APPENDIX I.3

Memorandum RE: Jaeger Ranch Supplemental Traffic Analyses, Draft Traffic Impact Analysis Services

Kimley»Horn

Memorandum

To: Olga Sciorelli, P.E., QSD, QSP
Land Planning Manager
K. Hovnanian® Homes of California, Inc.

From: Chris Gregerson, P.E., T.E., PTP
Kelly Andrews, E.I.T.

Re: Jaeger Ranch Supplemental Traffic Analyses
DRAFT *Traffic Impact Analysis Services*

Date: December 3, 2018

Per your request and authorization, we have prepared this traffic evaluation for the above referenced project.

Project Understanding

This memorandum documents the results of a supplemental transportation impact analysis completed for Jaeger Ranch (the "proposed project" or "project"). The vacant project site is located along Rancho Cordova Parkway/Jaeger Road, south of Douglas Road in Rancho Cordova, California. Kimley-Horn previously completed a traffic impact analysis for the Jaeger Ranch[1] project. The significant findings of the previous study are summarized below:

- The proposed project is estimated to generate 10,266 new daily trips, with 721 new trips occurring during the AM peak-hour, and 934 new trips occurring during the PM peak-hour.
- The addition of the proposed project to the Existing (2017) Conditions results in a significant impact at four (4) study intersections and one (1) roadway segment. With the application of mitigation measures recommended in the previous study, the impacts to intersections can be mitigated to be *less than significant*. The proposed project results in one significant and unavoidable impact to the roadway segments for Existing (2017) Conditions, as defined by the applicable jurisdictions.
- The addition of the proposed project to Cumulative (2040) Conditions results in a significant impact at three (3) intersections and one (1) roadway segment. Two of the impacted intersections would be mitigated to less than significant. One location does not have a feasible mitigation. The significant impact to the roadway segments for Cumulative (2040) Conditions does not have a feasible mitigation, as defined by the applicable jurisdictions.

The project applicant now proposes to include 723 single-family detached residential units, 250 multi-family residential units, 743 Active Adult Residential (AAR) units, and approximately 32,000 square-feet of commercial uses.

The purpose of this impact analysis is to identify additional impacts to transportation facilities due to the increased number of units and propose appropriate mitigations (as determined by the City of Rancho Cordova) for those impacts. This study was performed in accordance with the County of Sacramento's traffic study guidelines[2] and standards established by the Circulation Element of the City of Rancho Cordova's General Plan[3].

[1] *Transportation Impact Analysis, Jaeger Ranch,* Kimley-Horn and Associates, Inc., August 28,2018.
[2] *Traffic Impact Analysis Guidelines, July 2004*, County of Sacramento.
[3] *City of Rancho Cordova General Plan: Circulation Element, May 2015,* City of Rancho Cordova

Study Facilities and Analysis Scenarios

This analysis was limited to those intersections that were previously mitigated to less than significantly impacted conditions, and those intersections that fall within 5 seconds of delay of becoming impacted. The following transportation facilities are included in this evaluation:

Existing (2017) Study Intersections:

1. Jackson Rd/SR-16 @ Bradshaw Rd
2. Jackson Rd/SR-16 @ Excelsior Rd
3. Jackson Rd/SR-16 @ Eagles Nest Rd
4. Jackson Rd/SR-16 @ Sunrise Blvd
5. Jackson Rd/SR-16 @ Grant Line Rd
9. Grant Line Rd @ Sunrise Blvd
11. Douglas Rd @ Sunrise Blvd
13. Mather Field Rd @ Folsom Blvd
19. Zinfandel Dr @ US-50 Eastbound Ramps
21. Sunrise Blvd @ White Rock Rd
25. Sunrise Blvd @ Zinfandel Dr

Cumulative (2040) Study Intersections:

1. Jackson Rd/SR-16 @ Bradshaw Rd
4. Jackson Rd/SR-16 @ Sunrise Blvd
5. Jackson Rd/SR-16 @ Grant Line Rd
9. Grant Line Rd @ Sunrise Blvd
10. Douglas Rd @ Zinfandel Dr
11. Douglas Rd @ Sunrise Blvd
13. Mather Field Rd @ Folsom Blvd
17. Zinfandel Dr @ International Dr
19. Zinfandel Dr @ US-50 Eastbound Ramps
21. Sunrise Blvd @ White Rock Rd
25. Sunrise Blvd @ Zinfandel Dr
27. White Rock Rd @ Prairie City Rd

Exhibit 1 depicts the locations of these study intersections. Please note that the intersection ID's are consistent with the original Jaeger Ranch Transportation Impact Study[1].

This traffic impact analysis was conducted for the study facilities for the following scenarios:

A. Existing (2017) plus Proposed Project Conditions
B. Cumulative (2040) plus Proposed Project Conditions

Regulatory Setting and Thresholds of Significance

Sacramento County

The Circulation Element of the latest County of Sacramento General Plan[4] includes the following relevant provisions:

> ***CI-9.*** *Plan and design the roadway system in a manner that meets Level of Service (LOS) D on rural roadways and LOS E on urban roadways, unless it is infeasible to implement project alternatives or mitigation measures that would achieve LOS D on rural roadways or LOS E on urban roadways. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural.*
>
> ***CI-35.*** *The applicant/developer of land development projects shall be responsible to install bicycle and pedestrian facilities in accordance with Sacramento County Improvement Standards and may be responsible to participate in the fair share funding of regional multi-use trails identified in the Sacramento County Bicycle Master Plan.*

Sacramento County's traffic study guidelines[2] provide guidelines for the implementation of the General Plan provisions: "The County defines the minimum acceptable operation level for its roadways and intersections to be LOS D for rural areas and LOS E for urban areas. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural."

All of the Sacramento County study facilities are within the Urban Services Boundary. Therefore, LOS E is the minimum acceptable LOS for all County facilities.

Thresholds of Significance

Roadways/Signalized Intersections: A project is considered to have a significant effect if it would:

- Result in a roadway or a signalized intersection operating at an acceptable LOS to deteriorate to an unacceptable LOS; or
- Increase the V/C ratio by more than 0.05 at a roadway or at a signalized intersection that is operating at an unacceptable LOS without the project.

Unsignalized Intersections: A project is considered to have a significant effect if it would:

- Result in an unsignalized intersection movement/approach operating at an acceptable LOS to deteriorate to an unacceptable LOS, and also cause the intersection to meet a traffic signal warrant; or
- For an unsignalized intersection that meets a signal warrant, increase the delay by more than 5 seconds at a movement/approach that is operating at an unacceptable LOS without the project.

[4] *Sacramento County General Plan of 2005-2030,* Sacramento County Community Planning & Development Department, November 9, 2011.

City of Rancho Cordova

The Circulation Element of the City of Rancho Cordova's General Plan 2030 includes the following relevant provisions:

> *Policy C.1.2 - Seek to maintain operations on all roadways and intersections at Level of Service D or better at all times, including peak travel times, unless maintaining this Level of Service would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. Congestion in excess of Level of Service D may be accepted in these cases, provided that provisions are made to improve traffic flow and/or promote non-vehicular transportation as part of a development project or a City-initiated project. Please see Policy C.1.3 for additional policy guidance related to this issue.*
>
> *Examples of system improvements which may be accepted when Level of Service D cannot be maintained include the following, where the improvement or funding is in excess of standard City requirements:*
> *• Development of on- or off-street bicycle or pedestrian circulation (not including sidewalks that are constructed as part of roadway improvements);*
> *• Providing or funding public transportation facilities or services;*
> *• Other features as determined appropriate by the City.*
>
> *Policy C.1.3 - Recognize that regional traffic beyond the City's control, as well as circulation system decisions made prior to incorporation or by other agencies, will make it infeasible to achieve the City's desired Level of Service on all roadways. Subject development projects which affect these roadways to the provisions of Policy C.1.2 to provide offsetting improvements to the vehicular and/or non-vehicular transportation system.*

LOS D is the minimum acceptable LOS for all facilities within the City of Rancho Cordova.

Existing (2017) Conditions

As documented in the previous Jaeger Ranch Traffic Impact Analysis[1], new weekday AM (7-9 a.m.) and PM (4-6 p.m.) peak-period intersection turning movement traffic counts were collected on September 28, 2017. Existing (2017) peak-hour turn movement volumes are presented in Exhibit 2

Assessment of Proposed Project

Trip Generation

The number of trips anticipated to be generated by the proposed project are approximated using data included in *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (ITE).

The land use considered for this analysis included 723 market rate single family detached units (SFR), 250 multi-family multifamily housing units and 743 AAR units for the project site. Active Adult Residential (AAR) refers to detached senior housing units. This land use type is understood to have trip characteristics that generate fewer daily trips when compared to non-age restrictive land use types. In fact, as described in Trip Generation, the daily trip rate for AAR is 61 percent less than the daily trip rate for SFR. In addition, the AM and PM peak-hour trip rates for AAR are 71 percent and 73 percent less than the AM peak-hour and PM peak-hour trip rates for SFR, respectively.

To represent this development, ITE Land Use Codes 210 (Single Family Detached Housing), 220 (Apartment), 251 (Senior Adult Housing - Detached) and 820 (Shopping Center) were applied. Internal capture rates of 2.84 percent and 8.92 percent were applied to the AM and PM peak-hours, respectively. For the commercial uses, a pass-by reduction of 34% was applied for the PM peak-hour, in accordance with the Trip Generation Handbook. The anticipated trip generation characteristics for the proposed project are presented in Table 1.

Table 1 – Proposed Project Trip Generation Characteristics

Land Use (ITE Code)	Size (DU/KSF)	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Single Family Detached Housing (210)	723	6,685	538	134	404	705	444	261
Apartment (220)	250	1,425	123	25	98	133	86	47
Senior Adult Housing - Detached (251)	743	2,540	159	55	104	183	111	71
Shopping Center (820)	32.000	956	22	14	9	81	39	42
Total		**11,606**	**843**	**228**	**615**	**1,102**	**681**	**421**

As shown in Table 1, the proposed project is estimated to generate approximately 11,606 new daily trips, with 843 and 1,102 trips occurring during the A.M. and P.M. peak-hours, respectively. Relative to the previously completed analysis, this represents an increase of 1,340 new daily trips, with 122 and 168 additional trips occurring during the A.M. and P.M. peak-hours, respectively.

Existing (2017) Plus Proposed Project Conditions

As previously discussed, the number of trips anticipated to be generated by the proposed project was derived using the *Trip Generation Manual, 9th Edition,* published by the Institute for Traffic Engineering (ITE). These trips were assigned to the roadway network based on existing traffic volumes, output from the SACSIM travel demand model, and professional judgment. The project trip distribution percentages are provided in Exhibit 3 and the assignment of project trips are depicted in Exhibit 4.

Using these volumes, levels of service were determined at the study facilities. Existing (2017) plus Proposed Project peak-hour turning movement volumes are presented in Exhibit 5. Levels of service (LOS) were then determined at the study facilities. Analysis worksheets for this scenario are provided in Appendix A.

Table 2 presents the intersection operating conditions for this analysis scenario. As indicated in Table 2, the study intersections operate from LOS C to LOS F.

Table 2 – Existing (2017) plus Proposed Project Intersection Levels of Service

ID	Intersection	Control	Peak Hour	Existing		Existing plus Project	
				Delay	LOS	Delay	LOS
1	Jackson Rd/SR-16 @ Bradshaw Rd	Signal	AM	122.2	F	126.1	F
			PM	79.1	E	80.1	F
2	Jackson Rd/SR-16 @ Excelsior Rd	Signal	AM	74.1	E	59.1	E
			PM	51.8	D	43.2	D
3	Jackson Rd/SR-16 @ Eagles Nest Rd	SSSC	AM	17.2 (89.1 NB)	F	18.0 (95.3 NB)	F
			PM	20.1 (253.1 NB)	F	19.1 (*ECL NB)	F
4	Jackson Rd/SR-16 @ Sunrise Rd	Signal	AM	66.0	E	69.3	E
			PM	44.3	D	47.0	D
5	Jackson Rd/SR-16 @ Grant Line Rd	Signal	AM	113.8	F	114.1	F
			PM	136.4	F	136.9	F
9	Grant Line Rd @ Sunrise Blvd	Signal	AM	113.1	F	120.9	F
			PM	52.1	D	54.9	D
11	Douglas Rd @ Sunrise Blvd	Signal	AM	28.4	C	35.0	D
			PM	41.5	D	63.7	E
13	Mather Field Rd @ Folsom Blvd	Signal	AM	27.5	C	27.2	C
			PM	51.7	D	51.1	D
19	Zinfandel Dr @ US-50 Eastbound Ramps	Signal	AM	85.1	F	88.7	F
			PM	23.2	C	25.7	C
21	Sunrise Blvd @ White Rock Rd	Signal	AM	35.7	D	33.2	C
			PM	56.5	E	61.9	E
25	Sunrise Blvd @ Zinfandel Dr	Signal	AM	112.8	F	117.7	F
			PM	58.6	E	70.2	E

Note: Pink shading indicates new impacts not previously identified in the previous Jaeger Ranch Impact Analysis. Orange shading indicates impacts previously identified.

Cumulative (2040) Conditions

Future traffic estimates were prepared using the modified SACSIM travel demand model developed by the City of Rancho Cordova for the 2040 General Plan. The difference between the resulting traffic estimate and the 2012 baseline model results (the growth) was then added to Existing (2017) traffic volumes to establish Cumulative (2040) traffic estimates for this study. The Cumulative (2040) study intersections are depicted in Exhibit 6. Peak-hour traffic volumes for Cumulative (2040) Conditions are presented in Exhibit 7.

Cumulative (2040) plus Proposed Project Conditions

As previously discussed, the number of trips anticipated to be generated by the proposed project was derived using the *Trip Generation Manual, 9th Edition*, published by the Institute for Traffic Engineering (ITE). The project trips were assigned to the future roadway network based on modified SACSIM travel demand model, as provided by the City of Rancho Cordova. Using these volumes, levels of service were determined at the study facilities.

The Cumulative Scenario Project Trip distribution and trip assignment are shown in Exhibit 8 and Exhibit 9, respectively. Cumulative plus Proposed Project peak-hour turning movement volumes are presented in Exhibit 10. Analysis worksheets for this scenario are provided in Appendix B

Table 3 presents the peak-hour intersection operating conditions for this analysis scenario. As indicated in Table 3, the study intersections operate from LOS D to LOS F during the AM and PM peak-hours.

Table 3 – Cumulative (2036) plus Proposed Project Intersection Levels of Service

ID	Intersection	Control	Peak Hour	Cumulative		Cumulative plus Proposed Project	
				Delay	LOS	Delay	LOS
1	Jackson Rd/SR-16 @ Bradshaw Rd	Signal	AM	146.9	F	147.6	F
			PM	194.9	F	195.8	F
4	Jackson Rd/SR-16 @ Sunrise Rd	Signal	AM	104.6	F	105.3	F
			PM	53.9	D	54.7	D
5	Jackson Rd/SR-16 @ Grant Line Rd	Signal	AM	114.7	F	118.7	F
			PM	62.7	E	65.9	E
9	Grant Line Rd @ Sunrise Blvd	Signal	AM	150.1	F	151.5	F
			PM	109.2	F	108.7	F
10	Douglas Rd @ Zinfandel Dr	Signal	AM	145.2	F	161.7	F
			PM	35.3	D	43.9	D
11	Douglas Rd @ Sunrise Blvd	Signal	AM	97.1	F	114.5	F
			PM	107.6	F	109.6	F
13	Mather Field Rd @ Folsom Blvd	Signal	AM	46.3	D	46.1	D
			PM	142.2	F	141.2	F
17	Zinfandel Dr @ International Dr	Signal	AM	45.3	D	45.1	D
			PM	68.2	E	72.4	E
19	Zinfandel Dr @ US-50 Eastbound Ramps	Signal	AM	79.4	E	83.7	F
			PM	166.4	F	170.7	F
21	Sunrise Blvd @ White Rock Rd	Signal	AM	65.5	E	66.8	E
			PM	120.1	F	125.9	F
25	Sunrise Blvd @ Zinfandel Dr	Signal	AM	209.8	F	215.0	F
			PM	93.9	F	101.3	F
27	White Rock Rd @ Prairie City Rd	Signal	AM	140.3	F	144.8	F
			PM	157.0	F	171.0	F

Note: Pink shading indicates new impacts not previously identified in the previous Jaeger Ranch Impact Analysis. Orange shading indicates impacts previously identified.

Impacts and Mitigation

Project impacts were determined by comparing conditions with the proposed project to those without the project. Impacts for intersections are created when traffic from the proposed project forces the LOS to fall below the specified threshold.

Existing (2017) plus Proposed Project Impacts

As reflected in Table 2, the addition of the proposed project results in the five (5) significant impacts to study intersections. The following is a discussion of each impact and its associated mitigation. Analysis worksheets for the mitigations for this scenario are provided in Appendix C. Please note that the impact at Sunrise Boulevard and White Rock Road (Intersection #21) is an impact not identified in the previous Jaeger Ranch Traffic Impact Analysis[1].

Intersection Impacts:

I1. *Intersection #3, Jackson Road @Eagles Nest Road*
As shown in Table 2, this intersection operates at unacceptable LOS F during the AM and PM peak-hours without the project, and the project adds more than 5 seconds of delay to the northbound left turn movement during the AM and PM peak-hours. ***This is a significant impact***.

I2. *Intersection #9, Grant Line Road @ Sunrise Boulevard*
As shown in Table 2, this intersection operates at unacceptable LOS F during the AM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection. ***This is a significant impact***.

I3. *Intersection #11, Douglas Road @ Sunrise Boulevard*
As shown in Table 2, this intersection operates at LOS D during the PM peak-hour without the project, and the project results in LOS E. ***This is a significant impact***.

I4. *Intersection #21, Sunrise Boulevard @ White Rock Road*
As shown in Table 2, this intersection operates at unacceptable LOS E during the PM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection. ***This is a significant impact***.

I5. *Intersection #25, Sunrise Boulevard @ Zinfandel Drive*
As shown in Table 2, this intersection operates at unacceptable LOS E during the PM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection. ***This is a significant impact***.

Mitigations:

M1. *Intersection #3, Jackson Road and Eagles Nest Road*
The significant impact at this intersection during the AM and PM peak-hours can be mitigated by converting the intersection from side street stop control to signalized. As shown in Table 4, with this mitigation the intersection operates at LOS C or better during the AM and PM peak-hours. Therefore, ***this impact is less than significant***. However, the identified improvement falls under the jurisdiction of the County; therefore, neither the City nor the project applicant would have control over their timing or implementation. Thus, this impact would remain ***significant and unavoidable***. If the County allows the improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

M2. *Intersection #9, Grant Line Road @ Sunrise Boulevard*
The significant impact at this intersection during the AM peak-hour can be mitigated by changing the southbound approach to include a right turn lane and an all-purpose lane. This mitigation includes restriping the southbound approach to move the bicycle lane from its existing location between the two travel lanes to the right shoulder and add hatching for the right turns, consistent with the Optional Through Right and Right-Turn-Only lane configuration included in Figure 9C-4a (CA) of the CaMUTCD[5]. As shown in Table 4, this mitigation measure results in the intersection operating at LOS E or better during the AM and PM peak-hours. Therefore, ***this impact is less than significant***. However, the identified improvement falls under the jurisdiction of the County; therefore, neither the City nor the project applicant would have control over their timing or

[5] California MUTCD 2014 Edition. Chapter 9C-Markings: Part 9 Traffic Control for Bicycle Facilities. November 2014

implementation. Thus, this impact would remain ***significant and unavoidable***. If the County allows the improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

M3. Intersection #11, Douglas Road @ Sunrise Boulevard

The significant impact at this intersection during the PM peak-hour can be mitigated through signal timing optimization and the addition of a right-turn overlap signal phase for the eastbound right-turn, overlapping with the northbound left-turn movement. As shown in Table 4, this mitigation measure results in the intersection operating at LOS D during the AM and PM peak-hours. Therefore, ***this impact is less than significant***.

M4.Intersection #21, Sunrise Boulevard @ White Rock Road

The significant impact at this intersection during the PM peak-hour can be mitigated by optimizing the signal timings. As shown in Table 4, this mitigation measure results in the intersection operating at LOS D or better during the AM and PM peak-hours. Therefore, ***this impact is less than significant***

M5. Intersection #25, Sunrise Boulevard @ Zinfandel Drive

The significant impact at this intersection during the PM peak-hour can be mitigated by restriping the eastbound and westbound approaches to include a left turn lane and through-right lane. As shown in Table 4, this mitigation measure results in the intersection operating at LOS D or better during the PM peak-hour. Therefore, ***this impact is less than significant***

Table 4 – Existing (2017) plus Proposed Project Mitigated Intersection Level of Service

ID	Intersection	Control	Peak Hour	Existing plus Project		Existing plus Project (Mitigated)	
				Delay	LOS	Delay	LOS
3	Jackson Rd/SR-16 @ Eagles Nest Rd	Signal	AM	**18.0 (95.3 NB)**	**F**	20.0	C
			PM	**19.1 (*ECL NB)**	**F**	15.8	B
9	Grant Line Rd @ Sunrise Blvd	Signal	AM	**120.9**	**F**	61.9	E
			PM	54.9	D	32.1	C
11	Douglas Rd @ Sunrise Blvd	Signal	AM	35.0	D	35.0	D
			PM	**63.7**	**E**	53.2	D
21	Sunrise Blvd @ White Rock Rd	Signal	AM	33.2	C	33.2	C
			PM	**61.9**	**E**	54.3	D
25	Sunrise Blvd @ Zinfandel Dr	Signal	AM	**117.7**	**F**	**89.0**	**F**
			PM	**70.2**	**E**	54.5	D

<u>Cumulative plus Proposed Project Impacts</u>

As reflected in Table 3, the addition of the proposed project results in five (5) significant impacts to study intersections. The following is a discussion of each impact and its associated mitigation. Analysis worksheets for the mitigations for this scenario are provided in Appendix D. Please note that the impacts at Sunrise Boulevard and White Rock Road (Intersection #21) and Sunrise Boulevard and Zinfandel Drive (Intersection #25) were not identified in the previous Jaeger Ranch Traffic Impact Analysis[1].

Intersection Impacts:

I1. *Intersection #10, Douglas Road @ Zinfandel Drive*
As shown in Table 3, this intersection operates at unacceptable LOS F during the AM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection during the AM peak-hour. This is a significant impact.

I2. *Intersection #11, Douglas Road @ Sunrise Boulevard*
As shown in Table 3, this intersection operates at unacceptable LOS F during the AM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection during the AM peak-hour. ***This is a significant impact***.

I3. *Intersection #21, Sunrise Boulevard and White Rock Road*
As shown in Table 3, this intersection operates at unacceptable LOS F during the AM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection during the AM peak-hour. ***This is a significant impact***.

I4. *Intersection #25, Sunrise Boulevard and Zinfandel Drive*
As shown in Table 3, this intersection operates at unacceptable LOS F during the AM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection during the AM peak-hour. ***This is a significant impact***.

I5. *Intersection #27, White Rock Road @Prairie City Road*
As shown in Table 3, this intersection operates at unacceptable LOS F during the AM and PM peak-hour without the project, and the project adds more than 5 seconds of delay to the intersection during the PM peak-hour. ***This is a significant impact***.

