impact for Affordable Residential Development– Evidence supports a presumption of less than significant impact on VMT for 100 percent affordable developments in infill locations.

The project is located within a half mile of the Millbrae Station, which is a major transit stop, and none of the presumption exceptions apply to the project description. Therefore, the project is expected to have a less-than-significant impact on VMT.

Project Trip Generation

Since the project description has been revised, a trip generation analysis was conducted to compare the trip generation of the updated project description to the trip generation of the previously proposed project.

Trips that would be generated by the proposed project were estimated using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* for "Multifamily Housing (Mid-Rise)" (Land Use 221). Trips from the previously proposed mixed-use development were taken from the completed TIA. The ITE Trip Generation Manual defines multifamily housing (mid-rise) as a building consisting of apartments or condominiums between 3 and 10 stories high.

The trip generation estimates (see Table 1) compare the trip generation of the proposed project to the previously approved project. The proposed project would generate 1,412 daily trips, with 115 trips (26 inbound and 89 outbound) during the AM peak hour and 121 trips (74 inbound and 47 outbound) during the PM peak hour. The trip generation estimates show that the proposed project would generate fewer trips than the previously approved project. Therefore, it can be assumed that the transportation impact analysis conducted for the previously approved project would cover the newly proposed 311-unit residential development.

Table 1
Project Trip Estimates

Land Use	ITE Land Use Code	Size		Daily Rate	Daily Trips	AM Peak Hour Pk-Hr Rate	AM Peak Hour Trips In	AM Peak Hour Trips Out	AM Peak Hour Trips Total	PM Peak Hour Pk-Hr Rate	PM Peak Hour Trips In	PM Peak Hour Trips Out	PM Peak Hour Trips Total
Proposed Land Use													
Apartments[1]	221	311	DU	4.54	1,412	0.37	26	89	115	0.39	74	47	121
Previously Proposed Land Use													
Apartments[2]	220	60	DU	7.32	439	0.46	6	22	28	0.56	21	13	34
Retail[3]	820	7,588	s.f.	37.75	286	0.94	4	3	7	3.81	14	15	29
Office[4]	710	148,057	s.f.	9.74	1,442	1.16	148	24	172	1.15	27	143	170
- Mixed-Use Trip Reduction[5]					*-368*		*-21*	*-6*	*-27*		*-9*	*-26*	*-35*
Previous Gross Project Trips					**1,799**		**137**	**43**	**180**		**53**	**145**	**198**

Notes:
Trip Generation rates for the proposed land use are from ITE Trip Generation Manual, 11th Edition, 2021. Trip Generation rates from the previously approved land use are from ITE Trip Generation Manual, 10th Edition, 2017.
1. Average trip rates for Multifamily Housing Mid-Rise (Land Use 221), expressed in trips per dwelling unit (DU).
2. Average trip rates for Multifamily Housing Low-Rise (Land Use 220), expressed in trips per dwelling unit (DU).
3. Average trip rates for Shopping Center (Land Use 820), expressed in trips per 1,000 square feet (s.f.) of gross floor area (GFA).
4. Average trip rates for General Office Building (Land Use 710), expressed in trips per 1,000 s.f. of GFA.
5. Trip reduction rates of 17%, 13%, and 15% were applied to daily, AM peak-hour, and PM peak-hour trips, based on the EPA's MXD model (mixed-use trip generation model) to account for internal mixed-use trips in the project area.

Site Access and On-Site Circulation

Since the project site plan has changed, a site access and on-site circulation review was conducted for the proposed site plan. The site access and on-site circulation evaluation is based on the November 15, 2021 site plan prepared by TCA Architects. Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway Design

Parking would be provided in a two-and-a-half-level underground garage. Access to the garage would be provided by two driveways: one on El Camino Real and one on California Drive. The driveway along El Camino Real measures 24.5 feet in width. The site plan is unclear on the width of the California Drive driveway. However, the entryway into the garage along California Drive measures 20 feet in width, so it can be concluded that the driveway is wider than 20 feet. The City of Burlingame Zoning Code requires a minimum of either two 12-foot driveways or one 18-foot driveway for parking areas of more than 30 vehicle spaces. Therefore, the proposed driveways meet the City's minimum width requirement for two-way driveways.