Mitigations:

M6. *Intersection #10, Douglas Road @ Zinfandel Drive*
The significant impact at this intersection during the AM peak-hour can mitigated by the conversion of the westbound right turn from permitted to a free right turn with a receiving lane. As shown in Table 5, this mitigation measure results in the intersection operating at LOS D during the AM and PM peak-hours. Therefore, this impact is less than significant. However, the identified improvement falls under the jurisdiction of the County; therefore, neither the City nor the project applicant would have control over their timing or implementation. Thus, this impact would remain significant and unavoidable. If the County allows the improvement to move forward, the impact would be classified as significant in the short term but eventually would be reduced to a less-than-significant level in the long term.

M7. *Intersection #11, Douglas Road @ Sunrise Boulevard*
The significant impact at this intersection during the AM peak-hour cannot be feasibly mitigated. The intersection of Douglas Road and Sunrise Boulevard is fully built out according to the City's General Plan. As shown Table 5, signal timing optimization is not enough to mitigate the project impacts to acceptable conditions. Therefore, ***this impact is significant and unavoidable***. However, as described in the Rio Del Oro Specific Plan DEIR/DEIS[6], there is potential to improve conditions through additional connectivity along Sunrise Boulevard and further build out of the City's General Plan network.

[6] Rio del Oro Specific Plan Project DEIR/DEIS. City of Rancho Cordova and USACE. April, 2008

M8.Intersection #21, Sunrise Boulevard @ White Rock Road

The significant impact at this intersection during the PM peak-hour cannot be feasibly mitigated. The intersection of Sunrise Boulevard and White Rock Road is fully built out according to the City's General Plan. As shown in **Table 5,** signal timing optimization is not enough to mitigate the project impacts to acceptable conditions. Therefore, ***this impact is significant and unavoidable***.

M9.Intersection #25, Sunrise Boulevard @ Zinfandel Drive

The significant impact at this intersection during the AM peak-hour cannot be feasibly mitigated. The intersection of Sunrise Boulevard and Zinfandel Drive is fully built out according to the City's General Plan. As shown in **Table 5**, signal timing optimization is not enough to mitigate the project impacts to acceptable conditions. Therefore, ***this impact is significant and unavoidable***.

M10.Intersection #27, White Rock Road @ Prairie City Road

The significant impact at this intersection during the PM peak-hour can be mitigated with the addition of a second southbound right-turn lane and the addition of a right-turn overlap signal phase for the southbound right-turn. As shown in **Table 5**, this mitigation measure results in the intersection operating at LOS D or better during the AM and PM peak-hours. Therefore, ***this impact is less than significant***.

Table 5 – Cumulative (2040) plus Proposed Project Mitigated Intersection Level of Service

ID	Intersection	Control	Peak Hour	Cumulative plus Proposed Project		Cumulative plus Proposed Project (Mitigated)	
				Delay	LOS	Delay	LOS
10	Douglas Rd @ Zinfandel Dr	Signal	AM	**161.7**	**F**	51.7	D
			PM	43.9	D	43.0	D
11	Douglas Rd @ Sunrise Blvd	Signal	AM	**114.5**	**F**	**114.5**	**F**
			PM	**109.6**	**F**	**109.6**	**F**
21	Sunrise Blvd @ White Rock Rd	Signal	AM	**66.8**	**E**	**66.8**	**E**
			PM	**125.9**	**F**	**125.9**	**F**
25	Sunrise Blvd @ Zinfandel Dr	Signal	AM	**215.0**	**F**	**215.0**	**F**
			PM	**101.3**	**F**	**101.3**	**F**
27	White Rock Rd @ Prairie City Rd	Signal	AM	**144.8**	**F**	36.7	D
			PM	**171.0**	**F**	31.8	C

Conclusions

The following are the primary conclusions based on the analyses discussed herein:

- The proposed project is estimated to generate 11,606 new daily trips, with 843 new trips occurring during the AM peak-hour, and 1,102 new trips occurring during the PM peak-hour.
- The addition of the proposed project to the Existing (2017) Conditions results in a significant impact at five (5) study intersections. Four (4) of these impacts and mitigations were previously identified in the Jaeger Ranch Traffic Impact Analysis[1]. This analysis identified one additional impact to the intersection of Sunrise Boulevard with White Rock Road (Intersection #21). With the application of mitigation measures recommended herein, the impacts to all five (5) intersections can be mitigated to be *less than significant*.

- The addition of the proposed project to Cumulative (2040) Conditions results in a significant impact at five (5) intersections. Three (3) of these impacts and mitigations were previously identified in the Jaeger Ranch Traffic Impact Analysis[1]. Two (2) of the impacts to intersections would be mitigated to *less than significant*. Three (3) locations do not have a feasible mitigation including the two (2) newly identified mitigations.

Attachments:

Exhibit 1 – Existing Project Site Vicinity Map
Exhibit 2 – Existing (2017) Peak Hour Traffic Volumes
Exhibit 3 – Existing (2017) Project Trip Distribution
Exhibit 4 – Existing (2017) Proposed Project Trip Assignment
Exhibit 5 – Existing (2017) plus Proposed Project Peak-Hour Volumes
Exhibit 6 – Cumulative Project Site Vicinity Map
Exhibit 7 – Cumulative (2040) Peak-Hour Traffic Volumes
Exhibit 8 – Cumulative (2040) Project Trip Distribution
Exhibit 9 – Cumulative (2040) Proposed Project Trip Assignment
Exhibit 10 – Cumulative (2040) plus Proposed Project Peak-Hour Volumes

Appendix A – Analysis Worksheets for Existing (2017) plus Proposed Project Conditions
Appendix B – Analysis Worksheets for Cumulative (2040) plus Proposed Project Conditions
Appendix C– Analysis Worksheets for Existing (2017) plus Proposed Project Mitigated Conditions
Appendix D– Analysis Worksheets for Cumulative (2040) plus Proposed Project Mitigated Conditions

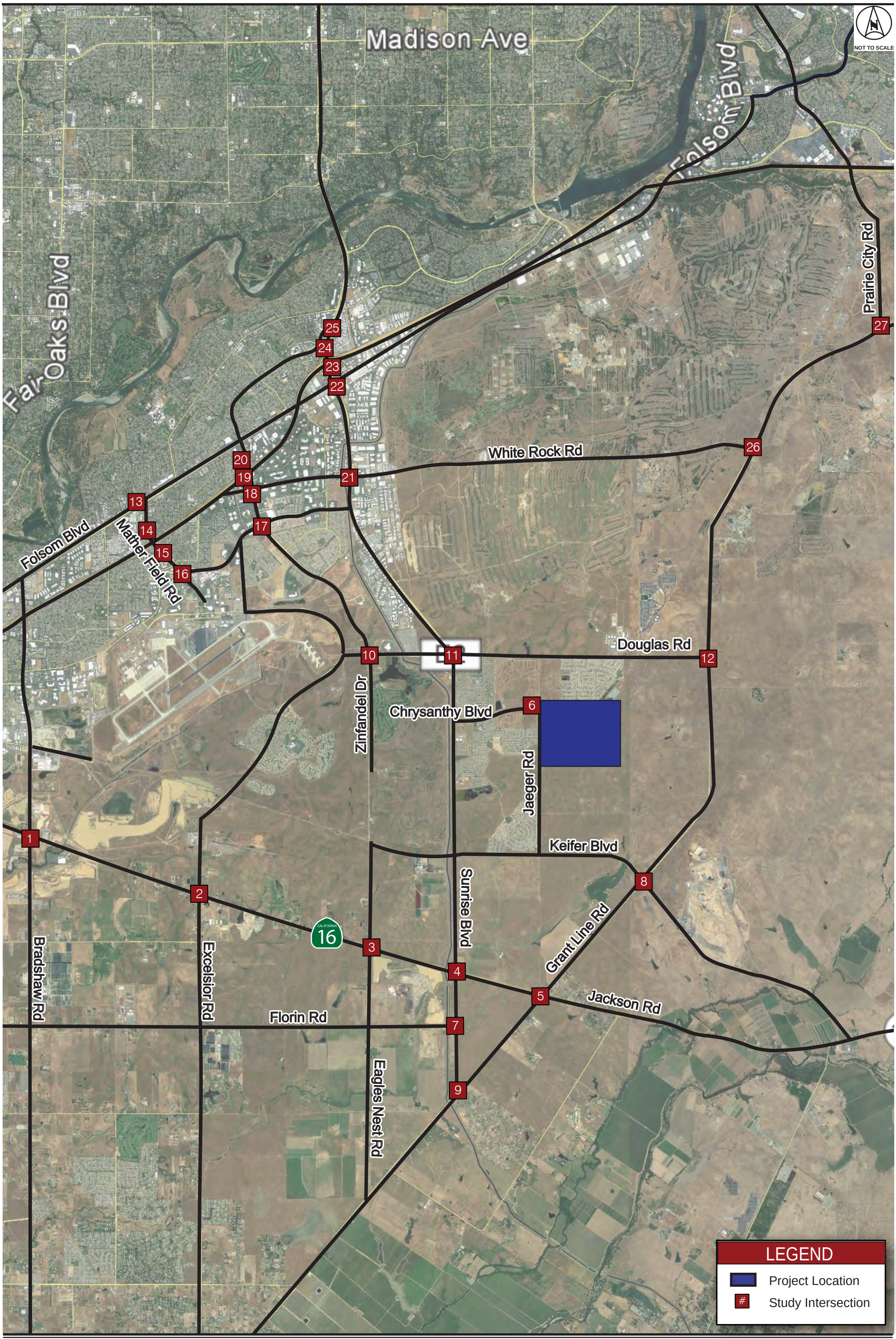

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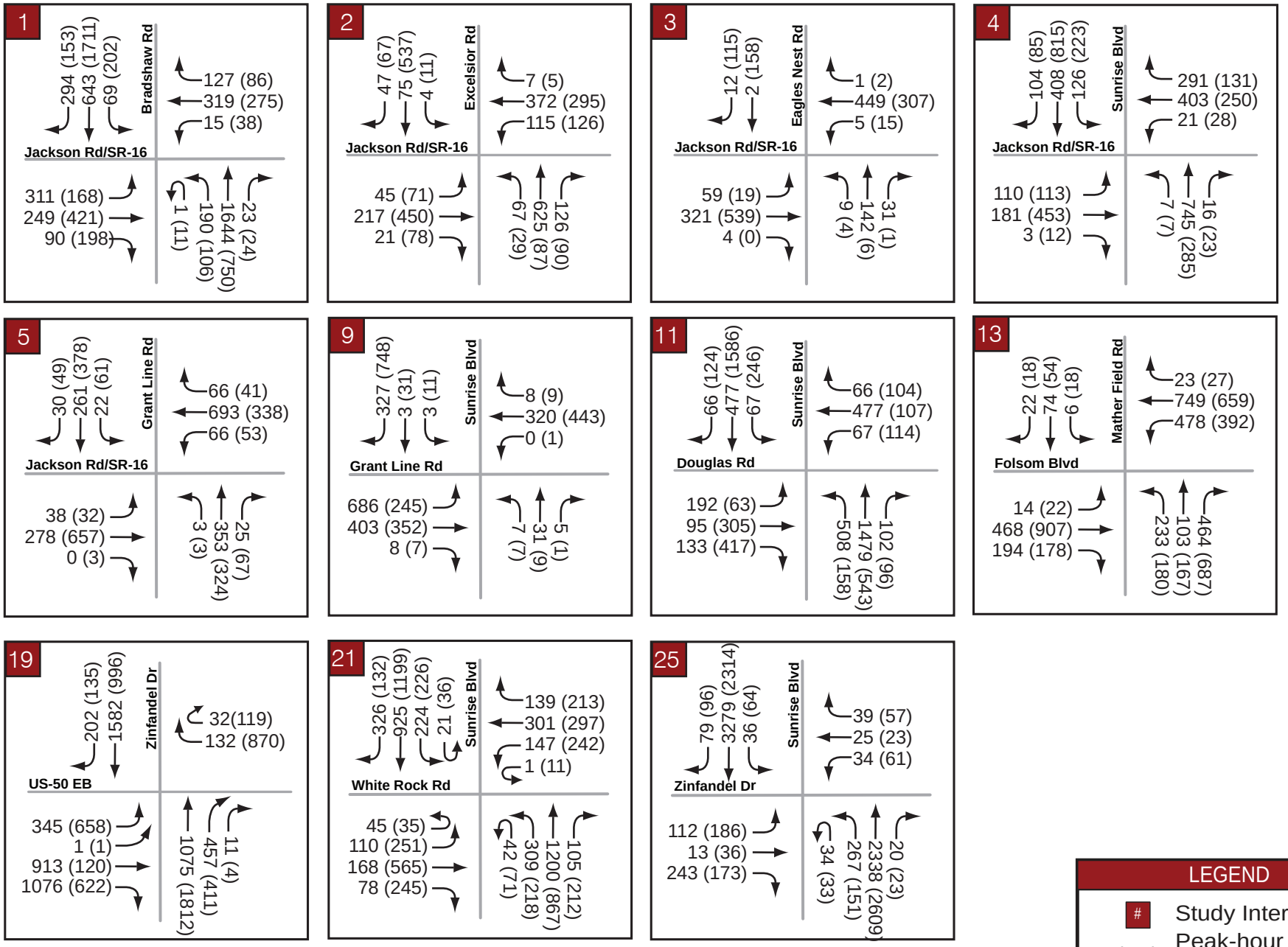
Exhibit 1
Existing (2017) Project Vicinity Map


1
Bradshaw Rd
Jackson Rd/SR-16
294 (153)
643 (1711)
69 (202)
127 (86)
319 (275)
15 (38)
311 (168)
249 (421)
90 (198)
1 (11)
190 (106)
1644 (750)
23 (24)
2
Excelsior Rd
Jackson Rd/SR-16
47 (67)
75 (537)
4 (11)
7 (5)
372 (295)
115 (126)
45 (71)
217 (450)
21 (78)
67 (29)
625 (87)
126 (90)
3
Eagles Nest Rd
Jackson Rd/SR-16
12 (115)
2 (158)
1 (2)
449 (307)
5 (15)
59 (19)
321 (539)
4 (0)
9 (4)
142 (6)
31 (1)
4
Sunrise Blvd
Jackson Rd/SR-16
104 (85)
408 (815)
126 (223)
291 (131)
403 (250)
21 (28)
110 (113)
181 (453)
3 (12)
7 (7)
745 (285)
16 (23)
5
Grant Line Rd
Jackson Rd/SR-16
30 (49)
261 (378)
22 (61)
66 (41)
693 (338)
66 (53)
38 (32)
278 (657)
0 (3)
3 (3)
353 (324)
25 (67)
9
Sunrise Blvd
Grant Line Rd
327 (748)
3 (31)
3 (11)
8 (9)
320 (443)
0 (1)
686 (245)
403 (352)
8 (7)
7 (7)
31 (9)
5 (1)
11
Sunrise Blvd
Douglas Rd
66 (124)
477 (1586)
67 (246)
66 (104)
477 (107)
67 (114)
192 (63)
95 (305)
133 (417)
508 (158)
1479 (543)
102 (96)
13
Mather Field Rd
Folsom Blvd
22 (18)
74 (54)
9 (18)
23 (27)
749 (659)
478 (392)
14 (22)
468 (907)
194 (178)
233 (180)
103 (167)
464 (687)
19
Zinfandel Dr
US-50 EB
202 (135)
1582 (996)
32(119)
132 (870)
345 (658)
1 (1)
913 (120)
1076 (622)
1075 (1812)
457 (411)
11 (4)
21
Sunrise Blvd
White Rock Rd
326 (132)
925 (1199)
224 (226)
21 (36)
139 (213)
301 (297)
147 (242)
1 (11)
45 (35)
110 (251)
168 (565)
78 (245)
309 (218)
1200 (867)
105 (212)
42 (71)
25
Sunrise Blvd
Zinfandel Dr
79 (96)
3279 (2314)
36 (64)
39 (57)
25 (23)
34 (61)
112 (186)
13 (36)
243 (173)
34 (33)
267 (151)
2338 (2609)
20 (23)
LEGEND
#
Study Intersection
AM(PM)
Peak-hour Turning Movement Volumes

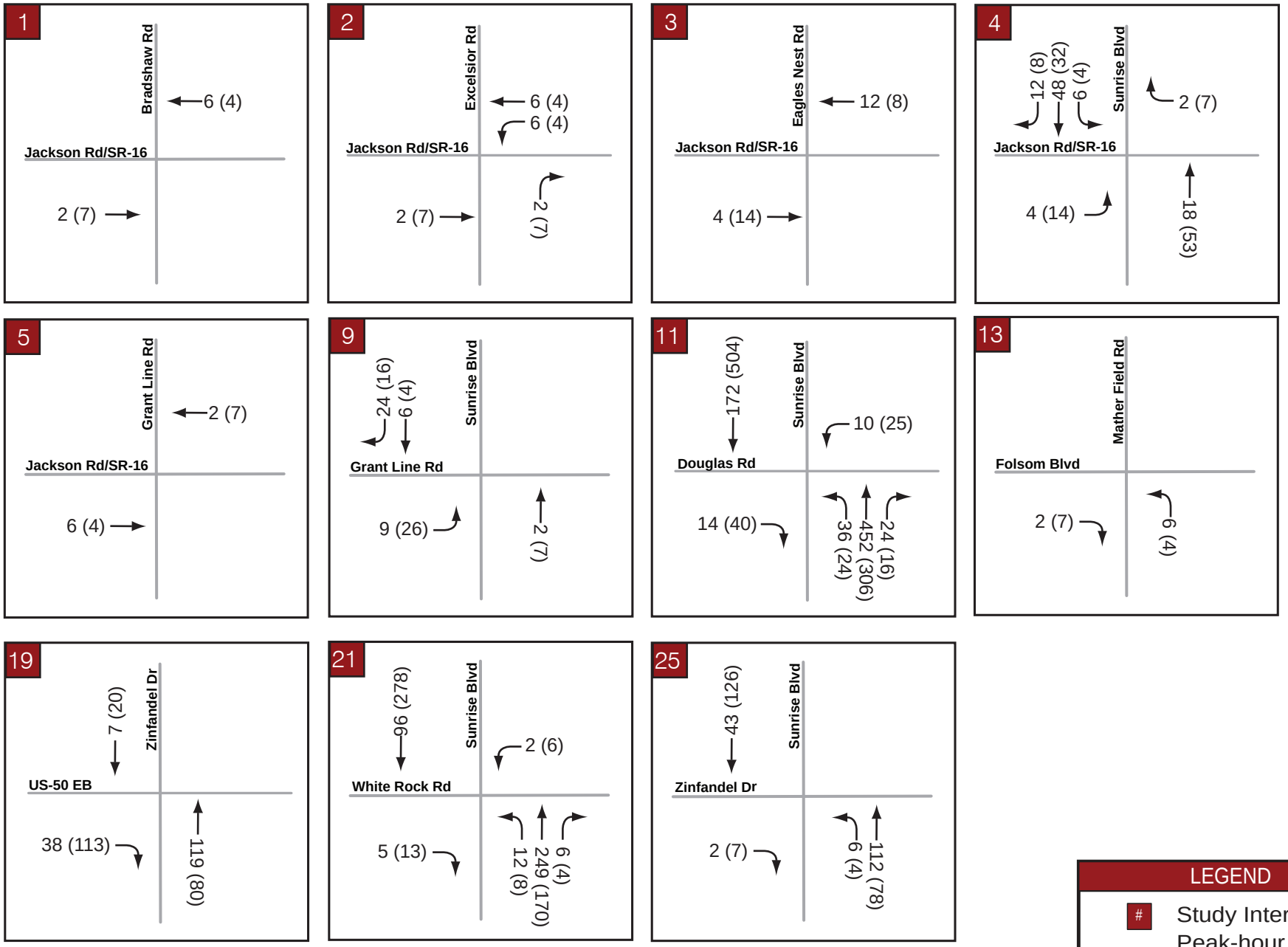
NOT TO SCALE

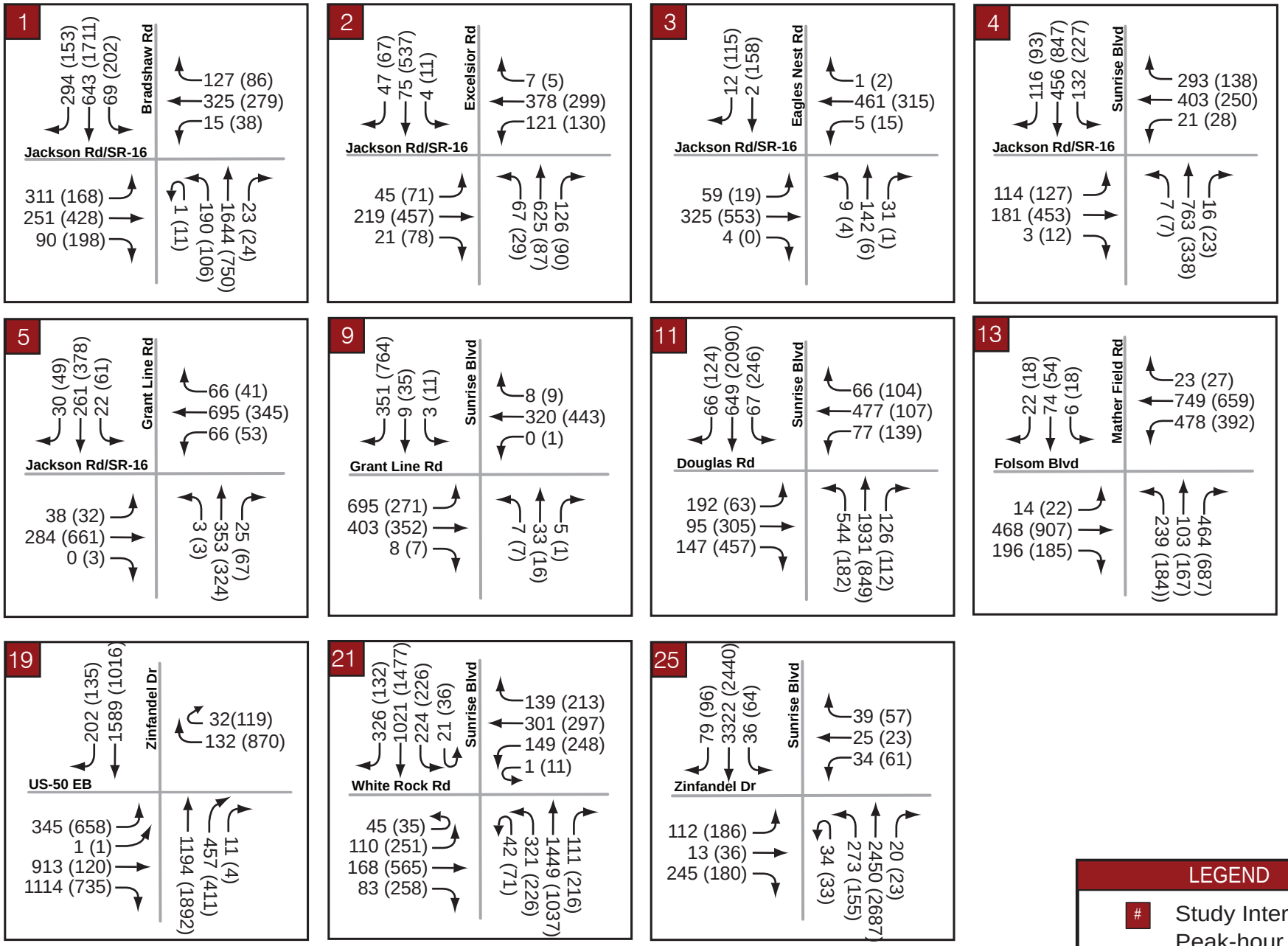
Madison Ave
Fair Oaks Blvd
Folsom Blvd
Prairie City Rd
White Rock Rd
Douglas Rd
Chrysanthy Blvd
Rancho Cordova Pkwy
Keifer Blvd
Zinfandel Dr
Sunrise Blvd
Grant Line Rd
International Dr
Mather Field Rd
Jackson Rd / SR -16
Bradshaw Rd
Florin Rd
Excelsior Rd
Eagles Nest Rd

LEGEND
- Project Location
- # Study Intersection
- XX% Trip Distribution Percentage
- XX% Local Trip End Percentage

Kimley»Horn

Exhibit 3
Existing (2017) Project Trip Distribution


1
Bradshaw Rd
6 (4)
Jackson Rd/SR-16
2 (7)
2
Excelsior Rd
6 (4)
6 (4)
Jackson Rd/SR-16
2 (7)
2 (7)
3
Eagles Nest Rd
12 (8)
Jackson Rd/SR-16
4 (14)
4
12 (8)
48 (32)
6 (4)
Sunrise Blvd
2 (7)
Jackson Rd/SR-16
4 (14)
18 (53)
5
Grant Line Rd
2 (7)
Jackson Rd/SR-16
6 (4)
9
24 (16)
6 (4)
Sunrise Blvd
Grant Line Rd
9 (26)
2 (7)
11
172 (504)
Sunrise Blvd
10 (25)
Douglas Rd
14 (40)
36 (24)
452 (306)
24 (16)
13
Mather Field Rd
Folsom Blvd
2 (7)
6 (4)
19
7 (20)
Zinfandel Dr
US-50 EB
38 (113)
119 (80)
21
96 (278)
Sunrise Blvd
2 (6)
White Rock Rd
5 (13)
12 (8)
249 (170)
6 (4)
25
43 (126)
Sunrise Blvd
Zinfandel Dr
2 (7)
6 (4)
112 (78)
LEGEND
#
Study Intersection
AM(PM)
Peak-hour Turning Movement Volumes


1
Jackson Rd/SR-16
Bradshaw Rd
294 (153)
643 (1711)
69 (202)
127 (86)
325 (279)
15 (38)
311 (168)
251 (428)
90 (198)
1 (11)
190 (106)
1644 (750)
23 (24)
2
Jackson Rd/SR-16
Excelsior Rd
47 (67)
75 (537)
4 (11)
7 (5)
378 (299)
121 (130)
45 (71)
219 (457)
21 (78)
67 (29)
625 (87)
126 (90)
3
Jackson Rd/SR-16
Eagles Nest Rd
12 (115)
2 (158)
1 (2)
461 (315)
5 (15)
59 (19)
325 (553)
4 (0)
9 (4)
142 (6)
31 (1)
4
Jackson Rd/SR-16
Sunrise Blvd
116 (93)
456 (847)
132 (227)
293 (138)
403 (250)
21 (28)
114 (127)
181 (453)
3 (12)
7 (7)
763 (338)
16 (23)
5
Jackson Rd/SR-16
Grant Line Rd
30 (49)
261 (378)
22 (61)
66 (41)
695 (345)
66 (53)
38 (32)
284 (661)
0 (3)
3 (3)
353 (324)
25 (67)
9
Grant Line Rd
Sunrise Blvd
351 (764)
9 (35)
3 (11)
8 (9)
320 (443)
0 (1)
695 (271)
403 (352)
8 (7)
7 (7)
33 (16)
5 (1)
11
Douglas Rd
Sunrise Blvd
66 (124)
649 (2090)
67 (246)
66 (104)
477 (107)
77 (139)
192 (63)
95 (305)
147 (457)
544 (182)
1931 (849)
126 (112)
13
Folsom Blvd
Mather Field Rd
22 (18)
74 (54)
9 (18)
23 (27)
749 (659)
478 (392)
14 (22)
468 (907)
196 (185)
239 (184)
103 (167)
464 (687)
19
US-50 EB
Zinfandel Dr
202 (135)
1589 (1016)
32(119)
132 (870)
345 (658)
1 (1)
913 (120)
1114 (735)
1194 (1892)
457 (411)
11 (4)
21
White Rock Rd
Sunrise Blvd
326 (132)
1021 (1477)
224 (226)
21 (36)
139 (213)
301 (297)
149 (248)
1 (11)
45 (35)
110 (251)
168 (565)
83 (258)
42 (71)
321 (226)
1449 (1037)
111 (216)
25
Zinfandel Dr
Sunrise Blvd
79 (96)
3322 (2440)
36 (64)
39 (57)
25 (23)
34 (61)
112 (186)
13 (36)
245 (180)
34 (33)
273 (155)
2450 (2687)
20 (23)
LEGEND
#
Study Intersection
AM(PM)
Peak-hour Turning Movement Volumes

NOT TO SCALE

Madison Ave
Folsom Blvd
Prairie City Rd
Fair Oaks Blvd
White Rock Rd
International Dr
Rio Del Oro Pkwy
Centennial Dr
Douglas Rd
Zinfandel Dr
Chrysanthy Blvd
Rancho Cordova Pkwy
Americanos Blvd
Keifer Blvd
Sunrise Blvd
Folsom Blvd
Mather Field Rd
Jackson Rd
Florin Rd
Bradshaw Rd
Excelsior Rd
Eagles Nest Rd
Grant Line Rd
CALIFORNIA 16

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

LEGEND

- Project Location
- # Existing (2017) Study Intersection
- # Cumulative (2040) Study Intersection

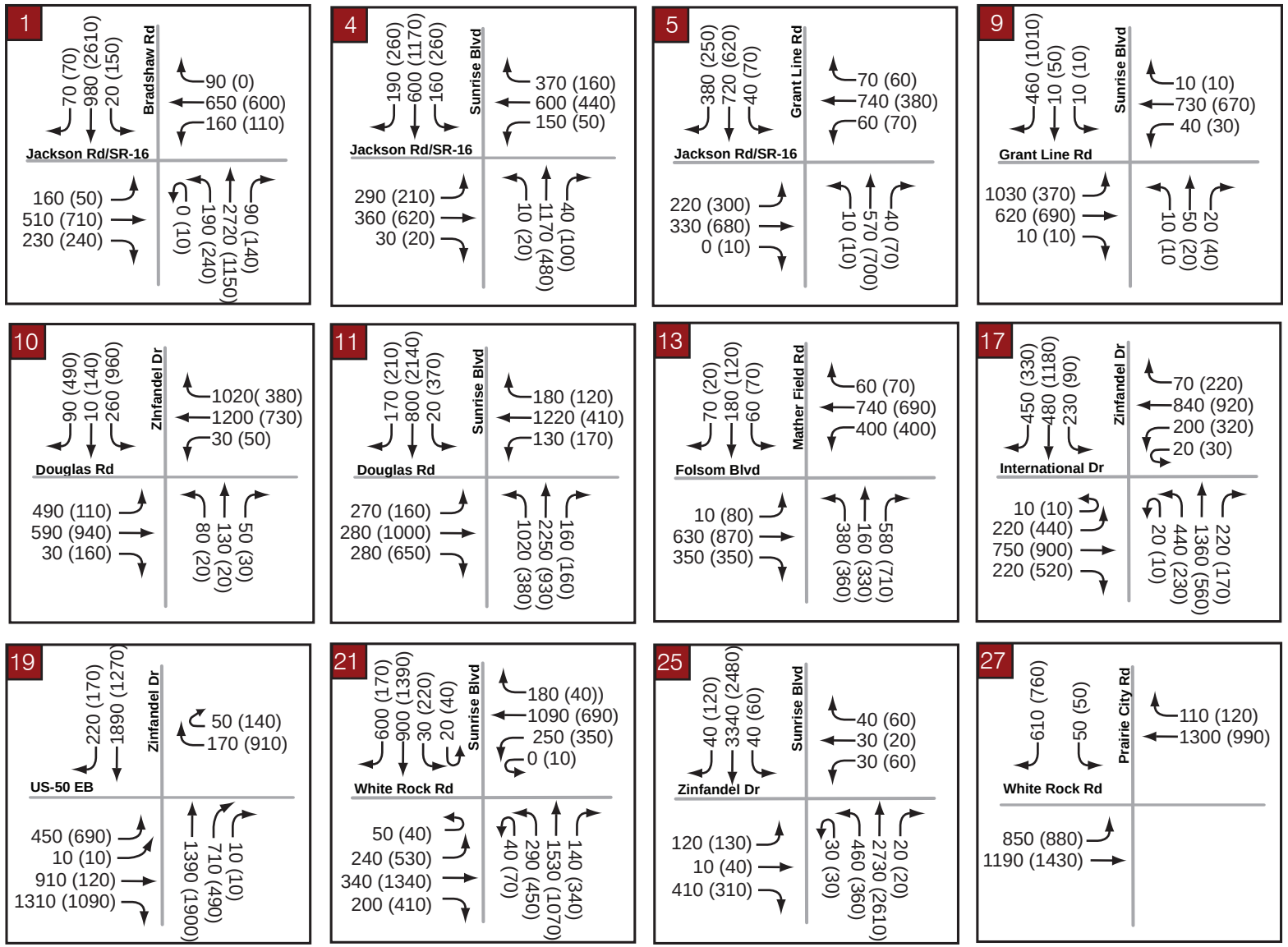


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Exhibit 7

Cumulative (2040) Peak-Hour Traffic Volumes

NOT TO SCALE

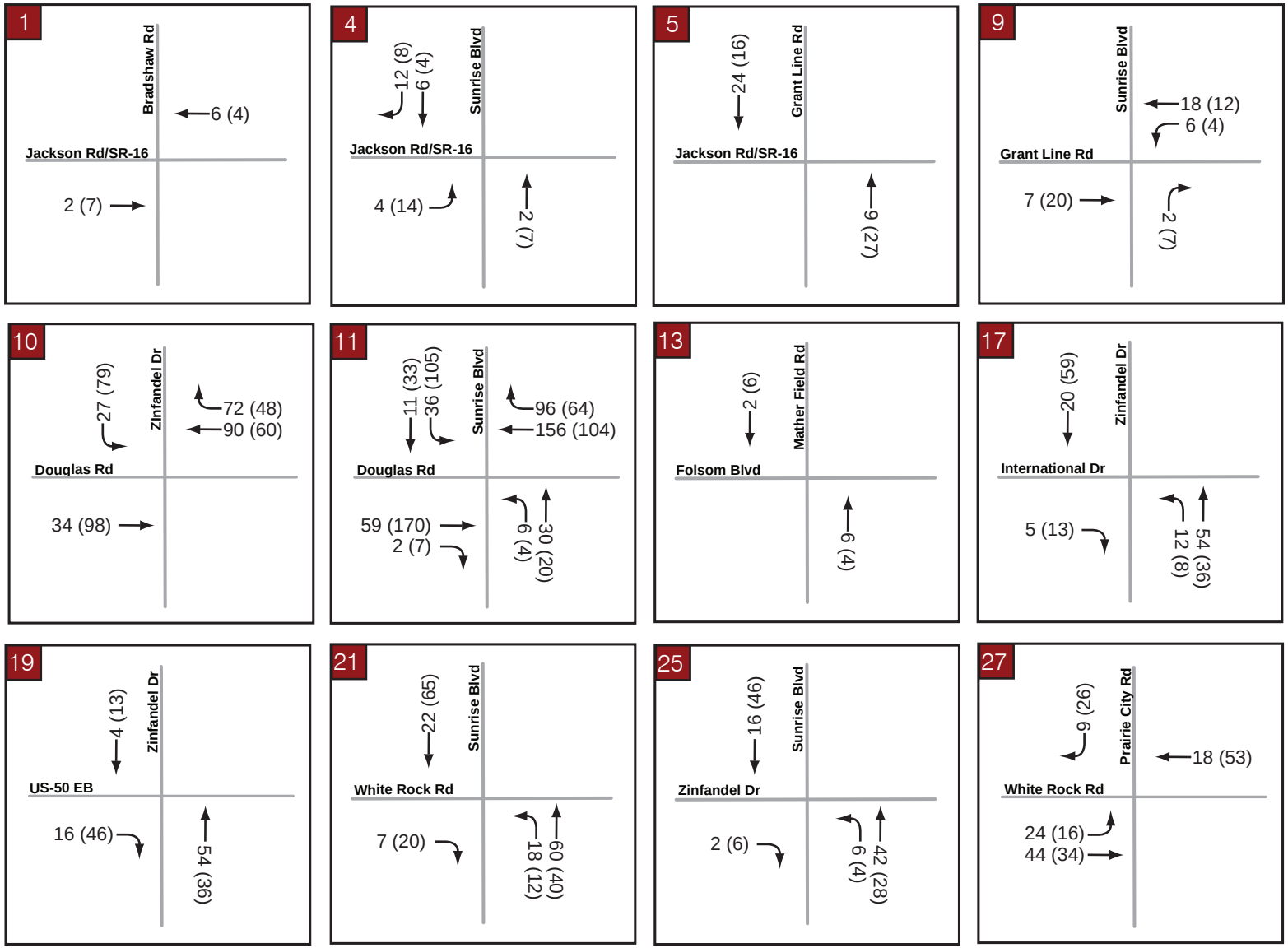
Madison Ave
Fair Oaks Blvd
Folsom Blvd
Prairie City Rd
White Rock Rd
International Dr
Rio Del Oro Pkwy
Centennial Dr
Douglas Rd
Mather Field Rd
Zinfandel Dr
Chrysanthy Blvd
Rancho Cordova Pkwy
Americanos Blvd
Keifer Blvd
Sunrise Blvd
Jackson Rd
Florin Rd
Excelsior Rd
Eagles Nest Rd
Grant Line Rd
Bradshaw Rd
CALIFORNIA 16

LEGEND

- Project Location
- # Existing (2017) Study Intersection
- # Cumulative (2040) Study Intersection
- XX% Trip Distribution Percentage
- XX% Local Trip End Percentage

Kimley»Horn

Exhibit 8
Cumulative (2040) Project Trip Distribution


1
Bradshaw Rd
Jackson Rd/SR-16
6 (4)
2 (7)
4
Sunrise Blvd
Jackson Rd/SR-16
12 (8)
6 (4)
4 (14)
2 (7)
5
Grant Line Rd
Jackson Rd/SR-16
24 (16)
9 (27)
9
Sunrise Blvd
Grant Line Rd
18 (12)
6 (4)
7 (20)
2 (7)
10
Zinfandel Dr
Douglas Rd
27 (79)
72 (48)
90 (60)
34 (98)
11
Sunrise Blvd
Douglas Rd
11 (33)
36 (105)
96 (64)
156 (104)
59 (170)
2 (7)
6 (4)
30 (20)
13
Mather Field Rd
Folsom Blvd
2 (6)
6 (4)
17
Zinfandel Dr
International Dr
20 (59)
5 (13)
12 (8)
54 (36)
19
Zinfandel Dr
US-50 EB
4 (13)
16 (46)
54 (36)
21
Sunrise Blvd
White Rock Rd
22 (65)
7 (20)
18 (12)
60 (40)
25
Sunrise Blvd
Zinfandel Dr
16 (46)
2 (6)
6 (4)
42 (28)
27
Prairie City Rd
White Rock Rd
9 (26)
18 (53)
24 (16)
44 (34)
LEGEND
#
Study Intersection
AM(PM)
Peak-hour Turning Movement Volumes

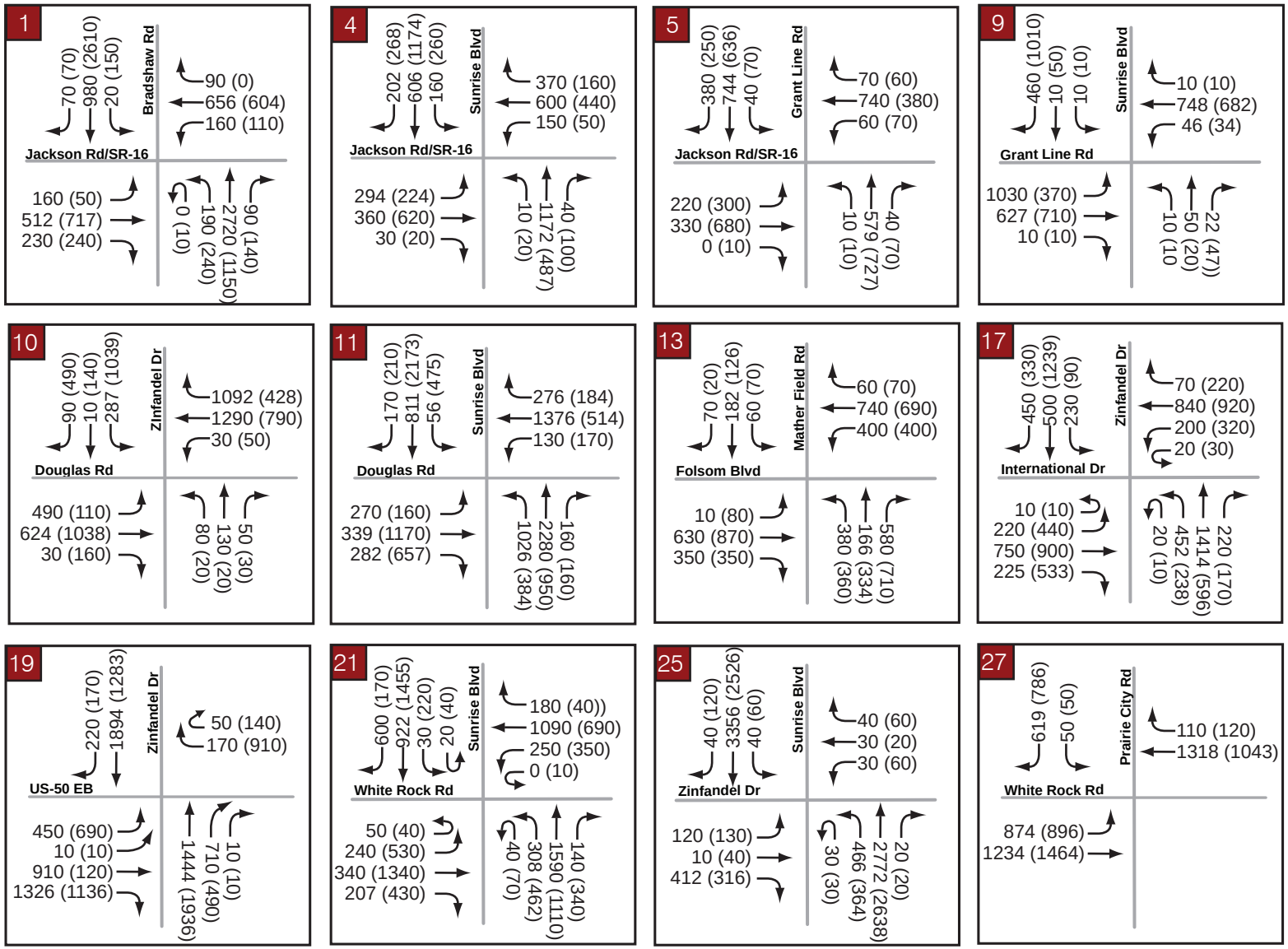


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Exhibit 10

Cumulative (2040) plus Proposed Project Peak-Hour Volumes

Appendix A

Analysis Worksheets for Existing (2017) plus Proposed Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	311	251	90	15	325	127	1	190	1644	23	69	643
Future Volume (veh/h)	311	251	90	15	325	127	1	190	1644	23	69	643
Number	3	8	18	7	4	14		1	6	16	5	2
Initial Q (Qb), veh	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		0.98	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	362	292	105	16	357	140		216	1868	26	76	707
Adj No. of Lanes	1	1	1	1	1	1		1	2	0	1	2
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91		0.88	0.88	0.88	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	286	660	561	19	380	323		227	1471	20	95	1193
Arrive On Green	0.16	0.35	0.35	0.01	0.20	0.20		0.13	0.41	0.41	0.05	0.34
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583		1774	3573	50	1774	3539
Grp Volume(v), veh/h	362	292	105	16	357	140		216	923	971	76	707
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583		1774	1770	1853	1774	1770
Q Serve(g_s), s	24.5	18.3	7.0	1.4	28.7	11.7		18.4	62.6	62.6	6.4	25.2
Cycle Q Clear(g_c), s	24.5	18.3	7.0	1.4	28.7	11.7		18.4	62.6	62.6	6.4	25.2
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.03	1.00	
Lane Grp Cap(c), veh/h	286	660	561	19	380	323		227	728	763	95	1193
V/C Ratio(X)	1.27	0.44	0.19	0.83	0.94	0.43		0.95	1.27	1.27	0.80	0.59
Avail Cap(c_a), veh/h	286	660	561	227	399	339		227	728	763	286	1457
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
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
Uniform Delay (d), s/veh	63.8	37.6	34.0	75.1	59.6	52.9		65.8	44.7	44.7	71.1	41.8
Incr Delay (d2), s/veh	144.8	0.2	0.1	26.6	28.8	0.3		45.2	130.9	133.1	5.7	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
%ile BackOfQ(50%),veh/ln	23.5	9.4	3.0	0.8	17.8	5.2		11.9	57.0	60.2	3.3	12.3
LnGrp Delay(d),s/veh	208.5	37.8	34.0	101.7	88.4	53.2		111.0	175.7	177.8	76.8	42.1
LnGrp LOS	F	D	C	F	F	D		F	F	F	E	D
Approach Vol, veh/h		759			513				2110			783
Approach Delay, s/veh		118.7			79.2				170.0			45.5
Approach LOS		F			E				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	25.0	58.7	30.0	38.4	13.7	70.0	7.2	61.3
Change Period (Y+Rc), s	5.5	7.4	5.5	7.4	5.5	7.4	5.5	* 7.4
Max Green Setting (Gmax), s	19.5	62.6	24.5	32.6	24.5	62.6	19.5	* 33
Max Q Clear Time (g_c+I1), s	20.4	27.2	26.5	30.7	8.4	64.6	3.4	20.3
Green Ext Time (p_c), s	0.0	3.8	0.0	0.3	0.1	0.0	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	126.1
HCM 2010 LOS	F