Both driveways would lead to a ramp into the underground garage. The site plan shows a gate at both entrances to the garage. There is enough space for one vehicle to queue in front of the gate. Given the estimated peak-hour trip generation of 84 inbound trips, that calculates to about one inbound trip every 43 seconds, the probability of two or more inbound vehicles entering the parking garage at the same time would likely be low. Furthermore, since residents could use either

driveway, an average of one inbound trip would occur every 86 seconds at each driveway. In the event where two inbound vehicles arrive at the same time, traffic along El Camino Real and California Drive would be momentarily stopped by queued vehicles while waiting for the gate to open. Given the low traffic volume along the frontage road along El Camino Real and along California drive, traffic operations along these roadways would not be significantly affected by inbound queuing operations.

Sight Distance

Sight distance was checked for the proposed driveways. Sight distance requirements vary depending on the roadway speeds. For the driveway along California Drive, which has a posted speed limit of 35 mph, the Caltrans stopping sight distance is 300 feet (based on a design speed of 40 mph). Thus, a driver must be able to see 300 feet on both directions of California Drive to locate a sufficient gap to turn out of the driveway. Since there is no posted speed limit on the El Camino Real frontage road along the project frontage, it was assumed that the speed limit is 25 mph. Therefore, the driveway along El Camino Real requires a stopping sight distance of 200 feet, based on a design speed of 30 mph.

According to the site plan, the landscape plan shows street trees would be added along the project frontage on Trousdale Drive and the El Camino Real frontage road. The type and location of the street trees would be determined by the City at the implementation stage. Note that street trees have a high canopy and would not obstruct the view of drivers exiting the project driveways.

The California Avenue driveway would be located 260 feet south of Trousdale Drive. However, because no roadway curve or on-street parking is present on California Avenue between Trousdale Drive and the driveway that would obstruct the vision of exiting drivers, vehicles exiting the driveway would be able to see approaching traffic on beyond Trousdale Drive with an adequate sight distance (greater than 300 feet) for the southbound through traffic. Vehicles turning from Trousdale Drive to southbound California Avenue are expected to travel with lower speed while making turns. The Caltrans stopping sight distance is 200 feet based on a travel speed of 30 mph. Therefore, the sight distance (260 feet) for traffic turning from Trousdale Drive is adequate.

At the El Camino Real frontage road driveway, no roadway curve or on-street parking is present to the left side of the driveway that would obstruct the vision of exiting drivers. Therefore, vehicles exiting the driveway would be able to see approaching traffic on the frontage road with an adequate sight distance (greater than 200 feet).

Project Driveway Operations

The project-generated gross trips that are estimated to occur at the project driveways are 29 inbound and 83 outbound during the AM peak hour and 84 inbound and 53 outbound during the PM peak hour. Because of the fairly low number of project trips at the driveways and low/moderate volume on the El Camino Real frontage road and California Drive, vehicles will easily be able to exit the project driveways.

Some minor on-site vehicle queuing could occur due to a combination of the inherent unpredictability of vehicle arrivals at the driveway and the random occurrence of gaps in traffic along California Avenue. However, given the estimated 83 outbound trips in the PM peak hour at the driveway, that calculates to about one outbound trip every 43 seconds, the probability of two or more outbound vehicles exiting the parking garage at the same time would likely be low. The maximum queue is not expected to affect the on-site circulation. Additionally, vehicles turning right into the project site from California Avenue may block the travel lane momentarily due to vehicles slowing down to turn into the driveway, but this is unlikely to have a significant effect on traffic

operations. City staff have indicated that there are concerns with queueing on-street due to vehicles turning left into the project site from California Avenue. The project should coordinate with city staff to determine appropriate measures that should be installed along California Drive in order to restrict left turns into the project site. Possible design measures to restrict left turns include signage, striping, delineators, or raised curbs.