Notes

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	294
Future Volume (veh/h)	294
Number	12
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1863
Adj Flow Rate, veh/h	0
Adj No. of Lanes	1
Peak Hour Factor	0.91
Percent Heavy Veh, %	2
Cap, veh/h	534
Arrive On Green	0.00
Sat Flow, veh/h	1583
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1583
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	534
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	652
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	219	21	121	378	7	67	625	128	4	75	47
Future Volume (veh/h)	45	219	21	121	378	7	67	625	128	4	75	47
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	58	281	27	136	425	8	73	679	139	5	88	55
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.78	0.78	0.78	0.89	0.89	0.89	0.92	0.92	0.92	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	528	50	174	779	15	92	576	118	69	397	248
Arrive On Green	0.04	0.16	0.16	0.10	0.22	0.22	0.05	0.38	0.38	0.04	0.37	0.37
Sat Flow, veh/h	1774	3266	311	1774	3554	67	1774	1501	307	1774	1073	671
Grp Volume(v), veh/h	58	151	157	136	211	222	73	0	818	5	0	143
Grp Sat Flow(s),veh/h/ln	1774	1770	1808	1774	1770	1851	1774	0	1809	1774	0	1744
Q Serve(g_s), s	1.7	4.2	4.3	4.0	5.7	5.7	2.2	0.0	20.5	0.1	0.0	3.0
Cycle Q Clear(g_c), s	1.7	4.2	4.3	4.0	5.7	5.7	2.2	0.0	20.5	0.1	0.0	3.0
Prop In Lane	1.00		0.17	1.00		0.04	1.00		0.17	1.00		0.38
Lane Grp Cap(c), veh/h	72	286	292	174	388	406	92	0	694	69	0	646
V/C Ratio(X)	0.81	0.53	0.54	0.78	0.54	0.55	0.79	0.00	1.18	0.07	0.00	0.22
Avail Cap(c_a), veh/h	365	1838	1877	365	1838	1922	365	0	694	365	0	669
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	25.4	20.5	20.6	23.5	18.5	18.5	25.1	0.0	16.5	24.8	0.0	11.5
Incr Delay (d2), s/veh	7.7	2.2	2.2	2.9	1.7	1.6	5.6	0.0	95.1	0.2	0.0	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	1.0	2.2	2.3	2.1	2.9	3.1	1.2	0.0	28.3	0.1	0.0	1.6
LnGrp Delay(d),s/veh	33.2	22.7	22.7	26.4	20.2	20.1	30.7	0.0	111.6	24.9	0.0	12.3
LnGrp LOS	C	C	C	C	C	C	C		F	C		B
Approach Vol, veh/h		366			569			891			148	
Approach Delay, s/veh		24.4			21.7			105.0			12.8	
Approach LOS		C			C			F			B	

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	6.2	16.2	6.8	24.3	9.2	13.1	6.1	25.0
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5
Max Green Setting (Gmax), s	11.0	55.5	11.0	20.5	11.0	55.5	11.0	20.5
Max Q Clear Time (g_c+I1), s	3.7	7.7	4.2	5.0	6.0	6.3	2.1	22.5
Green Ext Time (p_c), s	0.0	3.5	0.0	1.8	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.1
HCM 2010 LOS	E

Notes

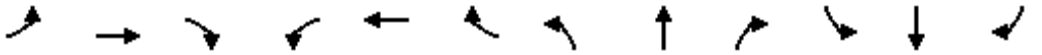
Intersection	
Int Delay, s/veh	18

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	325	4	5	461	1	9	142	31	0	2	12
Future Vol, veh/h	59	325	4	5	461	1	9	142	31	0	2	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	350	-	-	350	-	-	-	-	25	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	357	4	5	501	1	13	203	44	0	3	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	502	0	0	361	0	0	1011	1001	359	1125	1003	502
Stage 1	-	-	-	-	-	-	489	489	-	512	512	-
Stage 2	-	-	-	-	-	-	522	512	-	613	491	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1062	-	-	1198	-	-	218	243	685	182	242	569
Stage 1	-	-	-	-	-	-	561	549	-	545	536	-
Stage 2	-	-	-	-	-	-	538	536	-	480	548	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1062	-	-	1198	-	-	199	227	685	38	226	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	199	227	-	38	226	-
Stage 1	-	-	-	-	-	-	527	516	-	512	534	-
Stage 2	-	-	-	-	-	-	517	534	-	256	515	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.1	80.9	12.9
HCM LOS			F	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	225	685	1062	-	-	1198	-	-	226	569
HCM Lane V/C Ratio	0.959	0.065	0.061	-	-	0.005	-	-	0.013	0.03
HCM Control Delay (s)	95.3	10.6	8.6	-	-	8	-	-	21.1	11.5
HCM Lane LOS	F	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	8.4	0.2	0.2	-	-	0	-	-	0	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	181	3	21	403	293	7	763	16	132	456	116
Future Volume (veh/h)	114	181	3	21	403	293	7	763	16	132	456	116
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	125	199	3	23	433	315	8	857	18	140	485	123
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	553	470	29	429	364	37	802	17	163	954	942
Arrive On Green	0.08	0.30	0.30	0.02	0.23	0.23	0.02	0.44	0.44	0.09	0.51	0.51
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	1818	38	1774	1863	1583
Grp Volume(v), veh/h	125	199	3	23	433	315	8	0	875	140	485	123
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1856	1774	1863	1583
Q Serve(g_s), s	10.0	12.1	0.2	1.9	33.2	27.6	0.6	0.0	63.6	11.2	24.8	4.9
Cycle Q Clear(g_c), s	10.0	12.1	0.2	1.9	33.2	27.6	0.6	0.0	63.6	11.2	24.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	147	553	470	29	429	364	37	0	818	163	954	942
V/C Ratio(X)	0.85	0.36	0.01	0.80	1.01	0.86	0.22	0.00	1.07	0.86	0.51	0.13
Avail Cap(c_a), veh/h	252	553	470	252	429	364	252	0	818	301	954	942
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	1.00	1.00
Uniform Delay (d), s/veh	65.2	39.9	35.7	70.7	55.5	53.3	69.5	0.0	40.3	64.6	23.2	12.8
Incr Delay (d2), s/veh	5.1	0.1	0.0	17.2	45.9	18.2	1.1	0.0	51.6	5.0	0.2	0.0
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	6.3	0.1	1.1	22.5	13.9	0.3	0.0	44.2	5.7	12.7	2.1
LnGrp Delay(d),s/veh	70.4	40.0	35.7	87.9	101.5	71.5	70.5	0.0	91.9	69.5	23.4	12.8
LnGrp LOS	E	D	D	F	F	E	E		F	E	C	B
Approach Vol, veh/h		327			771			883			748	
Approach Delay, s/veh		51.6			88.8			91.7			30.3	
Approach LOS		D			F			F			C	

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	16.5	40.0	7.5	80.3	6.8	49.6	17.8	70.0
Change Period (Y+Rc), s	4.5	6.8	4.5	* 6.4	4.5	6.8	4.5	6.4
Max Green Setting (Gmax), s	20.5	33.2	20.5	* 64	20.5	33.2	24.5	63.6
Max Q Clear Time (g_c+I1), s	12.0	35.2	2.6	26.8	3.9	14.1	13.2	65.6
Green Ext Time (p_c), s	0.0	0.0	0.0	1.7	0.0	0.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.3
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	284	0	66	695	66	3	353	25	22	261	30
Future Volume (veh/h)	38	284	0	66	695	66	3	353	25	22	261	30
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	43	323	0	74	781	74	3	380	27	25	293	34
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.89	0.89	0.89	0.93	0.93	0.93	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	674	0	92	641	61	3	392	28	27	311	36
Arrive On Green	0.03	0.36	0.00	0.05	0.38	0.38	0.23	0.23	0.23	0.21	0.21	0.21
Sat Flow, veh/h	1774	1863	0	1774	1676	159	13	1706	121	130	1519	176
Grp Volume(v), veh/h	43	323	0	74	0	855	410	0	0	352	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	0	1835	1841	0	0	1825	0	0
Q Serve(g_s), s	4.0	22.1	0.0	6.8	0.0	63.2	36.5	0.0	0.0	31.4	0.0	0.0
Cycle Q Clear(g_c), s	4.0	22.1	0.0	6.8	0.0	63.2	36.5	0.0	0.0	31.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.09	0.01		0.07	0.07		0.10
Lane Grp Cap(c), veh/h	55	674	0	92	0	701	423	0	0	374	0	0
V/C Ratio(X)	0.78	0.48	0.00	0.81	0.00	1.22	0.97	0.00	0.00	0.94	0.00	0.00
Avail Cap(c_a), veh/h	274	716	0	220	0	701	423	0	0	422	0	0
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	79.5	40.8	0.0	77.6	0.0	51.1	63.1	0.0	0.0	64.7	0.0	0.0
Incr Delay (d2), s/veh	8.4	0.2	0.0	6.1	0.0	111.3	35.5	0.0	0.0	26.6	0.0	0.0
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	2.1	11.4	0.0	3.5	0.0	53.6	22.7	0.0	0.0	18.6	0.0	0.0
LnGrp Delay(d),s/veh	87.9	40.9	0.0	83.7	0.0	162.4	98.6	0.0	0.0	91.3	0.0	0.0
LnGrp LOS	F	D		F		F	F			F		
Approach Vol, veh/h		366			929			410			352	
Approach Delay, s/veh		46.5			156.2			98.6			91.3	
Approach LOS		D			F			F			F	

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	70.0		40.7	13.0	66.6		45.0
Change Period (Y+Rc), s	4.5	6.8		6.8	4.5	* 6.8		7.0
Max Green Setting (Gmax), s	25.5	63.2		38.2	20.5	* 64		38.0
Max Q Clear Time (g_c+I1), s	6.0	65.2		33.4	8.8	24.1		38.5
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	1.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay	114.1	
HCM 2010 LOS	F	

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	695	403	8	0	320	8	7	33	5	3	9	351
Future Volume (veh/h)	695	403	8	0	320	8	7	33	5	3	9	351
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.97	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	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	709	411	0	0	438	11	7	34	5	4	11	418
Adj No. of Lanes	1	1	1	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.73	0.73	0.73	0.98	0.98	0.98	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	451	1069	909	2	476	12	13	62	9	105	288	741
Arrive On Green	0.25	0.57	0.00	0.00	0.26	0.26	0.05	0.05	0.05	0.21	0.21	0.21
Sat Flow, veh/h	1774	1863	1583	1774	1809	45	275	1336	196	490	1348	1583
Grp Volume(v), veh/h	709	411	0	0	0	449	46	0	0	15	0	418
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1855	1808	0	0	1838	0	1583
Q Serve(g_s), s	24.5	11.6	0.0	0.0	0.0	22.7	2.4	0.0	0.0	0.6	0.0	18.4
Cycle Q Clear(g_c), s	24.5	11.6	0.0	0.0	0.0	22.7	2.4	0.0	0.0	0.6	0.0	18.4
Prop In Lane	1.00		1.00	1.00		0.02	0.15		0.11	0.27		1.00
Lane Grp Cap(c), veh/h	451	1069	909	2	0	488	83	0	0	393	0	741
V/C Ratio(X)	1.57	0.38	0.00	0.00	0.00	0.92	0.55	0.00	0.00	0.04	0.00	0.56
Avail Cap(c_a), veh/h	451	1241	1055	359	0	1231	668	0	0	656	0	968
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	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	11.2	0.0	0.0	0.0	34.6	45.0	0.0	0.0	30.0	0.0	18.5
Incr Delay (d2), s/veh	268.1	0.1	0.0	0.0	0.0	3.2	2.1	0.0	0.0	0.0	0.0	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	45.5	6.0	0.0	0.0	0.0	12.0	1.2	0.0	0.0	0.3	0.0	8.1
LnGrp Delay(d),s/veh	304.0	11.3	0.0	0.0	0.0	37.7	47.1	0.0	0.0	30.1	0.0	18.8
LnGrp LOS	F	B				D	D			C		B
Approach Vol, veh/h		1120			449			46			433	
Approach Delay, s/veh		196.6			37.7			47.1			19.2	
Approach LOS		F			D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.0	31.3		26.2	0.0	61.3		8.8
Change Period (Y+Rc), s	5.5	6.0		* 5.6	5.5	* 6		4.4
Max Green Setting (Gmax), s	24.5	64.0		* 34	19.5	* 64		35.6
Max Q Clear Time (g_c+I1), s	26.5	24.7		20.4	0.0	13.6		4.4
Green Ext Time (p_c), s	0.0	0.6		0.2	0.0	0.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	120.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	95	147	77	477	66	544	1931	126	67	649	66
Future Volume (veh/h)	192	95	147	77	477	66	544	1931	126	67	649	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		1.00	1.00		1.00	1.00		0.99	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	211	104	162	87	536	74	591	2099	137	84	811	82
Adj No. of Lanes	2	3	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.92	0.92	0.92	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	1095	341	141	623	279	647	2325	715	137	1571	489
Arrive On Green	0.08	0.22	0.22	0.04	0.18	0.18	0.19	0.46	0.46	0.04	0.31	0.31
Sat Flow, veh/h	3442	5085	1583	3442	3539	1583	3442	5085	1564	3442	5085	1583
Grp Volume(v), veh/h	211	104	162	87	536	74	591	2099	137	84	811	82
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1770	1583	1721	1695	1564	1721	1695	1583
Q Serve(g_s), s	6.1	1.7	9.1	2.5	15.0	4.1	17.2	39.0	5.3	2.5	13.4	3.9
Cycle Q Clear(g_c), s	6.1	1.7	9.1	2.5	15.0	4.1	17.2	39.0	5.3	2.5	13.4	3.9
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	277	1095	341	141	623	279	647	2325	715	137	1571	489
V/C Ratio(X)	0.76	0.09	0.48	0.62	0.86	0.27	0.91	0.90	0.19	0.61	0.52	0.17
Avail Cap(c_a), veh/h	657	1657	516	657	1150	514	657	3119	959	657	3115	970
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	46.0	32.1	35.1	48.2	40.9	36.4	40.7	25.6	16.5	48.3	29.0	25.7
Incr Delay (d2), s/veh	1.6	0.0	0.4	1.6	1.4	0.2	16.7	2.7	0.0	1.6	0.1	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	3.0	0.8	4.1	1.2	7.5	1.8	9.7	18.7	2.3	1.2	6.2	1.7
LnGrp Delay(d),s/veh	47.7	32.1	35.4	49.8	42.3	36.6	57.3	28.3	16.5	49.9	29.1	25.8
LnGrp LOS	D	C	D	D	D	D	E	C	B	D	C	C
Approach Vol, veh/h		477			697			2827			977	
Approach Delay, s/veh		40.1			42.6			33.8			30.6	
Approach LOS		D			D			C			C	

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	9.6	54.1	9.7	28.8	24.7	39.0	13.7	24.8
Change Period (Y+Rc), s	5.5	* 7.4	5.5	* 6.8	5.5	* 7.4	5.5	6.8
Max Green Setting (Gmax), s	19.5	* 63	19.5	* 33	19.5	* 63	19.5	33.2
Max Q Clear Time (g_c+I1), s	4.5	41.0	4.5	11.1	19.2	15.4	8.1	17.0
Green Ext Time (p_c), s	0.0	5.7	0.0	0.2	0.0	1.7	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	468	196	478	749	23	239	103	464	6	74	22
Future Volume (veh/h)	14	468	196	478	749	23	239	103	464	6	74	22
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.98	1.00		0.98	1.00		0.94
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	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	17	571	0	493	772	24	251	408	398	8	92	28
Adj No. of Lanes	1	2	1	2	2	0	1	1	1	0	2	0
Peak Hour Factor	0.82	0.82	0.82	0.97	0.97	0.97	0.77	0.77	0.77	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	21	792	354	568	1316	41	448	470	654	22	257	79
Arrive On Green	0.01	0.22	0.00	0.17	0.38	0.38	0.25	0.25	0.25	0.10	0.10	0.10
Sat Flow, veh/h	1774	3539	1583	3442	3501	109	1774	1863	1557	218	2524	776
Grp Volume(v), veh/h	17	571	0	493	390	406	251	408	398	68	0	60
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1841	1774	1863	1557	1852	0	1667
Q Serve(g_s), s	0.8	12.0	0.0	11.2	14.1	14.2	9.9	16.8	16.0	2.7	0.0	2.7
Cycle Q Clear(g_c), s	0.8	12.0	0.0	11.2	14.1	14.2	9.9	16.8	16.0	2.7	0.0	2.7
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	0.12		0.47
Lane Grp Cap(c), veh/h	21	792	354	568	665	692	448	470	654	188	0	169
V/C Ratio(X)	0.81	0.72	0.00	0.87	0.59	0.59	0.56	0.87	0.61	0.36	0.00	0.35
Avail Cap(c_a), veh/h	436	2884	1290	850	1444	1502	770	809	938	797	0	718
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	28.8	0.0	32.6	20.0	20.0	26.1	28.7	18.3	33.6	0.0	33.5
Incr Delay (d2), s/veh	23.3	0.5	0.0	4.4	0.3	0.3	0.4	2.1	0.3	0.4	0.0	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	0.5	5.9	0.0	5.6	6.9	7.2	4.9	8.9	6.9	1.4	0.0	1.3
LnGrp Delay(d),s/veh	62.9	29.3	0.0	37.0	20.3	20.3	26.5	30.8	18.6	34.0	0.0	34.0
LnGrp LOS	E	C		D	C	C	C	C	B	C		C
Approach Vol, veh/h		588			1289			1057			128	
Approach Delay, s/veh		30.2			26.7			25.2			34.0	
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	6.2	34.8		13.6	18.4	22.6		25.4
Change Period (Y+Rc), s	* 5.3	* 4.7		5.5	* 5.2	* 4.7		5.2
Max Green Setting (Gmax), s	* 20	* 65		34.5	* 20	* 65		34.8
Max Q Clear Time (g_c+I1), s	2.8	16.2		4.7	13.2	14.0		18.8
Green Ext Time (p_c), s	0.0	1.1		0.1	0.0	1.1		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

Movement	EBL2	EBL	EBT	EBR	WBR	WBR2	NBT	NBR	NBR2	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	345	1	913	1114	132	32	1194	457	11	1589	202
Future Volume (vph)	345	1	913	1114	132	32	1194	457	11	1589	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	6.8	4.6		4.6			4.6	4.0
Lane Util. Factor		0.91	0.86	0.91	0.88		0.86			0.95	1.00
Frpb, ped/bikes		1.00	0.99	0.98	1.00		0.99			1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00			1.00	1.00
Frt		1.00	0.95	0.85	0.85		0.96			1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)		1610	3021	1417	2787		6098			3539	1545
Flt Permitted		0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (perm)		1610	3021	1417	2787		6098			3539	1545
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.93	0.93	0.93	0.85	0.85
Adj. Flow (vph)	388	1	1026	1252	148	36	1284	491	12	1869	238
RTOR Reduction (vph)	0	0	5	9	16	0	0	0	0	0	0
Lane Group Flow (vph)	0	389	1559	705	168	0	1787	0	0	1869	238
Confl. Peds. (#/hr)	6	6		6	3	3		3	3		6
Confl. Bikes (#/hr)								2	2		3
Turn Type	Split	Split	NA	Perm	Prot		NA			NA	Free
Protected Phases	4	4	4		2!		6!			2	
Permitted Phases				4	2						Free
Actuated Green, G (s)		48.2	48.2	48.2	65.4		65.4			65.4	125.0
Effective Green, g (s)		48.2	48.2	48.2	65.4		65.4			65.4	125.0
Actuated g/C Ratio		0.39	0.39	0.39	0.52		0.52			0.52	1.00
Clearance Time (s)		6.8	6.8	6.8	4.6		4.6			4.6	
Vehicle Extension (s)		1.0	1.0	1.0	1.0		1.0			1.0	
Lane Grp Cap (vph)		620	1164	546	1458		3190			1851	1545
v/s Ratio Prot		0.24	c0.52		0.06		0.29			c0.53	
v/s Ratio Perm				0.50							0.15
v/c Ratio		0.63	1.34	1.29	0.12		0.56			1.01	0.15
Uniform Delay, d1		31.1	38.4	38.4	15.1		20.1			29.8	0.0
Progression Factor		1.00	1.00	1.00	1.00		1.00			1.21	1.00
Incremental Delay, d2		1.4	158.6	144.6	0.2		0.7			21.1	0.2
Delay (s)		32.6	197.0	183.0	15.3		20.8			57.2	0.2
Level of Service		C	F	F	B		C			E	A
Approach Delay (s)			169.3				20.8			50.8	
Approach LOS			F				C			D	

Intersection Summary			
HCM 2000 Control Delay	88.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Volume (veh/h)	45	110	168	83	1	149	301	139	42	321	1449	111	21	224	1021	326
Future Volume (veh/h)	45	110	168	83	1	149	301	139	42	321	1449	111	21	224	1021	326
Number		3	8	18		7	4	14		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		0.98		1.00		0.99		1.00		0.99		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		1676	1676	1676		1676	1676	1676		1676	1676	1676		1676	1676	1676
Adj Flow Rate, veh/h		118	181	89		159	320	148		349	1575	121		243	1110	354
Adj No. of Lanes		2	2	1		2	3	1		2	3	1		2	3	1
Peak Hour Factor		0.93	0.93	0.93		0.94	0.94	0.94		0.92	0.92	0.92		0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2		2	2	2		2	2	2		2	2	2
Cap, veh/h		167	488	214		211	765	237		400	2223	683		295	2068	634
Arrive On Green		0.05	0.15	0.15		0.07	0.17	0.17		0.13	0.49	0.49		0.10	0.45	0.45
Sat Flow, veh/h		3097	3185	1396		3097	4577	1417		3097	4577	1406		3097	4577	1403
Grp Volume(v), veh/h		118	181	89		159	320	148		349	1575	121		243	1110	354
Grp Sat Flow(s),veh/h/ln		1549	1593	1396		1549	1526	1417		1549	1526	1406		1549	1526	1403
Q Serve(g_s), s		4.3	5.9	6.6		5.8	7.2	11.2		12.7	31.1	5.6		8.9	20.2	21.3
Cycle Q Clear(g_c), s		4.3	5.9	6.6		5.8	7.2	11.2		12.7	31.1	5.6		8.9	20.2	21.3
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		167	488	214		211	765	237		400	2223	683		295	2068	634
V/C Ratio(X)		0.71	0.37	0.42		0.75	0.42	0.62		0.87	0.71	0.18		0.82	0.54	0.56
Avail Cap(c_a), veh/h		524	1770	776		524	1351	418		524	2559	786		524	2551	782
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		53.6	43.8	44.1		52.7	43.0	44.6		49.2	23.2	16.7		51.2	22.8	23.1
Incr Delay (d2), s/veh		2.0	1.0	2.6		2.1	1.3	8.9		10.1	1.1	0.3		2.2	0.4	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		1.9	2.7	2.7		2.6	3.1	5.0		6.0	13.2	2.2		3.9	8.6	8.5
LnGrp Delay(d),s/veh		55.6	44.7	46.7		54.8	44.2	53.5		59.3	24.3	16.9		53.4	23.3	24.7
LnGrp LOS		E	D	D		D	D	D		E	C	B		D	C	C
Approach Vol, veh/h			388				627				2045				1707	
Approach Delay, s/veh			48.5				49.1				29.9				27.9	
Approach LOS			D				D				C				C	

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	10.4	57.8	11.7	25.2	16.5	61.7	13.3	23.6
Change Period (Y+Rc), s	5.5	* 5.8	5.5	6.0	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	19.5	* 64	19.5	34.0	19.5	* 64	19.5	64.0
Max Q Clear Time (g_c+I1), s	14.7	23.3	6.3	13.2	10.9	33.1	7.8	8.6
Green Ext Time (p_c), s	0.1	21.9	0.1	5.5	0.1	22.8	0.1	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	112	13	245	34	25	39	34	273	2450	20	36	3322	79
Future Volume (veh/h)	112	13	245	34	25	39	34	273	2450	20	36	3322	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		0.99	1.00		1.00		1.00		1.00	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	1900	1863	1863	1863	1863	1900		1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	129	118	213	43	32	49		281	2526	21	39	3572	85
Adj No. of Lanes	0	1	1	1	1	0		2	3	0	1	3	1
Peak Hour Factor	0.87	0.87	0.87	0.79	0.79	0.79		0.97	0.97	0.97	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2	2
Cap, veh/h	151	138	251	119	44	68		334	3033	25	50	2603	790
Arrive On Green	0.16	0.16	0.16	0.07	0.07	0.07		0.10	0.58	0.58	0.03	0.51	0.51
Sat Flow, veh/h	948	867	1571	1774	663	1015		3442	5202	43	1774	5085	1543
Grp Volume(v), veh/h	247	0	213	43	0	81		281	1645	902	39	3572	85
Grp Sat Flow(s),veh/h/ln	1815	0	1571	1774	0	1678		1721	1695	1855	1774	1695	1543
Q Serve(g_s), s	16.9	0.0	16.8	3.0	0.0	6.0		10.2	50.1	50.3	2.8	65.2	3.6
Cycle Q Clear(g_c), s	16.9	0.0	16.8	3.0	0.0	6.0		10.2	50.1	50.3	2.8	65.2	3.6
Prop In Lane	0.52		1.00	1.00		0.60		1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	289	0	251	119	0	112		334	1977	1082	50	2603	790
V/C Ratio(X)	0.85	0.00	0.85	0.36	0.00	0.72		0.84	0.83	0.83	0.78	1.37	0.11
Avail Cap(c_a), veh/h	492	0	426	480	0	455		538	1977	1082	281	2603	790
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	52.1	0.0	52.1	56.8	0.0	58.3		56.6	21.5	21.6	61.5	31.1	16.1
Incr Delay (d2), s/veh	2.9	0.0	3.1	0.7	0.0	3.2		3.3	3.0	5.4	9.4	170.1	0.0
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	8.7	0.0	7.5	1.5	0.0	2.9		5.0	24.1	27.2	1.5	71.4	1.5
LnGrp Delay(d),s/veh	55.0	0.0	55.2	57.5	0.0	61.5		59.9	24.5	27.0	70.9	201.1	16.1
LnGrp LOS	E		E	E		E		E	C	C	E	F	B
Approach Vol, veh/h		460			124				2828			3696	
Approach Delay, s/veh		55.1			60.1				28.8			195.5	
Approach LOS		E			E				C			F	

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	70.1		25.8	8.4	79.2		14.0
Change Period (Y+Rc), s	* 5.1	* 4.9		5.5	* 4.8	* 4.9		5.5
Max Green Setting (Gmax), s	* 26	* 65		34.5	* 20	* 65		34.5
Max Q Clear Time (g_c+I1), s	12.2	67.2		18.9	4.8	52.3		8.0
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	6.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	117.7
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	168	428	198	38	279	86	11	106	750	24	202	1711
Future Volume (veh/h)	168	428	198	38	279	86	11	106	750	24	202	1711
Number	3	8	18	7	4	14		1	6	16	5	2
Initial Q (Qb), veh	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	
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	179	455	211	41	303	93		115	815	26	213	1801
Adj No. of Lanes	1	1	1	1	1	1		1	2	0	1	2
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92		0.92	0.92	0.92	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	203	491	417	53	333	283		138	1365	44	237	1577
Arrive On Green	0.11	0.26	0.26	0.03	0.18	0.18		0.08	0.39	0.39	0.13	0.45
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583		1774	3501	112	1774	3539
Grp Volume(v), veh/h	179	455	211	41	303	93		115	412	429	213	1801
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583		1774	1770	1843	1774	1770
Q Serve(g_s), s	14.0	33.5	15.9	3.2	22.4	7.2		9.0	26.0	26.0	16.6	62.6
Cycle Q Clear(g_c), s	14.0	33.5	15.9	3.2	22.4	7.2		9.0	26.0	26.0	16.6	62.6
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.06	1.00	
Lane Grp Cap(c), veh/h	203	491	417	53	333	283		138	690	718	237	1577
V/C Ratio(X)	0.88	0.93	0.51	0.78	0.91	0.33		0.83	0.60	0.60	0.90	1.14
Avail Cap(c_a), veh/h	309	491	417	246	432	367		246	788	821	309	1577
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
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
Uniform Delay (d), s/veh	61.3	50.5	44.0	67.7	56.6	50.4		63.9	34.1	34.1	60.0	39.0
Incr Delay (d2), s/veh	12.1	23.6	0.4	8.7	17.3	0.2		4.9	0.5	0.5	20.2	72.2
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
%ile BackOfQ(50%),veh/ln	7.5	20.4	7.0	1.7	13.1	3.2		4.6	12.8	13.3	9.5	46.2
LnGrp Delay(d),s/veh	73.4	74.0	44.4	76.4	73.9	50.6		68.8	34.6	34.6	80.2	111.2
LnGrp LOS	E	E	D	E	E	D		E	C	C	F	F
Approach Vol, veh/h		845			437				956			2014
Approach Delay, s/veh		66.5			69.2				38.7			107.9
Approach LOS		E			E				D			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	16.4	70.0	21.6	32.5	24.2	62.2	9.7	44.4
Change Period (Y+Rc), s	5.5	7.4	5.5	7.4	5.5	7.4	5.5	* 7.4
Max Green Setting (Gmax), s	19.5	62.6	24.5	32.6	24.5	62.6	19.5	* 33
Max Q Clear Time (g_c+I1), s	11.0	64.6	16.0	24.4	18.6	28.0	5.2	35.5
Green Ext Time (p_c), s	0.1	0.0	0.1	0.7	0.1	1.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	80.1
HCM 2010 LOS	F

Notes

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	153
Future Volume (veh/h)	153
Number	12
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1863
Adj Flow Rate, veh/h	0
Adj No. of Lanes	1
Peak Hour Factor	0.95
Percent Heavy Veh, %	2
Cap, veh/h	705
Arrive On Green	0.00
Sat Flow, veh/h	1583
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1583
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	705
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	705
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	457	78	130	299	5	29	87	97	11	537	67
Future Volume (veh/h)	71	457	78	130	299	5	29	87	97	11	537	67
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	72	462	79	148	340	6	34	101	113	12	610	76
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.99	0.99	0.99	0.88	0.88	0.88	0.86	0.86	0.86	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	745	127	187	1068	19	40	261	292	71	556	69
Arrive On Green	0.05	0.25	0.25	0.11	0.30	0.30	0.02	0.32	0.32	0.04	0.34	0.34
Sat Flow, veh/h	1774	3027	515	1774	3559	63	1774	804	900	1774	1625	202
Grp Volume(v), veh/h	72	269	272	148	169	177	34	0	214	12	0	686
Grp Sat Flow(s),veh/h/ln	1774	1770	1772	1774	1770	1852	1774	0	1704	1774	0	1827
Q Serve(g_s), s	2.4	8.1	8.2	4.9	4.4	4.4	1.1	0.0	5.8	0.4	0.0	20.5
Cycle Q Clear(g_c), s	2.4	8.1	8.2	4.9	4.4	4.4	1.1	0.0	5.8	0.4	0.0	20.5
Prop In Lane	1.00		0.29	1.00		0.03	1.00		0.53	1.00		0.11
Lane Grp Cap(c), veh/h	91	435	436	187	531	556	40	0	553	71	0	625
V/C Ratio(X)	0.79	0.62	0.62	0.79	0.32	0.32	0.84	0.00	0.39	0.17	0.00	1.10
Avail Cap(c_a), veh/h	326	1639	1641	326	1639	1715	326	0	583	326	0	625
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	28.1	20.1	20.1	26.2	16.2	16.2	29.2	0.0	15.6	27.8	0.0	19.7
Incr Delay (d2), s/veh	5.5	2.0	2.1	2.8	0.5	0.5	15.7	0.0	2.0	0.4	0.0	65.7
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	1.3	4.2	4.3	2.5	2.2	2.3	0.7	0.0	3.0	0.2	0.0	21.6
LnGrp Delay(d),s/veh	33.6	22.1	22.2	29.0	16.7	16.7	44.9	0.0	17.7	28.2	0.0	85.4
LnGrp LOS	C	C	C	C	B	B	D		B	C		F
Approach Vol, veh/h		613			494			248			698	
Approach Delay, s/veh		23.5			20.4			21.4			84.4	
Approach LOS		C			C			C			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	7.1	22.5	5.4	25.0	10.3	19.2	6.4	24.0
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5
Max Green Setting (Gmax), s	11.0	55.5	11.0	20.5	11.0	55.5	11.0	20.5
Max Q Clear Time (g_c+I1), s	4.4	6.4	3.1	22.5	6.9	10.2	2.4	7.8
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	4.6	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	43.2
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	19.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	553	0	15	315	2	4	6	1	0	158	115
Future Vol, veh/h	19	553	0	15	315	2	4	6	1	0	158	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	350	-	-	350	-	-	-	-	25	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	79	79	79	70	70	70	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	595	0	19	399	3	6	9	1	0	216	158

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	595	0	0	1261	1075	595	1079	1074	401
Stage 1	-	-	-	-	-	-	635	635	-	439	439	-
Stage 2	-	-	-	-	-	-	626	440	-	640	635	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1157	-	-	981	-	-	147	220	504	196	220	649
Stage 1	-	-	-	-	-	-	467	472	-	597	578	-
Stage 2	-	-	-	-	-	-	472	578	-	464	472	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1157	-	-	981	-	-	-	212	504	184	~ 212	649
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	212	-	184	~ 212	-
Stage 1	-	-	-	-	-	-	459	464	-	587	567	-
Stage 2	-	-	-	-	-	-	217	567	-	446	464	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4		71.8
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	504	1157	-	-	981	-	-	212	649
HCM Lane V/C Ratio	-	0.003	0.018	-	-	0.019	-	-	1.021	0.243
HCM Control Delay (s)	-	12.2	8.2	-	-	8.7	-	-	115.1	12.3
HCM Lane LOS	-	B	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	-	0	0.1	-	-	0.1	-	-	9.3	0.9

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	453	12	28	250	138	7	338	23	227	847	93
Future Volume (veh/h)	127	453	12	28	250	138	7	338	23	227	847	93
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	135	482	13	30	269	148	7	348	24	232	864	95
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.97	0.97	0.97	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	511	434	37	380	323	46	630	43	259	905	914
Arrive On Green	0.09	0.27	0.27	0.02	0.20	0.20	0.03	0.37	0.37	0.15	0.49	0.49
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	1723	119	1774	1863	1583
Grp Volume(v), veh/h	135	482	13	30	269	148	7	0	372	232	864	95
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1842	1774	1863	1583
Q Serve(g_s), s	8.6	29.2	0.7	1.9	15.5	9.5	0.4	0.0	18.5	14.8	51.2	3.1
Cycle Q Clear(g_c), s	8.6	29.2	0.7	1.9	15.5	9.5	0.4	0.0	18.5	14.8	51.2	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	162	511	434	37	380	323	46	0	674	259	905	914
V/C Ratio(X)	0.83	0.94	0.03	0.80	0.71	0.46	0.15	0.00	0.55	0.89	0.95	0.10
Avail Cap(c_a), veh/h	316	537	456	316	537	456	316	0	1017	377	1035	1024
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	1.00	1.00
Uniform Delay (d), s/veh	51.5	40.9	30.6	56.1	42.6	40.3	54.8	0.0	29.0	48.3	28.4	10.9
Incr Delay (d2), s/veh	4.2	24.5	0.0	13.4	0.9	0.4	0.6	0.0	0.3	13.3	16.2	0.0
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	4.4	18.5	0.3	1.1	8.1	4.2	0.2	0.0	9.5	8.2	30.2	1.4
LnGrp Delay(d),s/veh	55.7	65.4	30.6	69.5	43.6	40.6	55.4	0.0	29.3	61.6	44.6	11.0
LnGrp LOS	E	E	C	E	D	D	E		C	E	D	B
Approach Vol, veh/h		630			447			379			1191	
Approach Delay, s/veh		62.6			44.3			29.8			45.2	
Approach LOS		E			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	15.0	30.3	7.5	62.4	6.9	38.4	21.3	48.5
Change Period (Y+Rc), s	4.5	6.8	4.5	* 6.4	4.5	6.8	4.5	6.4
Max Green Setting (Gmax), s	20.5	33.2	20.5	* 64	20.5	33.2	24.5	63.6
Max Q Clear Time (g_c+I1), s	10.6	17.5	2.4	53.2	3.9	31.2	16.8	20.5
Green Ext Time (p_c), s	0.0	0.9	0.0	2.8	0.0	0.4	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	47.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	32	661	3	1	53	345	41	3	324	67	61	378	49
Future Volume (veh/h)	32	661	3	1	53	345	41	3	324	67	61	378	49
Number	1	6	16		5	2	12	3	8	18	7	4	14
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		0.98	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	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	36	743	3		62	401	48	3	352	73	69	430	56
Adj No. of Lanes	1	1	0		1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.89	0.89	0.89		0.86	0.86	0.86	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2		2	2	2	2	2	2	2	2	2
Cap, veh/h	46	684	3		78	629	75	3	328	68	50	312	41
Arrive On Green	0.03	0.37	0.37		0.04	0.39	0.39	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1774	1854	7		1774	1629	195	13	1487	308	226	1409	184
Grp Volume(v), veh/h	36	0	746		62	0	449	428	0	0	555	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1861		1774	0	1823	1808	0	0	1819	0	0
Q Serve(g_s), s	3.5	0.0	63.6		6.0	0.0	34.6	38.0	0.0	0.0	38.2	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	63.6		6.0	0.0	34.6	38.0	0.0	0.0	38.2	0.0	0.0
Prop In Lane	1.00		0.00		1.00		0.11	0.01		0.17	0.12		0.10
Lane Grp Cap(c), veh/h	46	0	686		78	0	705	398	0	0	403	0	0
V/C Ratio(X)	0.78	0.00	1.09		0.80	0.00	0.64	1.07	0.00	0.00	1.38	0.00	0.00
Avail Cap(c_a), veh/h	262	0	686		211	0	705	398	0	0	403	0	0
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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	83.5	0.0	54.4		81.7	0.0	43.1	67.2	0.0	0.0	67.1	0.0	0.0
Incr Delay (d2), s/veh	9.8	0.0	60.3		6.7	0.0	1.5	66.5	0.0	0.0	184.9	0.0	0.0
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	1.8	0.0	44.1		3.1	0.0	17.8	26.3	0.0	0.0	39.8	0.0	0.0
LnGrp Delay(d),s/veh	93.3	0.0	114.8		88.4	0.0	44.5	133.7	0.0	0.0	252.0	0.0	0.0
LnGrp LOS	F		F		F		D	F			F		
Approach Vol, veh/h		782				511			428			555	
Approach Delay, s/veh		113.8				49.9			133.7			252.0	
Approach LOS		F				D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	73.5		45.0	12.1	70.4		45.0
Change Period (Y+Rc), s	4.5	6.8		6.8	4.5	* 6.8		7.0
Max Green Setting (Gmax), s	25.5	63.2		38.2	20.5	* 64		38.0
Max Q Clear Time (g_c+I1), s	5.5	36.6		40.2	8.0	65.6		40.0
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	136.9
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	352	7	1	443	9	7	16	1	11	35	764
Future Volume (veh/h)	271	352	7	1	443	9	7	16	1	11	35	764
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.98	1.00		1.00	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	1863	1863	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	291	378	0	1	461	9	8	19	1	12	38	822
Adj No. of Lanes	1	1	1	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.96	0.96	0.96	0.85	0.85	0.85	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	840	714	2	494	10	18	42	2	140	443	776
Arrive On Green	0.18	0.45	0.00	0.00	0.27	0.27	0.03	0.03	0.03	0.32	0.32	0.32
Sat Flow, veh/h	1774	1863	1583	1774	1820	36	521	1239	65	442	1399	1550
Grp Volume(v), veh/h	291	378	0	1	0	470	28	0	0	50	0	822
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1856	1825	0	0	1841	0	1550
Q Serve(g_s), s	17.5	15.2	0.0	0.1	0.0	26.8	1.6	0.0	0.0	2.1	0.0	34.4
Cycle Q Clear(g_c), s	17.5	15.2	0.0	0.1	0.0	26.8	1.6	0.0	0.0	2.1	0.0	34.4
Prop In Lane	1.00		1.00	1.00		0.02	0.29		0.04	0.24		1.00
Lane Grp Cap(c), veh/h	319	840	714	2	0	504	61	0	0	583	0	776
V/C Ratio(X)	0.91	0.45	0.00	0.61	0.00	0.93	0.46	0.00	0.00	0.09	0.00	1.06
Avail Cap(c_a), veh/h	400	1101	936	319	0	1094	598	0	0	583	0	776
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	20.6	0.0	54.2	0.0	38.6	51.5	0.0	0.0	26.1	0.0	27.5
Incr Delay (d2), s/veh	19.5	0.1	0.0	91.3	0.0	3.5	1.9	0.0	0.0	0.0	0.0	49.3
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	10.3	7.8	0.0	0.1	0.0	14.2	0.9	0.0	0.0	1.1	0.0	33.6
LnGrp Delay(d),s/veh	63.2	20.7	0.0	145.5	0.0	42.1	53.4	0.0	0.0	26.1	0.0	76.8
LnGrp LOS	E	C		F		D	D			C		F
Approach Vol, veh/h		669			471			28			872	
Approach Delay, s/veh		39.2			42.3			53.4			73.9	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.0	35.5		40.0	5.6	54.9		8.1
Change Period (Y+Rc), s	5.5	6.0		* 5.6	5.5	* 6		4.4
Max Green Setting (Gmax), s	24.5	64.0		* 34	19.5	* 64		35.6
Max Q Clear Time (g_c+I1), s	19.5	28.8		36.4	2.1	17.2		3.6
Green Ext Time (p_c), s	0.1	0.7		0.0	0.0	0.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.9
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	305	457	139	107	104	182	849	112	246	2090	124
Future Volume (veh/h)	63	305	457	139	107	104	182	849	112	246	2090	124
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		0.99	1.00		0.99	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	66	318	476	170	130	127	200	933	123	270	2297	136
Adj No. of Lanes	2	3	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.96	0.96	0.96	0.82	0.82	0.82	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	1209	376	218	957	422	248	2170	667	318	2273	708
Arrive On Green	0.03	0.24	0.24	0.06	0.27	0.27	0.07	0.43	0.43	0.09	0.45	0.45
Sat Flow, veh/h	3442	5085	1583	3442	3539	1563	3442	5085	1564	3442	5085	1583
Grp Volume(v), veh/h	66	318	476	170	130	127	200	933	123	270	2297	136
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1770	1563	1721	1695	1564	1721	1695	1583
Q Serve(g_s), s	2.7	7.1	33.3	6.8	3.9	9.0	8.0	18.0	6.9	10.8	62.6	7.3
Cycle Q Clear(g_c), s	2.7	7.1	33.3	6.8	3.9	9.0	8.0	18.0	6.9	10.8	62.6	7.3
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	106	1209	376	218	957	422	248	2170	667	318	2273	708
V/C Ratio(X)	0.62	0.26	1.26	0.78	0.14	0.30	0.81	0.43	0.18	0.85	1.01	0.19
Avail Cap(c_a), veh/h	479	1209	376	479	957	422	479	2276	700	479	2273	708
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	67.1	43.4	53.4	64.6	38.7	40.6	64.0	28.2	25.0	62.6	38.7	23.4
Incr Delay (d2), s/veh	2.2	0.0	138.7	2.3	0.0	0.1	2.4	0.1	0.0	5.8	21.5	0.0
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	1.3	3.3	29.0	3.3	1.9	3.9	3.9	8.5	3.0	5.4	33.8	3.2
LnGrp Delay(d),s/veh	69.3	43.5	192.1	66.9	38.7	40.7	66.4	28.2	25.0	68.4	60.3	23.5
LnGrp LOS	E	D	F	E	D	D	E	C	C	E	F	C
Approach Vol, veh/h		860			427			1256			2703	
Approach Delay, s/veh		127.7			50.6			34.0			59.2	
Approach LOS		F			D			C			E	

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	67.2	14.4	40.1	15.6	70.0	9.8	44.7
Change Period (Y+Rc), s	5.5	* 7.4	5.5	* 6.8	5.5	* 7.4	5.5	6.8
Max Green Setting (Gmax), s	19.5	* 63	19.5	* 33	19.5	* 63	19.5	33.2
Max Q Clear Time (g_c+I1), s	12.8	20.0	8.8	35.3	10.0	64.6	4.7	11.0
Green Ext Time (p_c), s	0.1	2.0	0.1	0.0	0.1	0.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	63.7
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	907	185	392	659	27	184	167	687	18	54	18
Future Volume (veh/h)	22	907	185	392	659	27	184	167	687	18	54	18
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.97	1.00		0.96	1.00		0.90
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	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	27	1093	0	431	724	30	205	477	494	24	72	24
Adj No. of Lanes	1	2	1	2	2	0	1	1	1	0	2	0
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.87	0.87	0.87	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	1171	524	476	1555	64	462	485	615	80	241	81
Arrive On Green	0.02	0.33	0.00	0.14	0.45	0.45	0.26	0.26	0.26	0.12	0.12	0.12
Sat Flow, veh/h	1774	3539	1583	3442	3459	143	1774	1863	1518	690	2085	701
Grp Volume(v), veh/h	27	1093	0	431	370	384	205	477	494	64	0	56
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1833	1774	1863	1518	1828	0	1648
Q Serve(g_s), s	2.0	39.9	0.0	16.5	19.4	19.5	12.9	34.0	34.8	4.3	0.0	4.2
Cycle Q Clear(g_c), s	2.0	39.9	0.0	16.5	19.4	19.5	12.9	34.0	34.8	4.3	0.0	4.2
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	0.38		0.43
Lane Grp Cap(c), veh/h	34	1171	524	476	796	824	462	485	615	212	0	191
V/C Ratio(X)	0.80	0.93	0.00	0.90	0.47	0.47	0.44	0.98	0.80	0.30	0.00	0.30
Avail Cap(c_a), veh/h	262	1731	774	510	867	898	462	485	615	472	0	426
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.2	43.2	0.0	56.7	25.6	25.6	41.3	49.1	35.7	54.1	0.0	54.1
Incr Delay (d2), s/veh	14.5	5.8	0.0	18.0	0.2	0.2	0.2	36.1	7.1	0.3	0.0	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	1.1	20.4	0.0	9.0	9.5	9.8	6.4	22.4	17.4	2.2	0.0	1.9
LnGrp Delay(d),s/veh	79.7	49.0	0.0	74.7	25.7	25.7	41.5	85.2	42.8	54.4	0.0	54.4
LnGrp LOS	E	D		E	C	C	D	F	D	D		D
Approach Vol, veh/h		1120			1185			1176			120	
Approach Delay, s/veh		49.8			43.5			59.8			54.4	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	64.7		20.9	23.7	48.9		40.0
Change Period (Y+Rc), s	* 5.3	* 4.7		5.5	* 5.2	* 4.7		5.2
Max Green Setting (Gmax), s	* 26	* 65		34.5	* 20	* 65		34.8
Max Q Clear Time (g_c+I1), s	4.0	21.5		6.3	18.5	41.9		36.8
Green Ext Time (p_c), s	0.0	1.1		0.1	0.0	2.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.1
HCM 2010 LOS	D