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of Burlingame Zoning Code and generally accepted traffic engineering standards. Generally, the proposed site plan would provide vehicle traffic with adequate connectivity through the parking areas. The site plan shows a small number of spaces in a dead-end aisle on the first level of the basement. The bottom half-level of the parking garage is also a dead-end. Parking spaces should be assigned to residents so that vehicles do not drive into a dead-end aisle.

The project would provide mostly 90-degree parking stalls throughout the parking areas. There are a small number of spaces that are slightly angled towards drive aisles to accommodate building columns but are not noticeably slanted from other parking spaces. The City's standard minimum width for two-way drive aisles is 24 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the drive aisles throughout the parking garage measure 24 feet wide. Thus, adequate access to all parking stalls would be provided throughout the site.

The site plan proposes to provide a passenger loading area along its frontage on the El Camino Real frontage road. The loading area would allow for residents or visitors to be picked up or dropped off. Additionally, with the increasing popularity of ride-sharing and food delivery services, a loading area as part of the project would be beneficial. The project should coordinate with city staff to stripe 50-100 feet (enough for two to four vehicles) of loading space along the El Camino Real frontage road..

The site plan provides adequate pedestrian circulation throughout the site, as well as between the site and the surrounding pedestrian facilities. The site plan shows walkways around the building providing access to outdoor amenities proposed by the projects such as courtyards, a dog run area, and a shuffleboard court. The project would reconstruct the sidewalk along its frontages along El Camino Real, Trousdale Drive, and California Drive. The project would also reconstruct the sidewalk on the opposite side of the Trousdale Drive frontage and the northbound segment of El Camino Real, just north of the El Camino Real/Trousdale Drive intersection. The project applicant has stated that a bicycle storage room would be provided for residents. Guest bicycle parking would be provided at several bike racks located along the project frontages.

Parking Stall Dimensions

According to the site plan, the project proposes stalls that are 8.5 feet wide by 17 feet long. This size meets the North Burlingame Mixed Use zoning requirements.

Truck Access and Circulation

The site plan shows a trash/loading area behind the building accessible via a 24-foot-wide driveway along Trousdale Drive. The driveway provides adequate width for garbage trucks and delivery trucks. This loading area would be used by moving trucks as well as for garbage pick-up.

Emergency vehicles access would be provided via Trousdale Drive, the El Camino Real frontage road, and the California Drive.

Parking Supply

The City of Burlingame Zoning Code for the North Burlingame Mixed Use Zone (Section 25.40.050.A) states that residential developments are required to provide 1 parking spaces per studio or one-bedroom apartment, 1.5 parking spaces per two-bedroom unit, and 2 parking spaces per three-bedroom unit. The project proposes 324 parking spaces, representing a 16.5% deficit in number of required spaces (see Table 2). The zoning code allows for up to a 20% reduction in required number of vehicular parking spaces if the project implements a Transportation Demand Management (TDM) Plan and achieves a permanent mobility mode shift towards alternative transportation of 25% or greater through the TDM program.

Table 2
Parking Requirement

Unit Type	Number of Units	Requirement	Spaces Needed
Studio	35	1 per unit	35
1-Bedroom	139	1 per unit	139
2-Bedroom	120	1.5 per unit	180
3-Bedroom	17	2 per unit	34
Zoning Code Required Number of Parking Spaces:			388
less 20% with TDM Plan:			-78
		Total:	**310**

The parking areas would meet ADA requirements by providing 9 ADA spaces. Five of the ADA spaces are shown to be van accessible, with one space prepared for EV charging equipment. The zoning code also requires 5 percent of all spaces be prepared for EV charging equipment. The site plan shows 32 EV charging spaces, meeting the requirement.

The Zoning Code requires the development to provide 0.5 bicycle parking spaces per unit. The project applicant has indicated that the project would provide a bicycle storage room. The bicycle storage room should provide a minimum of 156 bicycle parking spaces to residents, meeting the requirement for bicycle parking. The project also would provide 16 short-term bicycle spaces for visitors in bicycle racks, which would be located around the building.