Notes

Movement	EBL2	EBL	EBT	EBR	WBR	WBR2	NBT	NBR	NBR2	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	658	1	120	735	870	119	1892	411	4	1016	135
Future Volume (vph)	658	1	120	735	870	119	1892	411	4	1016	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	6.8	6.8	4.6		4.6			4.6	4.0
Lane Util. Factor	0.95	0.95	0.95	0.95	0.88		0.86			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	0.98	1.00		1.00			1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.89	0.85	0.85		0.97			1.00	0.85
Flt Protected	0.95	0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)	1681	1681	1552	1471	2787		6204			3539	1540
Flt Permitted	0.95	0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (perm)	1681	1681	1552	1471	2787		6204			3539	1540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.86	0.86	0.88	0.88	0.88	0.92	0.92
Adj. Flow (vph)	693	1	126	774	1012	138	2150	467	5	1104	147
RTOR Reduction (vph)	0	0	42	42	13	0	0	0	0	0	0
Lane Group Flow (vph)	346	348	417	399	1137	0	2622	0	0	1104	147
Confl. Peds. (#/hr)	11	11		11	3	3		3	3		11
Confl. Bikes (#/hr)								8	8		5
Turn Type	Split	Split	NA	Perm	Prot		NA			NA	Free
Protected Phases	4	4	4		2!		6!			2	
Permitted Phases				4	2						Free
Actuated Green, G (s)	39.3	39.3	39.3	39.3	74.3		74.3			74.3	125.0
Effective Green, g (s)	39.3	39.3	39.3	39.3	74.3		74.3			74.3	125.0
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.59		0.59			0.59	1.00
Clearance Time (s)	6.8	6.8	6.8	6.8	4.6		4.6			4.6	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0		1.0			1.0	
Lane Grp Cap (vph)	528	528	487	462	1656		3687			2103	1540
v/s Ratio Prot	0.21	0.21	0.27		0.41		c0.42			0.31	
v/s Ratio Perm				c0.27							0.10
v/c Ratio	0.66	0.66	0.86	0.86	0.69		0.71			0.52	0.10
Uniform Delay, d1	37.0	37.1	40.2	40.3	17.4		17.8			14.9	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00			1.22	1.00
Incremental Delay, d2	2.2	2.3	13.4	14.9	2.3		1.2			0.9	0.1
Delay (s)	39.2	39.3	53.6	55.2	19.7		19.0			19.1	0.1
Level of Service	D	D	D	E	B		B			B	A
Approach Delay (s)			47.8				19.0			16.9	
Approach LOS			D				B			B	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

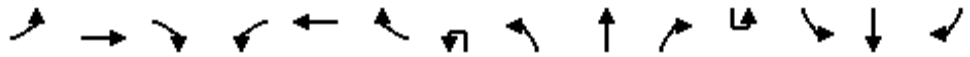
! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Volume (veh/h)	35	251	565	258	11	248	297	213	71	226	1037	216	36	226	1477	132
Future Volume (veh/h)	35	251	565	258	11	248	297	213	71	226	1037	216	36	226	1477	132
Number		3	8	18		7	4	14		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		0.99		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		1676	1676	1676		1676	1676	1676		1676	1676	1676		1676	1676	1676
Adj Flow Rate, veh/h		295	665	304		306	367	263		248	1140	237		260	1698	152
Adj No. of Lanes		2	2	1		2	3	1		2	3	1		2	3	1
Peak Hour Factor		0.85	0.85	0.85		0.81	0.81	0.81		0.91	0.91	0.91		0.87	0.87	0.87
Percent Heavy Veh, %		2	2	2		2	2	2		2	2	2		2	2	2
Cap, veh/h		329	882	392		340	1283	399		283	1744	540		295	1762	546
Arrive On Green		0.11	0.28	0.28		0.11	0.28	0.28		0.09	0.38	0.38		0.10	0.38	0.38
Sat Flow, veh/h		3097	3185	1416		3097	4577	1422		3097	4577	1418		3097	4577	1418
Grp Volume(v), veh/h		295	665	304		306	367	263		248	1140	237		260	1698	152
Grp Sat Flow(s),veh/h/ln		1549	1593	1416		1549	1526	1422		1549	1526	1418		1549	1526	1418
Q Serve(g_s), s		15.7	31.8	32.9		16.3	10.5	27.2		13.2	34.2	20.7		13.8	60.4	12.3
Cycle Q Clear(g_c), s		15.7	31.8	32.9		16.3	10.5	27.2		13.2	34.2	20.7		13.8	60.4	12.3
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		329	882	392		340	1283	399		283	1744	540		295	1762	546
V/C Ratio(X)		0.90	0.75	0.78		0.90	0.29	0.66		0.87	0.65	0.44		0.88	0.96	0.28
Avail Cap(c_a), veh/h		363	1224	544		363	1283	399		363	1770	548		363	1764	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	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		73.5	55.0	55.5		73.2	46.9	52.9		74.7	42.5	38.3		74.4	50.1	35.3
Incr Delay (d2), s/veh		21.2	3.0	7.5		22.5	0.4	6.9		14.7	1.2	1.1		16.5	14.0	0.6
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		7.7	14.4	13.7		8.0	4.5	11.4		6.2	14.5	8.3		6.6	27.8	4.9
LnGrp Delay(d),s/veh		94.7	58.0	62.9		95.8	47.3	59.8		89.4	43.6	39.4		90.9	64.1	35.9
LnGrp LOS		F	E	E		F	D	E		F	D	D		F	E	D
Approach Vol, veh/h			1264				936				1625				2110	
Approach Delay, s/veh			67.8				66.7				50.0				65.4	
Approach LOS			E				E				D				E	

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	20.7	69.9	23.2	52.7	21.4	69.3	23.8	52.1
Change Period (Y+Rc), s	5.5	* 5.8	5.5	6.0	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	19.5	* 64	19.5	34.0	19.5	* 64	19.5	64.0
Max Q Clear Time (g_c+I1), s	15.2	62.4	17.7	29.2	15.8	36.2	18.3	34.9
Green Ext Time (p_c), s	0.1	1.7	0.0	2.5	0.1	16.8	0.0	11.2

Intersection Summary	
HCM 2010 Ctrl Delay	61.9
HCM 2010 LOS	E

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	186	36	180	61	23	57	33	155	2687	23	2	62	2440	96
Future Volume (veh/h)	186	36	180	61	23	57	33	155	2687	23	2	62	2440	96
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		0.99	1.00		0.96		1.00		0.98		1.00		0.99
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	1900	1863	1863	1863	1863	1900		1863	1863	1900		1863	1863	1863
Adj Flow Rate, veh/h	224	43	217	79	30	74		167	2889	25		68	2681	105
Adj No. of Lanes	0	1	1	1	1	0		2	3	0		1	3	1
Peak Hour Factor	0.83	0.83	0.83	0.77	0.77	0.77		0.93	0.93	0.93		0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2	2	2
Cap, veh/h	260	50	272	181	47	117		219	2688	23		87	2542	785
Arrive On Green	0.17	0.17	0.17	0.10	0.10	0.10		0.06	0.52	0.52		0.05	0.50	0.50
Sat Flow, veh/h	1500	288	1567	1774	464	1145		3442	5199	45		1774	5085	1571
Grp Volume(v), veh/h	267	0	217	79	0	104		167	1881	1033		68	2681	105
Grp Sat Flow(s),veh/h/ln	1788	0	1567	1774	0	1609		1721	1695	1854		1774	1695	1571
Q Serve(g_s), s	18.9	0.0	17.3	5.5	0.0	8.1		6.2	67.4	67.4		4.9	65.2	4.7
Cycle Q Clear(g_c), s	18.9	0.0	17.3	5.5	0.0	8.1		6.2	67.4	67.4		4.9	65.2	4.7
Prop In Lane	0.84		1.00	1.00		0.71		1.00		0.02		1.00		1.00
Lane Grp Cap(c), veh/h	310	0	272	181	0	164		219	1753	958		87	2542	785
V/C Ratio(X)	0.86	0.00	0.80	0.44	0.00	0.63		0.76	1.07	1.08		0.79	1.05	0.13
Avail Cap(c_a), veh/h	473	0	415	469	0	426		525	1753	958		275	2542	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	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	52.4	0.0	51.7	55.0	0.0	56.2		60.1	31.5	31.5		61.3	32.6	17.5
Incr Delay (d2), s/veh	6.5	0.0	3.1	0.6	0.0	1.5		2.1	44.1	52.5		5.7	34.3	0.0
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	9.9	0.0	7.8	2.7	0.0	3.7		3.0	42.1	48.3		2.6	38.4	2.0
LnGrp Delay(d),s/veh	58.8	0.0	54.8	55.7	0.0	57.7		62.2	75.6	84.0		67.1	66.9	17.5
LnGrp LOS	E		D	E		E		E	F	F		E	F	B
Approach Vol, veh/h		484			183				3081				2854	
Approach Delay, s/veh		57.0			56.8				77.7				65.1	
Approach LOS		E			E				E				E	

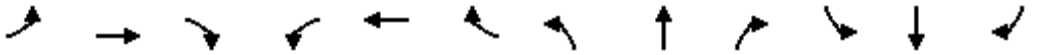
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.4	70.1		28.1	11.2	72.3		18.8
Change Period (Y+Rc), s	* 5.1	* 4.9		5.5	* 4.8	* 4.9		5.5
Max Green Setting (Gmax), s	* 20	* 65		34.5	* 20	* 65		34.5
Max Q Clear Time (g_c+I1), s	10.2	67.2		20.9	6.9	69.4		10.1
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	70.2
HCM 2010 LOS	E

Notes

Appendix B

Analysis Worksheets for Cumulative (2040) plus Proposed Project Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	512	230	160	656	90	190	2720	90	20	980	70
Future Volume (veh/h)	160	512	230	160	656	90	190	2720	90	20	980	70
Number	3	8	18	7	4	14	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		0.98	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	1900	1863	1863	1863
Adj Flow Rate, veh/h	174	557	250	174	713	98	207	2957	98	22	1065	0
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	530	450	126	530	450	229	2296	75	27	1731	539
Arrive On Green	0.07	0.28	0.28	0.07	0.28	0.28	0.13	0.45	0.45	0.02	0.34	0.00
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	5054	165	1774	5085	1583
Grp Volume(v), veh/h	174	557	250	174	713	98	207	1972	1083	22	1065	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1695	1829	1774	1695	1583
Q Serve(g_s), s	10.5	42.0	19.8	10.5	42.0	7.0	17.0	67.1	67.1	1.8	25.8	0.0
Cycle Q Clear(g_c), s	10.5	42.0	19.8	10.5	42.0	7.0	17.0	67.1	67.1	1.8	25.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	126	530	450	126	530	450	229	1540	831	27	1731	539
V/C Ratio(X)	1.38	1.05	0.56	1.38	1.35	0.22	0.90	1.28	1.30	0.81	0.62	0.00
Avail Cap(c_a), veh/h	126	530	450	126	530	450	287	1540	831	60	1731	539
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	0.00
Uniform Delay (d), s/veh	68.6	52.8	44.9	68.6	52.8	40.3	63.4	40.3	40.3	72.5	40.6	0.0
Incr Delay (d2), s/veh	212.4	53.3	0.9	212.4	167.9	0.1	23.1	131.1	145.2	18.1	0.6	0.0
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	12.6	29.3	8.8	12.6	46.2	3.1	9.8	59.3	67.2	1.0	12.1	0.0
LnGrp Delay(d),s/veh	281.0	106.1	45.8	281.0	220.7	40.4	86.5	171.4	185.5	90.6	41.2	0.0
LnGrp LOS	F	F	D	F	F	D	F	F	F	F	D	
Approach Vol, veh/h		981			985			3262			1087	
Approach Delay, s/veh		121.8			213.4			170.7			42.2	
Approach LOS		F			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	24.6	57.7	16.0	49.4	7.8	74.5	16.0	49.4
Change Period (Y+Rc), s	5.5	7.4	5.5	7.4	5.5	7.4	5.5	* 7.4
Max Green Setting (Gmax), s	23.9	48.2	10.5	41.6	5.0	67.1	10.5	* 42
Max Q Clear Time (g_c+I1), s	19.0	27.8	12.5	44.0	3.8	69.1	12.5	44.0
Green Ext Time (p_c), s	0.1	5.6	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	147.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	360	30	150	600	370	10	1172	40	160	606	202
Future Volume (veh/h)	294	360	30	150	600	370	10	1172	40	160	606	202
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	320	391	33	163	652	402	11	1274	43	174	659	220
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	606	515	186	557	473	38	1068	478	197	1386	827
Arrive On Green	0.13	0.33	0.33	0.10	0.30	0.30	0.02	0.30	0.30	0.11	0.39	0.39
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	320	391	33	163	652	402	11	1274	43	174	659	220
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	18.5	25.3	2.0	12.8	42.2	33.7	0.9	42.6	2.8	13.6	19.7	10.9
Cycle Q Clear(g_c), s	18.5	25.3	2.0	12.8	42.2	33.7	0.9	42.6	2.8	13.6	19.7	10.9
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	232	606	515	186	557	473	38	1068	478	197	1386	827
V/C Ratio(X)	1.38	0.65	0.06	0.88	1.17	0.85	0.29	1.19	0.09	0.88	0.48	0.27
Avail Cap(c_a), veh/h	232	606	515	225	557	473	239	1068	478	308	1386	827
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	61.3	40.7	32.8	62.3	49.5	46.5	68.0	49.3	35.4	61.8	32.1	18.7
Incr Delay (d2), s/veh	194.2	1.9	0.0	23.9	94.9	13.0	1.6	96.3	0.0	11.3	0.1	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	21.6	13.3	0.9	7.5	36.3	16.4	0.4	35.0	1.2	7.3	9.6	4.7
LnGrp Delay(d),s/veh	255.5	42.5	32.8	86.2	144.4	59.5	69.6	145.6	35.4	73.2	32.2	18.7
LnGrp LOS	F	D	C	F	F	E	E	F	D	E	C	B
Approach Vol, veh/h		744			1217			1328			1053	
Approach Delay, s/veh		133.7			108.6			141.4			36.2	
Approach LOS		F			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	23.0	49.0	7.5	61.7	19.3	52.7	20.2	49.0
Change Period (Y+Rc), s	4.5	6.8	4.5	* 6.4	4.5	6.8	4.5	6.4
Max Green Setting (Gmax), s	18.5	42.2	19.0	* 49	17.9	42.8	24.5	42.6
Max Q Clear Time (g_c+I1), s	20.5	44.2	2.9	21.7	14.8	27.3	15.6	44.6
Green Ext Time (p_c), s	0.0	0.0	0.0	2.8	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	105.3
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	330	0	60	740	70	10	579	40	40	744	380
Future Volume (veh/h)	220	330	0	60	740	70	10	579	40	40	744	380
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	239	359	0	65	804	76	11	629	43	43	809	413
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	948	0	82	730	69	13	867	59	55	641	325
Arrive On Green	0.12	0.51	0.00	0.05	0.44	0.44	0.01	0.26	0.26	0.03	0.28	0.28
Sat Flow, veh/h	1774	1863	0	1774	1676	158	1774	3362	230	1774	2274	1154
Grp Volume(v), veh/h	239	359	0	65	0	880	11	331	341	43	629	593
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	0	1835	1774	1770	1822	1774	1770	1659
Q Serve(g_s), s	17.5	17.2	0.0	5.3	0.0	63.7	0.9	25.0	25.0	3.5	41.2	41.2
Cycle Q Clear(g_c), s	17.5	17.2	0.0	5.3	0.0	63.7	0.9	25.0	25.0	3.5	41.2	41.2
Prop In Lane	1.00		0.00	1.00		0.09	1.00		0.13	1.00		0.70
Lane Grp Cap(c), veh/h	212	948	0	82	0	799	13	456	470	55	498	467
V/C Ratio(X)	1.13	0.38	0.00	0.79	0.00	1.10	0.84	0.72	0.73	0.78	1.26	1.27
Avail Cap(c_a), veh/h	212	948	0	147	0	799	61	478	492	79	498	467
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	21.9	0.0	69.0	0.0	41.3	72.5	49.5	49.6	70.4	52.5	52.5
Incr Delay (d2), s/veh	99.8	0.1	0.0	6.2	0.0	63.3	37.6	4.4	4.3	16.1	132.9	137.6
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	14.4	8.8	0.0	2.7	0.0	46.2	0.6	12.8	13.2	2.0	38.5	36.7
LnGrp Delay(d),s/veh	164.2	22.0	0.0	75.2	0.0	104.6	110.1	53.9	53.8	86.4	185.4	190.1
LnGrp LOS	F	C		E		F	F	D	D	F	F	F
Approach Vol, veh/h		598			945			683			1265	
Approach Delay, s/veh		78.8			102.5			54.8			184.3	
Approach LOS		E			F			D			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	22.0	70.5	5.6	48.2	11.3	81.2	9.1	44.7
Change Period (Y+Rc), s	4.5	6.8	4.5	* 7	4.5	* 6.8	4.5	7.0
Max Green Setting (Gmax), s	17.5	63.7	5.0	* 41	12.1	* 70	6.5	39.5
Max Q Clear Time (g_c+I1), s	19.5	65.7	2.9	43.2	7.3	19.2	5.5	27.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	118.7
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1030	627	10	46	748	10	10	50	22	10	10	460
Future Volume (veh/h)	1030	627	10	46	748	10	10	50	22	10	10	460
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		0.98	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	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	1120	682	0	50	813	11	11	54	24	11	11	500
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	682	2011	900	64	786	11	14	69	31	149	149	869
Arrive On Green	0.38	0.57	0.00	0.04	0.22	0.22	0.07	0.07	0.07	0.16	0.16	0.16
Sat Flow, veh/h	1774	3539	1583	1774	3575	48	217	1068	474	909	909	1583
Grp Volume(v), veh/h	1120	682	0	50	402	422	89	0	0	22	0	500
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1854	1759	0	0	1817	0	1583
Q Serve(g_s), s	52.5	14.1	0.0	3.8	30.0	30.0	6.8	0.0	0.0	1.4	0.0	22.4
Cycle Q Clear(g_c), s	52.5	14.1	0.0	3.8	30.0	30.0	6.8	0.0	0.0	1.4	0.0	22.4
Prop In Lane	1.00		1.00	1.00		0.03	0.12		0.27	0.50		1.00
Lane Grp Cap(c), veh/h	682	2011	900	64	389	408	114	0	0	298	0	869
V/C Ratio(X)	1.64	0.34	0.00	0.78	1.03	1.03	0.78	0.00	0.00	0.07	0.00	0.58
Avail Cap(c_a), veh/h	682	2011	900	120	389	408	289	0	0	298	0	869
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	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.0	15.8	0.0	65.2	53.2	53.2	62.8	0.0	0.0	48.3	0.0	20.3
Incr Delay (d2), s/veh	295.1	0.0	0.0	7.3	54.8	53.8	4.2	0.0	0.0	0.0	0.0	0.6
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	31.5	6.8	0.0	2.0	20.5	21.4	3.4	0.0	0.0	0.7	0.0	12.5
LnGrp Delay(d),s/veh	337.1	15.8	0.0	72.5	108.0	107.0	67.1	0.0	0.0	48.3	0.0	20.9
LnGrp LOS	F	B		E	F	F	E			D		C
Approach Vol, veh/h		1802			874			89			522	
Approach Delay, s/veh		215.5			105.5			67.1			22.1	
Approach LOS		F			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	58.0	36.0		14.5	10.4	83.6		28.0
Change Period (Y+Rc), s	5.5	6.0		* 5.6	5.5	* 6		5.6
Max Green Setting (Gmax), s	52.5	30.0		* 22	9.2	* 74		22.4
Max Q Clear Time (g_c+I1), s	54.5	32.0		8.8	5.8	16.1		24.4
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	1.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	151.5
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	624	30	30	1290	1092	80	130	50	287	10	90
Future Volume (veh/h)	490	624	30	30	1290	1092	80	130	50	287	10	90
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.99	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	1900	1863	1863	1863
Adj Flow Rate, veh/h	533	678	33	33	1402	1187	87	141	54	312	11	98
Adj No. of Lanes	1	2	0	2	3	1	1	1	0	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	383	2162	105	60	2174	668	108	161	62	248	482	216
Arrive On Green	0.22	0.63	0.63	0.02	0.43	0.43	0.06	0.13	0.13	0.07	0.14	0.14
Sat Flow, veh/h	1774	3436	167	3442	5085	1563	1774	1284	492	3442	3539	1583
Grp Volume(v), veh/h	533	349	362	33	1402	1187	87	0	195	312	11	98
Grp Sat Flow(s),veh/h/ln	1774	1770	1833	1721	1695	1563	1774	0	1776	1721	1770	1583
Q Serve(g_s), s	28.5	12.0	12.0	1.3	28.7	56.4	6.4	0.0	14.2	9.5	0.4	7.5
Cycle Q Clear(g_c), s	28.5	12.0	12.0	1.3	28.7	56.4	6.4	0.0	14.2	9.5	0.4	7.5
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	383	1114	1154	60	2174	668	108	0	222	248	482	216
V/C Ratio(X)	1.39	0.31	0.31	0.55	0.64	1.78	0.80	0.00	0.88	1.26	0.02	0.45
Avail Cap(c_a), veh/h	383	1114	1154	138	2174	668	113	0	471	248	960	430
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	1.00	1.00
Uniform Delay (d), s/veh	51.7	11.3	11.3	64.3	29.8	37.8	61.2	0.0	56.7	61.2	49.4	52.5
Incr Delay (d2), s/veh	191.2	0.1	0.1	3.0	0.5	355.6	29.6	0.0	4.3	144.9	0.0	0.6
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	34.3	5.8	6.1	0.6	13.5	90.2	4.0	0.0	7.3	9.5	0.2	3.3
LnGrp Delay(d),s/veh	242.9	11.4	11.4	67.3	30.4	393.3	90.7	0.0	61.0	206.1	49.4	53.0
LnGrp LOS	F	B	B	E	C	F	F		E	F	D	D
Approach Vol, veh/h		1244			2622			282			421	
Approach Delay, s/veh		110.6			195.1			70.2			166.4	
Approach LOS		F			F			E			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	34.0	61.3	13.5	23.1	7.4	87.9	15.0	21.6
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	28.5	* 56	8.4	* 36	* 5.3	* 80	9.5	* 35
Max Q Clear Time (g_c+I1), s	30.5	58.4	8.4	9.5	3.3	14.0	11.5	16.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	1.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	161.7
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	339	282	130	1376	276	1026	2280	160	56	811	170
Future Volume (veh/h)	270	339	282	130	1376	276	1026	2280	160	56	811	170
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		0.99	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	293	368	307	141	1496	300	1115	2478	174	61	882	185
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	1613	502	187	1553	484	729	2161	664	99	1230	383
Arrive On Green	0.07	0.32	0.32	0.05	0.31	0.31	0.21	0.42	0.42	0.03	0.24	0.24
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	5085	1564	3442	5085	1583
Grp Volume(v), veh/h	293	368	307	141	1496	300	1115	2478	174	61	882	185
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1695	1564	1721	1695	1583
Q Serve(g_s), s	9.5	7.7	23.7	5.8	41.7	23.4	30.5	61.2	10.4	2.5	22.9	14.4
Cycle Q Clear(g_c), s	9.5	7.7	23.7	5.8	41.7	23.4	30.5	61.2	10.4	2.5	22.9	14.4
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	227	1613	502	187	1553	484	729	2161	664	99	1230	383
V/C Ratio(X)	1.29	0.23	0.61	0.75	0.96	0.62	1.53	1.15	0.26	0.62	0.72	0.48
Avail Cap(c_a), veh/h	227	1613	502	272	1561	486	729	2161	664	119	1257	391
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	67.3	36.2	41.7	67.2	49.2	42.9	56.8	41.4	26.8	69.2	50.1	46.9
Incr Delay (d2), s/veh	159.6	0.0	1.6	3.2	14.8	1.8	245.3	72.0	0.1	2.9	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	9.5	3.6	10.6	2.9	21.7	10.5	39.3	43.0	4.5	1.2	10.9	6.4
LnGrp Delay(d),s/veh	226.9	36.2	43.3	70.4	64.0	44.6	302.1	113.4	26.9	72.0	51.7	47.2
LnGrp LOS	F	D	D	E	E	D	F	F	C	E	D	D
Approach Vol, veh/h		968			1937			3767			1128	
Approach Delay, s/veh		96.2			61.5			165.2			52.1	
Approach LOS		F			E			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	9.6	68.6	13.3	52.5	36.0	42.2	15.0	50.8
Change Period (Y+Rc), s	5.5	* 7.4	5.5	* 6.8	5.5	* 7.4	5.5	6.8
Max Green Setting (Gmax), s	5.0	* 61	11.4	* 42	30.5	* 36	9.5	44.2
Max Q Clear Time (g_c+I1), s	4.5	63.2	7.8	25.7	32.5	24.9	11.5	43.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	1.6	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	114.5
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	630	350	400	740	60	380	166	580	60	182	70
Future Volume (veh/h)	10	630	350	400	740	60	380	166	580	60	182	70
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		0.96	1.00		0.99	1.00		0.95
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	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	685	0	435	804	65	335	462	444	65	198	76
Adj No. of Lanes	1	2	1	2	2	0	1	1	1	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	794	355	492	1185	96	519	545	457	94	294	117
Arrive On Green	0.01	0.22	0.00	0.14	0.36	0.36	0.29	0.29	0.29	0.14	0.14	0.14
Sat Flow, veh/h	1774	3539	1583	3442	3305	267	1774	1863	1561	654	2040	810
Grp Volume(v), veh/h	11	685	0	435	430	439	335	462	444	182	0	157
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1803	1774	1863	1561	1830	0	1674
Q Serve(g_s), s	0.7	19.6	0.0	13.0	21.7	21.7	17.3	24.6	29.6	9.9	0.0	9.3
Cycle Q Clear(g_c), s	0.7	19.6	0.0	13.0	21.7	21.7	17.3	24.6	29.6	9.9	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	0.36		0.48
Lane Grp Cap(c), veh/h	14	794	355	492	634	646	519	545	457	264	0	242
V/C Ratio(X)	0.79	0.86	0.00	0.88	0.68	0.68	0.65	0.85	0.97	0.69	0.00	0.65
Avail Cap(c_a), veh/h	72	911	408	507	644	656	519	545	457	452	0	413
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.1	39.3	0.0	44.2	28.6	28.6	32.5	35.0	36.8	42.8	0.0	42.5
Incr Delay (d2), s/veh	29.8	7.0	0.0	15.8	2.3	2.3	2.2	11.3	34.7	1.2	0.0	1.1
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	10.4	0.0	7.3	11.0	11.2	8.8	14.3	17.2	5.1	0.0	4.4
LnGrp Delay(d),s/veh	81.9	46.2	0.0	60.0	30.9	30.9	34.6	46.4	71.5	44.0	0.0	43.6
LnGrp LOS	F	D		E	C	C	C	D	E	D		D
Approach Vol, veh/h		696			1304			1241			339	
Approach Delay, s/veh		46.8			40.6			52.2			43.8	
Approach LOS		D			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	6.1	42.4		36.0	20.3	28.3		20.7
Change Period (Y+Rc), s	* 5.3	* 4.7		* 5.2	* 5.2	* 4.7		5.5
Max Green Setting (Gmax), s	* 4.3	* 38		* 31	* 16	* 27		26.0
Max Q Clear Time (g_c+I1), s	2.7	23.7		31.6	15.0	21.6		11.9
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	0.8		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	46.1
HCM 2010 LOS	D

Notes

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations															
Traffic Volume (veh/h)	10	220	750	225	20	200	840	70	20	452	1414	220	230	500	450
Future Volume (veh/h)	10	220	750	225	20	200	840	70	20	452	1414	220	230	500	450
Number		3	8	18		7	4	14		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		0.98		1.00		0.98		1.00		1.00	1.00		0.99
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		239	815	245		217	913	76		491	1537	239	250	543	489
Adj No. of Lanes		2	3	0		2	3	1		2	3	1	2	3	0
Peak Hour Factor		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2		2	2	2		2	2	2	2	2	2
Cap, veh/h		276	942	281		282	1246	381		554	1808	562	316	971	447
Arrive On Green		0.08	0.24	0.24		0.08	0.24	0.24		0.16	0.36	0.36	0.09	0.29	0.29
Sat Flow, veh/h		3442	3873	1155		3442	5085	1557		3442	5085	1579	3442	3390	1561
Grp Volume(v), veh/h		239	713	347		217	913	76		491	1537	239	250	543	489
Grp Sat Flow(s),veh/h/ln		1721	1695	1638		1721	1695	1557		1721	1695	1579	1721	1695	1561
Q Serve(g_s), s		6.8	19.8	20.1		6.1	16.3	3.8		13.7	27.5	11.3	7.0	13.4	28.2
Cycle Q Clear(g_c), s		6.8	19.8	20.1		6.1	16.3	3.8		13.7	27.5	11.3	7.0	13.4	28.2
Prop In Lane		1.00		0.71		1.00		1.00		1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h		276	825	398		282	1246	381		554	1808	562	316	971	447
V/C Ratio(X)		0.87	0.86	0.87		0.77	0.73	0.20		0.89	0.85	0.43	0.79	0.56	1.09
Avail Cap(c_a), veh/h		276	985	476		290	1498	459		612	1808	562	377	971	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	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		44.8	35.7	35.8		44.3	34.2	29.5		40.4	29.3	24.1	43.8	29.9	35.1
Incr Delay (d2), s/veh		22.9	6.2	12.7		10.4	1.1	0.1		12.9	3.9	0.2	7.6	0.4	70.3
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		4.1	10.0	10.5		3.3	7.7	1.6		7.5	13.5	5.0	3.7	6.3	20.8
LnGrp Delay(d),s/veh		67.7	41.9	48.5		54.7	35.3	29.6		53.3	33.2	24.3	51.4	30.3	105.4
LnGrp LOS		E	D	D		D	D	C		D	C	C	D	C	F
Approach Vol, veh/h			1299				1206				2267			1282	
Approach Delay, s/veh			48.4				38.4				36.6			63.1	
Approach LOS			D				D				D			E	

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	11.3	33.8	13.4	29.9	14.5	40.6	13.6	29.8
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	17.5	* 28	7.9	29.0	10.8	* 35	8.3	28.6
Max Q Clear Time (g_c+I1), s	15.7	30.2	8.8	18.3	9.0	29.5	8.1	22.1
Green Ext Time (p_c), s	0.1	0.0	0.0	1.9	0.0	2.4	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	45.1
HCM 2010 LOS	D

Notes

Movement	EBL2	EBL	EBT	EBR	WBR	WBR2	NBT	NBR	NBR2	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	450	10	910	1326	170	50	1444	710	10	1894	220
Future Volume (vph)	450	10	910	1326	170	50	1444	710	10	1894	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	6.8	4.5		4.6			4.6	4.0
Lane Util. Factor		0.91	0.86	0.91	0.88		0.86			0.91	1.00
Frpb, ped/bikes		1.00	0.99	0.98	1.00		0.99			1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00			1.00	1.00
Frt		1.00	0.94	0.85	0.85		0.95			1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)		1610	2989	1418	2787		6041			5085	1545
Flt Permitted		0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (perm)		1610	2989	1418	2787		6041			5085	1545
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	489	11	989	1441	185	54	1570	772	11	2059	239
RTOR Reduction (vph)	0	0	1	30	72	0	1	0	0	0	0
Lane Group Flow (vph)	0	499	1666	734	167	0	2352	0	0	2059	239
Confl. Peds. (#/hr)	6	6		6	3	3		3	3		6
Confl. Bikes (#/hr)								2	2		3
Turn Type	Split	Split	NA	Perm	Prot		NA			NA	Free
Protected Phases	4	4	4		5		6			2	
Permitted Phases				4							Free
Actuated Green, G (s)		55.2	55.2	55.2	6.5		42.4			53.4	120.0
Effective Green, g (s)		55.2	55.2	55.2	6.5		42.4			53.4	120.0
Actuated g/C Ratio		0.46	0.46	0.46	0.05		0.35			0.44	1.00
Clearance Time (s)		6.8	6.8	6.8	4.5		4.6			4.6	
Vehicle Extension (s)		1.0	1.0	1.0	3.0		1.0			1.0	
Lane Grp Cap (vph)		740	1374	652	150		2134			2262	1545
v/s Ratio Prot		0.31	c0.56		0.06		c0.39			c0.40	
v/s Ratio Perm				0.52							0.15
v/c Ratio		0.67	1.21	1.13	1.11		1.39dr			0.91	0.15
Uniform Delay, d1		25.4	32.4	32.4	56.8		38.8			31.1	0.0
Progression Factor		1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2		1.9	102.6	75.4	107.4		53.8			5.9	0.2
Delay (s)		27.3	135.0	107.8	164.1		92.6			37.0	0.2
Level of Service		C	F	F	F		F			D	A
Approach Delay (s)			109.5				92.6			33.1	
Approach LOS			F				F			C	

Intersection Summary			
HCM 2000 Control Delay	83.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations															
Traffic Volume (veh/h)	50	240	340	207	250	1090	180	40	308	1590	140	20	30	922	600
Future Volume (veh/h)	50	240	340	207	250	1090	180	40	308	1590	140	20	30	922	600
Number		3	8	18	7	4	14		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		0.98	1.00		1.00		1.00		0.99		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		1676	1676	1676	1676	1676	1676		1676	1676	1676		1676	1676	1676
Adj Flow Rate, veh/h		261	370	225	272	1185	196		335	1728	152		33	1002	652
Adj No. of Lanes		2	2	1	2	3	1		2	3	1		2	3	1
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2	2	2	2		2	2	2		2	2	2
Cap, veh/h		283	831	365	283	1194	370		310	1974	606		56	1600	490
Arrive On Green		0.09	0.26	0.26	0.09	0.26	0.26		0.10	0.43	0.43		0.02	0.35	0.35
Sat Flow, veh/h		3097	3185	1401	3097	4577	1420		3097	4577	1405		3097	4577	1402
Grp Volume(v), veh/h		261	370	225	272	1185	196		335	1728	152		33	1002	652
Grp Sat Flow(s),veh/h/ln		1549	1593	1401	1549	1526	1420		1549	1526	1405		1549	1526	1402
Q Serve(g_s), s		9.6	11.2	16.3	10.1	29.7	13.6		11.5	39.7	7.9		1.2	21.0	40.2
Cycle Q Clear(g_c), s		9.6	11.2	16.3	10.1	29.7	13.6		11.5	39.7	7.9		1.2	21.0	40.2
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		283	831	365	283	1194	370		310	1974	606		56	1600	490
V/C Ratio(X)		0.92	0.45	0.62	0.96	0.99	0.53		1.08	0.88	0.25		0.58	0.63	1.33
Avail Cap(c_a), veh/h		283	831	365	283	1194	370		310	1974	606		108	1600	490
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		51.8	35.5	37.4	52.1	42.4	36.4		51.8	29.9	20.8		56.0	31.1	37.4
Incr Delay (d2), s/veh		33.3	0.8	4.4	42.7	24.3	4.1		74.6	5.1	0.4		3.5	1.1	162.1
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		5.4	5.0	6.8	6.0	15.2	5.8		8.1	17.6	3.1		0.6	9.0	37.6
LnGrp Delay(d),s/veh		85.2	36.3	41.8	94.8	66.7	40.5		126.3	34.9	21.3		59.5	32.2	199.5
LnGrp LOS		F	D	D	F	E	D		F	C	C		E	C	F
Approach Vol, veh/h			856			1653				2215				1687	
Approach Delay, s/veh			52.7			68.2				47.8				97.4	
Approach LOS			D			E				D				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	17.0	46.0	16.0	36.0	7.6	55.4	16.0	36.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	6.0	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	11.5	* 40	10.5	30.0	4.0	* 48	10.5	30.0
Max Q Clear Time (g_c+I1), s	13.6	42.2	11.6	31.7	3.2	41.7	12.1	18.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.8	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.8
HCM 2010 LOS	E

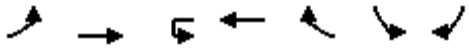
Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	120	10	412	30	30	40	30	466	2772	20	40	3356	40
Future Volume (veh/h)	120	10	412	30	30	40	30	466	2772	20	40	3356	40
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		0.99	1.00		1.00		1.00		1.00	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	1900	1863	1863	1863	1863	1900		1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	130	241	294	33	33	43		507	3013	22	43	3648	43
Adj No. of Lanes	0	1	1	1	1	0		2	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2	2
Cap, veh/h	144	267	354	114	47	62		299	2596	19	55	2238	679
Arrive On Green	0.22	0.22	0.22	0.06	0.06	0.06		0.09	0.50	0.50	0.03	0.44	0.44
Sat Flow, veh/h	641	1189	1575	1774	733	956		3442	5208	38	1774	5085	1542
Grp Volume(v), veh/h	371	0	294	33	0	76		507	1959	1076	43	3648	43
Grp Sat Flow(s),veh/h/ln	1831	0	1575	1774	0	1689		1721	1695	1856	1774	1695	1542
Q Serve(g_s), s	22.5	0.0	20.3	2.0	0.0	5.0		9.9	56.9	56.9	2.7	50.2	1.8
Cycle Q Clear(g_c), s	22.5	0.0	20.3	2.0	0.0	5.0		9.9	56.9	56.9	2.7	50.2	1.8
Prop In Lane	0.35		1.00	1.00		0.57		1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	354	114	0	109		299	1690	925	55	2238	679
V/C Ratio(X)	0.90	0.00	0.83	0.29	0.00	0.70		1.70	1.16	1.16	0.78	1.63	0.06
Avail Cap(c_a), veh/h	514	0	442	498	0	474		299	1690	925	73	2238	679
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	43.0	0.0	42.2	50.9	0.0	52.3		52.1	28.6	28.6	54.9	31.9	18.4
Incr Delay (d2), s/veh	14.8	0.0	8.6	0.5	0.0	3.0		327.9	78.6	85.4	23.2	285.7	0.0
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	13.0	0.0	9.7	1.0	0.0	2.4		18.3	45.0	51.0	1.7	82.6	0.8
LnGrp Delay(d),s/veh	57.8	0.0	50.8	51.4	0.0	55.3		380.0	107.2	114.0	78.1	317.6	18.4
LnGrp LOS	E		D	D		E		F	F	F	E	F	B
Approach Vol, veh/h		665			109				3542			3734	
Approach Delay, s/veh		54.7			54.1				148.3			311.4	
Approach LOS		D			D				F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	55.1		31.1	8.3	61.8		12.9
Change Period (Y+Rc), s	* 5.1	* 4.9		5.5	* 4.8	* 4.9		5.5
Max Green Setting (Gmax), s	* 9.9	* 50		32.0	* 4.7	* 56		32.0
Max Q Clear Time (g_c+I1), s	11.9	52.2		24.5	4.7	58.9		7.0
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	215.0
HCM 2010 LOS	F

Notes



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	874	1234	0	1318	110	50	619
Future Volume (veh/h)	874	1234	0	1318	110	50	619
Number	1	6		2	12	3	18
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		1863	1863	1863	1863
Adj Flow Rate, veh/h	950	1341		1433	120	54	673
Adj No. of Lanes	2	2		2	1	1	1
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	964	2488		1313	587	310	277
Arrive On Green	0.28	0.70		0.37	0.37	0.17	0.17
Sat Flow, veh/h	3442	3632		3632	1583	1774	1583
Grp Volume(v), veh/h	950	1341		1433	120	54	673
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1583	1774	1583
Q Serve(g_s), s	27.5	18.1		37.1	5.2	2.6	17.5
Cycle Q Clear(g_c), s	27.5	18.1		37.1	5.2	2.6	17.5
Prop In Lane	1.00				1.00	1.00	1.00
Lane Grp Cap(c), veh/h	964	2488		1313	587	310	277
V/C Ratio(X)	0.99	0.54		1.09	0.20	0.17	2.43
Avail Cap(c_a), veh/h	964	2488		1313	587	310	277
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	35.8	7.1		31.5	21.4	35.1	41.3
Incr Delay (d2), s/veh	25.4	0.1		53.7	0.1	0.1	653.9
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	8.8		27.8	2.3	1.3	58.0
LnGrp Delay(d),s/veh	61.2	7.2		85.1	21.5	35.2	695.1
LnGrp LOS	E	A		F	C	D	F
Approach Vol, veh/h		2291		1553		727	
Approach Delay, s/veh		29.6		80.2		646.1	
Approach LOS		C		F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	33.2	43.8				77.0		23.0
Change Period (Y+Rc), s	* 5.2	* 6.7				* 6.7		5.5
Max Green Setting (Gmax), s	* 28	* 37				* 61		17.5
Max Q Clear Time (g_c+I1), s	29.5	39.1				20.1		19.5
Green Ext Time (p_c), s	0.0	0.0				3.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	144.8
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	50	717	240	110	604	0	10	240	1150	140	10	150
Future Volume (veh/h)	50	717	240	110	604	0	10	240	1150	140	10	150
Number	3	8	18	7	4	14		1	6	16		5
Initial Q (Qb), veh	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		0.98		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1900		1863
Adj Flow Rate, veh/h	54	779	261	120	657	0		261	1250	152		163
Adj No. of Lanes	1	1	1	1	1	1		1	3	0		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		0.92	0.92	0.92		0.92
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2
Cap, veh/h	69	570	484	100	603	512		183	1658	202		185
Arrive On Green	0.04	0.31	0.31	0.06	0.32	0.00		0.10	0.36	0.36		0.10
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583		1774	4583	557		1774
Grp Volume(v), veh/h	54	779	261	120	657	0		261	925	477		163
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583		1774	1695	1750		1774
Q Serve(g_s), s	4.5	46.0	20.6	8.5	48.6	0.0		15.5	36.0	36.0		13.6
Cycle Q Clear(g_c), s	4.5	46.0	20.6	8.5	48.6	0.0		15.5	36.0	36.0		13.6
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.32		1.00
Lane Grp Cap(c), veh/h	69	570	484	100	603	512		183	1226	633		185
V/C Ratio(X)	0.78	1.37	0.54	1.20	1.09	0.00		1.43	0.75	0.75		0.88
Avail Cap(c_a), veh/h	71	570	484	100	603	512		183	1226	633		250
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	71.6	52.2	43.4	70.9	50.9	0.0		67.4	42.1	42.1		66.4
Incr Delay (d2), s/veh	38.0	176.3	0.7	152.1	63.7	0.0		221.0	2.4	4.6		19.0
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
%ile BackOfQ(50%),veh/ln	3.0	51.5	9.1	8.4	35.6	0.0		18.8	17.2	18.2		7.7
LnGrp Delay(d),s/veh	109.7	228.5	44.0	223.1	114.6	0.0		288.5	44.5	46.7		85.4
LnGrp LOS	F	F	D	F	F			F	D	D		F
Approach Vol, veh/h		1094			777				1663			
Approach Delay, s/veh		178.6			131.3				83.4			
Approach LOS		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	21.0	62.0	11.4	56.0	21.2	61.8	14.0	53.4
Change Period (Y+Rc), s	5.5	7.4	5.5	7.4	5.5	7.4	5.5	* 7.4
Max Green Setting (Gmax), s	15.5	54.6	6.0	48.1	21.2	48.9	8.5	* 46
Max Q Clear Time (g_c+I1), s	17.5	56.6	6.5	50.6	15.6	38.0	10.5	48.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	2.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	195.8
HCM 2010 LOS	F

Notes

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	2610	70
Future Volume (veh/h)	2610	70
Number	2	12
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863
Adj Flow Rate, veh/h	2837	0
Adj No. of Lanes	3	1
Peak Hour Factor	0.92	0.92
Percent Heavy Veh, %	2	2
Cap, veh/h	1846	575
Arrive On Green	0.36	0.00
Sat Flow, veh/h	5085	1583
Grp Volume(v), veh/h	2837	0
Grp Sat Flow(s),veh/h/ln	1695	1583
Q Serve(g_s), s	54.6	0.0
Cycle Q Clear(g_c), s	54.6	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	1846	575
V/C Ratio(X)	1.54	0.00
Avail Cap(c_a), veh/h	1846	575
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	47.9	0.0
Incr Delay (d2), s/veh	244.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	67.2	0.0
LnGrp Delay(d),s/veh	292.2	0.0
LnGrp LOS	F	
Approach Vol, veh/h	3000	
Approach Delay, s/veh	281.0	
Approach LOS	F	
Timer		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	620	20	50	440	160	20	487	100	260	1174	268
Future Volume (veh/h)	224	620	20	50	440	160	20	487	100	260	1174	268
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	243	674	22	54	478	174	22	529	109	283	1276	291
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	713	606	69	508	432	49	832	372	307	1346	838
Arrive On Green	0.15	0.38	0.38	0.04	0.27	0.27	0.03	0.24	0.24	0.17	0.38	0.38
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	243	674	22	54	478	174	22	529	109	283	1276	291
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	17.6	45.6	1.1	3.9	32.7	11.7	1.6	17.5	7.4	20.5	45.5	13.8
Cycle Q Clear(g_c), s	17.6	45.6	1.1	3.9	32.7	11.7	1.6	17.5	7.4	20.5	45.5	13.8
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	264	713	606	69	508	432	49	832	372	307	1346	838
V/C Ratio(X)	0.92	0.95	0.04	0.78	0.94	0.40	0.45	0.64	0.29	0.92	0.95	0.35
Avail Cap(c_a), veh/h	264	756	643	72	555	472	259	926	414	483	1385	856
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	54.7	38.9	25.2	62.0	46.3	38.7	62.4	44.8	40.9	53.0	39.1	17.7
Incr Delay (d2), s/veh	34.2	19.6	0.0	36.1	22.7	0.2	2.4	0.8	0.2	12.2	13.3	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	11.2	27.3	0.5	2.6	20.1	5.1	0.8	8.7	3.2	11.1	24.6	6.0
LnGrp Delay(d),s/veh	88.9	58.5	25.2	98.1	69.0	38.9	64.8	45.6	41.1	65.3	52.4	17.8
LnGrp LOS	F	E	C	F	E	D	E	D	D	E	D	B
Approach Vol, veh/h		939			706			660			1850	
Approach Delay, s/veh		65.6			63.8			45.5			48.9	
Approach LOS		E			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	23.9	42.3	8.1	56.0	9.6	56.6	27.0	37.0
Change Period (Y+Rc), s	4.5	6.8	4.5	* 6.4	4.5	6.8	4.5	6.4
Max Green Setting (Gmax), s	19.4	38.8	19.0	* 51	5.3	52.9	35.5	34.1
Max Q Clear Time (g_c+I1), s	19.6	34.7	3.6	47.5	5.9	47.6	22.5	19.5
Green Ext Time (p_c), s	0.0	0.8	0.0	2.0	0.0	1.3	0.1	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	54.7
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	680	10	70	380	60	10	727	70	70	636	250
Future Volume (veh/h)	300	680	10	70	380	60	10	727	70	70	636	250
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	326	739	11	76	413	65	11	790	76	76	691	272
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	766	11	97	441	69	14	798	77	90	714	281
Arrive On Green	0.19	0.42	0.42	0.05	0.28	0.28	0.01	0.24	0.24	0.05	0.29	0.29
Sat Flow, veh/h	1774	1831	27	1774	1572	247	1774	3263	314	1774	2483	977
Grp Volume(v), veh/h	326	0	750	76	0	478	11	428	438	76	493	470
Grp Sat Flow(s),veh/h/ln	1774	0	1858	1774	0	1819	1774	1770	1807	1774	1770	1690
Q Serve(g_s), s	17.9	0.0	38.8	4.2	0.0	25.3	0.6	23.8	23.8	4.2	27.1	27.1
Cycle Q Clear(g_c), s	17.9	0.0	38.8	4.2	0.0	25.3	0.6	23.8	23.8	4.2	27.1	27.1
Prop In Lane	1.00		0.01	1.00		0.14	1.00		0.17	1.00		0.58
Lane Grp Cap(c), veh/h	342	0	777	97	0	510	14	433	442	90	509	486
V/C Ratio(X)	0.95	0.00	0.96	0.78	0.00	0.94	0.78	0.99	0.99	0.84	0.97	0.97
Avail Cap(c_a), veh/h	342	0	777	207	0	537	90	433	442	90	509	486
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	39.3	0.0	27.9	46.0	0.0	34.6	48.8	37.1	37.1	46.4	34.7	34.7
Incr Delay (d2), s/veh	36.0	0.0	23.8	5.0	0.0	23.1	28.7	40.3	40.0	46.4	31.6	32.5
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	12.2	0.0	24.9	2.2	0.0	15.9	0.4	16.4	16.7	3.2	17.6	16.9
LnGrp Delay(d),s/veh	75.3	0.0	51.7	51.0	0.0	57.7	77.4	77.4	77.0	92.8	66.3	67.1
LnGrp LOS	E		D	D		E	E	E	E	F	E	E
Approach Vol, veh/h		1076			554			877			1039	
Approach Delay, s/veh		58.9			56.8			77.2			68.6	
Approach LOS		E			E			E			E	

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	23.5	34.4	5.3	35.3	9.9	48.0	9.5	31.1
Change Period (Y+Rc), s	4.5	6.8	4.5	* 7	4.5	* 6.8	4.5	7.0
Max Green Setting (Gmax), s	19.0	29.1	5.0	* 24	11.5	* 37	5.0	24.1
Max Q Clear Time (g_c+I1), s	19.9	27.3	2.6	29.1	6.2	40.8	6.2	25.8
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.9
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	710	10	34	682	10	10	20	47	10	50	1010
Future Volume (veh/h)	370	710	10	34	682	10	10	20	47	10	50	1010
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		0.98	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	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	402	772	0	37	741	11	11	22	51	11	54	1098
Adj No. of Lanes	1	2	1	1	2	0	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	431	1585	709	46	824	12	15	31	71	71	347	743
Arrive On Green	0.24	0.45	0.00	0.03	0.23	0.23	0.07	0.07	0.07	0.23	0.23	0.23
Sat Flow, veh/h	1774	3539	1583	1774	3570	53	217	434	1006	313	1535	1583
Grp Volume(v), veh/h	402	772	0	37	367	385	84	0	0	65	0	1098
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1853	1656	0	0	1847	0	1583
Q Serve(g_s), s	22.0	15.3	0.0	2.1	20.0	20.0	4.9	0.0	0.0	2.8	0.0	22.4
Cycle Q Clear(g_c), s	22.0	15.3	0.0	2.1	20.0	20.0	4.9	0.0	0.0	2.8	0.0	22.4
Prop In Lane	1.00		1.00	1.00		0.03	0.13		0.61	0.17		1.00
Lane Grp Cap(c), veh/h	431	1585	709	46	408	428	117	0	0	418	0	743
V/C Ratio(X)	0.93	0.49	0.00	0.80	0.90	0.90	0.72	0.00	0.00	0.16	0.00	1.48
Avail Cap(c_a), veh/h	922	2705	1210	125	554	580	375	0	0	418	0	743
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	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.7	19.3	0.0	48.0	37.0	37.0	45.1	0.0	0.0	30.7	0.0	26.3
Incr Delay (d2), s/veh	4.0	0.1	0.0	10.9	11.9	11.4	3.0	0.0	0.0	0.1	0.0	222.1
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	11.2	7.4	0.0	1.1	11.0	11.5	2.3	0.0	0.0	1.4	0.0	66.0
LnGrp Delay(d),s/veh	40.7	19.4	0.0	58.9	48.8	48.4	48.1	0.0	0.0	30.8	0.0	248.4
LnGrp LOS	D	B		E	D	D	D			C		F
Approach Vol, veh/h		1174			789			84			1163	
Approach Delay, s/veh		26.7			49.1			48.1			236.3	
Approach LOS		C			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	29.6	28.9		12.6	8.1	50.4		28.0
Change Period (Y+Rc), s	5.5	6.0		* 5.6	5.5	* 6		5.6
Max Green Setting (Gmax), s	51.5	31.0		* 22	7.0	* 76		22.4
Max Q Clear Time (g_c+I1), s	24.0	22.0		6.9	4.1	17.3		24.4
Green Ext Time (p_c), s	0.1	0.9		0.1	0.0	1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	108.7
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1038	160	50	790	428	20	20	30	1039	140	490
Future Volume (veh/h)	110	1038	160	50	790	428	20	20	30	1039	140	490
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.99	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	1900	1863	1863	1863
Adj Flow Rate, veh/h	120	1128	174	54	859	465	22	22	33	1129	152	533
Adj No. of Lanes	1	2	0	2	3	1	1	1	0	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	1195	184	94	1675	515	27	34	52	1185	1346	602
Arrive On Green	0.08	0.39	0.39	0.03	0.33	0.33	0.01	0.05	0.05	0.34	0.38	0.38
Sat Flow, veh/h	1774	3076	473	3442	5085	1562	1774	674	1011	3442	3539	1583
Grp Volume(v), veh/h	120	648	654	54	859	465	22	0	55	1129	152	533
Grp Sat Flow(s),veh/h/ln	1774	1770	1779	1721	1695	1562	1774	0	1684	1721	1770	1583
Q Serve(g_s), s	7.3	38.5	38.8	1.7	14.9	31.0	1.3	0.0	3.5	34.9	3.0	34.3
Cycle Q Clear(g_c), s	7.3	38.5	38.8	1.7	14.9	31.0	1.3	0.0	3.5	34.9	3.0	34.3
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	147	688	691	94	1675	515	27	0	86	1185	1346	602
V/C Ratio(X)	0.82	0.94	0.95	0.58	0.51	0.90	0.83	0.00	0.64	0.95	0.11	0.89
Avail Cap(c_a), veh/h	216	767	771	161	1809	556	99	0	540	1335	2300	1029
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	1.00	1.00
Uniform Delay (d), s/veh	49.2	32.2	32.3	52.4	29.5	34.9	53.6	0.0	50.8	34.9	21.9	31.6
Incr Delay (d2), s/veh	8.9	17.9	18.7	2.1	0.1	16.6	20.8	0.0	2.9	13.5	0.0	2.5
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	3.9	22.1	22.5	0.8	6.9	15.7	0.8	0.0	1.7	18.8	1.5	15.3
LnGrp Delay(d),s/veh	58.2	50.1	50.9	54.5	29.6	51.5	74.4	0.0	53.7	48.4	21.9	34.1
LnGrp LOS	E	D	D	D	C	D	E		D	D	C	C
Approach Vol, veh/h		1422			1378			77			1814	
Approach Delay, s/veh		51.1			38.0			59.6			42.0	
Approach LOS		D			D			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	14.5	40.8	7.1	46.6	8.1	47.3	43.0	10.7
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	13.3	* 39	6.1	* 71	* 5.1	* 47	42.3	* 35
Max Q Clear Time (g_c+I1), s	9.3	33.0	3.3	36.3	3.7	40.8	36.9	5.5
Green Ext Time (p_c), s	0.0	1.4	0.0	0.5	0.0	1.6	0.6	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	43.9
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1170	657	170	514	184	384	950	160	475	2173	210
Future Volume (veh/h)	160	1170	657	170	514	184	384	950	160	475	2173	210
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		0.99	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	174	1272	714	185	559	200	417	1033	174	516	2362	228
Adj No. of Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1447	451	154	1351	421	344	1702	523	558	2019	629
Arrive On Green	0.06	0.28	0.28	0.04	0.27	0.27	0.10	0.33	0.33	0.16	0.40	0.40
Sat Flow, veh/h	3442	5085	1583	3442	5085	1583	3442	5085	1563	3442	5085	1583
Grp Volume(v), veh/h	174	1272	714	185	559	200	417	1033	174	516	2362	228
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1695	1583	1721	1695	1563	1721	1695	1583
Q Serve(g_s), s	7.2	34.6	41.3	6.5	13.2	15.4	14.5	24.6	12.1	21.4	57.6	14.7
Cycle Q Clear(g_c), s	7.2	34.6	41.3	6.5	13.2	15.4	14.5	24.6	12.1	21.4	57.6	14.7
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	220	1447	451	154	1351	421	344	1702	523	558	2019	629
V/C Ratio(X)	0.79	0.88	1.58	1.20	0.41	0.48	1.21	0.61	0.33	0.92	1.17	0.36
Avail Cap(c_a), veh/h	296	1447	451	154	1351	421	344	1702	523	600	2019	629
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	67.0	49.5	51.9	69.3	44.0	44.8	65.3	40.3	36.1	59.9	43.8	30.8
Incr Delay (d2), s/veh	7.0	6.3	273.4	136.2	0.1	0.3	119.5	0.5	0.1	18.8	82.2	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	3.7	17.1	52.2	6.0	6.2	6.8	12.6	11.5	5.2	11.6	42.3	6.5
LnGrp Delay(d),s/veh	74.0	55.8	325.3	205.5	44.0	45.1	184.8	40.8	36.3	78.7	126.0	31.0
LnGrp LOS	E	E	F	F	D	D	F	D	D	E	F	C
Approach Vol, veh/h		2160			944			1624			3106	
Approach Delay, s/veh		146.3			75.9			77.3			111.1	
Approach LOS		F			E			E			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	39.0	56.0	12.0	48.1	20.0	65.0	14.8	45.3
Change Period (Y+Rc), s	5.5	* 7.4	5.5	* 6.8	5.5	* 7.4	5.5	6.8
Max Green Setting (Gmax), s	25.3	* 47	6.5	* 41	14.5	* 58	12.5	35.2
Max Q Clear Time (g_c+I1), s	23.4	26.6	8.5	43.3	16.5	59.6	9.2	17.4
Green Ext Time (p_c), s	0.1	2.2	0.0	0.0	0.0	0.0	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	109.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	870	350	400	690	70	360	334	710	70	126	20
Future Volume (veh/h)	80	870	350	400	690	70	360	334	710	70	126	20
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		0.96	1.00		0.98	1.00		0.95
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	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	87	946	0	435	750	76	382	563	572	76	137	22
Adj No. of Lanes	1	2	1	2	2	0	1	1	1	0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	1059	474	180	929	94	476	500	418	144	274	45
Arrive On Green	0.06	0.30	0.00	0.05	0.29	0.29	0.27	0.27	0.27	0.13	0.13	0.13
Sat Flow, veh/h	1774	3539	1583	3442	3230	327	1774	1863	1559	1113	2123	351
Grp Volume(v), veh/h	87	946	0	435	411	415	382	563	572	123	0	112
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1787	1774	1863	1559	1807	0	1779
Q Serve(g_s), s	4.0	21.0	0.0	4.3	17.7	17.7	16.5	22.0	22.0	5.2	0.0	4.8
Cycle Q Clear(g_c), s	4.0	21.0	0.0	4.3	17.7	17.7	16.5	22.0	22.0	5.2	0.0	4.8
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	0.62		0.20
Lane Grp Cap(c), veh/h	111	1059	474	180	509	514	476	500	418	233	0	229
V/C Ratio(X)	0.78	0.89	0.00	2.41	0.81	0.81	0.80	1.13	1.37	0.53	0.00	0.49
Avail Cap(c_a), veh/h	145	1170	523	180	533	538	476	500	418	573	0	564
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	27.5	0.0	38.9	27.1	27.1	28.0	30.0	30.0	33.4	0.0	33.2
Incr Delay (d2), s/veh	13.5	7.9	0.0	651.3	7.8	7.8	8.9	79.8	180.3	0.7	0.0	0.6
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	2.4	11.4	0.0	18.4	9.7	9.8	9.2	22.3	30.3	2.7	0.0	2.4
LnGrp Delay(d),s/veh	51.4	35.4	0.0	690.1	34.9	34.9	36.9	109.8	210.3	34.1	0.0	33.8
LnGrp LOS	D	D		F	C	C	D	F	F	C		C
Approach Vol, veh/h		1033			1261			1517			235	
Approach Delay, s/veh		36.8			261.0			129.3			33.9	
Approach LOS		D			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.4	28.3		27.2	9.5	29.2		16.1
Change Period (Y+Rc), s	* 5.3	* 4.7		* 5.2	* 5.2	* 4.7		5.5
Max Green Setting (Gmax), s	* 6.7	* 25		* 22	* 4.3	* 27		26.0
Max Q Clear Time (g_c+I1), s	10.0	19.7		24.0	6.3	23.0		7.2
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	1.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	141.2
HCM 2010 LOS	F

Notes

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations															
Traffic Volume (veh/h)	10	440	900	533	30	320	920	220	10	238	596	170	90	1239	330
Future Volume (veh/h)	10	440	900	533	30	320	920	220	10	238	596	170	90	1239	330
Number		3	8	18		7	4	14		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		0.99		1.00		0.98		1.00		1.00	1.00		0.99
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		478	978	579		348	1000	239		259	648	185	98	1347	359
Adj No. of Lanes		2	3	0		2	3	1		2	3	1	2	3	0
Peak Hour Factor		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2		2	2	2		2	2	2	2	2	2
Cap, veh/h		524	1023	471		392	1341	411		307	1944	604	143	1335	355
Arrive On Green		0.15	0.30	0.30		0.11	0.26	0.26		0.09	0.38	0.38	0.04	0.33	0.33
Sat Flow, veh/h		3442	3390	1560		3442	5085	1558		3442	5085	1580	3442	3989	1060
Grp Volume(v), veh/h		478	978	579		348	1000	239		259	648	185	98	1144	562
Grp Sat Flow(s),veh/h/ln		1721	1695	1560		1721	1695	1558		1721	1695	1580	1721	1695	1659
Q Serve(g_s), s		19.1	39.6	42.2		13.9	25.2	18.7		10.4	12.6	11.5	3.9	46.8	46.8
Cycle Q Clear(g_c), s		19.1	39.6	42.2		13.9	25.2	18.7		10.4	12.6	11.5	3.9	46.8	46.8
Prop In Lane		1.00		1.00		1.00		1.00		1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h		524	1023	471		392	1341	411		307	1944	604	143	1135	555
V/C Ratio(X)		0.91	0.96	1.23		0.89	0.75	0.58		0.84	0.33	0.31	0.69	1.01	1.01
Avail Cap(c_a), veh/h		613	1023	471		396	1341	411		431	2015	626	219	1135	555
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		58.3	47.9	48.8		61.0	47.2	44.8		62.7	30.6	30.2	66.1	46.5	46.5
Incr Delay (d2), s/veh		15.3	18.2	120.7		20.0	2.1	1.4		7.7	0.0	0.1	2.2	28.8	41.1
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		10.2	21.1	33.8		7.7	12.0	8.2		5.3	5.9	5.0	1.9	26.3	27.6
LnGrp Delay(d),s/veh		73.6	66.1	169.5		81.0	49.2	46.2		70.4	30.6	30.3	68.2	75.2	87.6
LnGrp LOS		E	E	F		F	D	D		E	C	C	E	F	F
Approach Vol, veh/h			2035				1587				1092			1804	
Approach Delay, s/veh			97.3				55.8				40.0			78.7	
Approach LOS			F				E				D			E	

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	18.0	52.4	26.8	42.7	11.3	59.0	21.4	48.0
Change Period (Y+Rc), s	5.5	* 5.6	5.5	5.8	5.5	* 5.6	5.5	5.8
Max Green Setting (Gmax), s	12.5	* 47	24.9	33.4	8.9	* 55	16.1	42.2
Max Q Clear Time (g_c+I1), s	12.4	48.8	21.1	27.2	5.9	14.6	15.9	44.2
Green Ext Time (p_c), s	0.1	0.0	0.2	1.7	0.0	1.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	72.4
HCM 2010 LOS	E

Notes

Movement	EBL2	EBL	EBT	EBR	WBR	WBR2	NBT	NBR	NBR2	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	690	10	120	1136	910	140	1936	490	10	1283	170
Future Volume (vph)	690	10	120	1136	910	140	1936	490	10	1283	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8	6.8	4.5		4.6			4.6	4.0
Lane Util. Factor		0.91	0.86	0.91	0.88		0.86			0.91	1.00
Frpb, ped/bikes		1.00	0.99	0.98	1.00		1.00			1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00			1.00	1.00
Frt		1.00	0.88	0.85	0.85		0.97			1.00	0.85
Flt Protected		0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)		1610	2770	1415	2787		6180			5085	1545
Flt Permitted		0.95	1.00	1.00	1.00		1.00			1.00	1.00
Satd. Flow (perm)		1610	2770	1415	2787		6180			5085	1545
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	750	11	130	1235	989	152	2104	533	11	1395	185
RTOR Reduction (vph)	0	0	31	38	59	0	1	0	0	0	0
Lane Group Flow (vph)	0	751	727	579	1082	0	2647	0	0	1395	185
Confl. Peds. (#/hr)	6	6		6	3	3		3	3		6
Confl. Bikes (#/hr)								2	2		3
Turn Type	Split	Split	NA	Perm	Prot		NA			NA	Free
Protected Phases	4	4	4		5		6			2	
Permitted Phases				4							Free
Actuated Green, G (s)		37.2	37.2	37.2	26.5		40.4			71.4	120.0
Effective Green, g (s)		37.2	37.2	37.2	26.5		40.4			71.4	120.0
Actuated g/C Ratio		0.31	0.31	0.31	0.22		0.34			0.60	1.00
Clearance Time (s)		6.8	6.8	6.8	4.5		4.6			4.6	
Vehicle Extension (s)		1.0	1.0	1.0	3.0		1.0			1.0	
Lane Grp Cap (vph)		499	858	438	615		2080			3025	1545
v/s Ratio Prot		c0.47	0.26		c0.39		c0.43			0.27	
v/s Ratio Perm				0.41							0.12
v/c Ratio		1.51	1.31dr	1.32	1.76		1.27			0.46	0.12
Uniform Delay, d1		41.4	38.7	41.4	46.8		39.8			13.6	0.0
Progression Factor		1.00	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2		237.5	7.5	160.2	348.2		126.7			0.0	0.2
Delay (s)		278.9	46.2	201.6	395.0		166.5			13.6	0.2
Level of Service		F	D	F	F		F			B	A
Approach Delay (s)			173.5				166.5			12.0	
Approach LOS			F				F			B	

Intersection Summary			
HCM 2000 Control Delay	170.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	115.4%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Volume (veh/h)	40	530	1340	430	10	350	690	40	70	462	1110	340	40	220	1455	170
Future Volume (veh/h)	40	530	1340	430	10	350	690	40	70	462	1110	340	40	220	1455	170
Number		3	8	18		7	4	14		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		0.98		1.00		1.00		1.00		0.99		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		1676	1676	1676		1676	1676	1676		1676	1676	1676		1676	1676	1676
Adj Flow Rate, veh/h		576	1457	467		380	750	43		502	1207	370		239	1582	185
Adj No. of Lanes		2	2	1		2	3	1		2	3	1		2	3	1
Peak Hour Factor		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2		2	2	2		2	2	2		2	2	2
Cap, veh/h		613	1098	484		267	1067	331		374	1472	452		279	1332	408
Arrive On Green		0.20	0.34	0.34		0.09	0.23	0.23		0.12	0.32	0.32		0.09	0.29	0.29
Sat Flow, veh/h		3097	3185	1403		3097	4577	1420		3097	4577	1404		3097	4577	1401
Grp Volume(v), veh/h		576	1457	467		380	750	43		502	1207	370		239	1582	185
Grp Sat Flow(s),veh/h/ln		1549	1593	1403		1549	1526	1420		1549	1526	1404		1549	1526	1401
Q Serve(g_s), s		26.6	50.0	47.4		12.5	21.8	3.5		17.5	35.2	35.2		11.0	42.2	15.6
Cycle Q Clear(g_c), s		26.6	50.0	47.4		12.5	21.8	3.5		17.5	35.2	35.2		11.0	42.2	15.6
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		613	1098	484		267	1067	331		374	1472	452		279	1332	408
V/C Ratio(X)		0.94	1.33	0.97		1.42	0.70	0.13		1.34	0.82	0.82		0.86	1.19	0.45
Avail Cap(c_a), veh/h		641	1098	484		267	1067	331		374	1472	452		303	1332	408
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		57.3	47.5	46.7		66.3	51.0	44.0		63.7	45.3	45.3		65.1	51.4	42.0
Incr Delay (d2), s/veh		21.1	153.3	32.4		210.9	3.3	0.6		171.3	4.2	12.5		18.3	92.3	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		13.2	45.4	22.6		13.2	9.5	1.4		16.4	15.4	15.2		5.4	29.1	6.2
LnGrp Delay(d),s/veh		78.4	200.8	79.1		277.1	54.3	44.6		235.0	49.5	57.8		83.4	143.7	43.6
LnGrp LOS		E	F	E		F	D	D		F	D	E		F	F	D
Approach Vol, veh/h			2500				1173				2079				2006	
Approach Delay, s/veh			149.9				126.1				95.8				127.3	
Approach LOS			F				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	23.0	48.0	34.2	39.8	18.6	52.4	18.0	56.0
Change Period (Y+Rc), s	5.5	* 5.8	5.5	6.0	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	17.5	* 42	30.0	32.5	14.2	* 46	12.5	50.0
Max Q Clear Time (g_c+I1), s	19.5	44.2	28.6	23.8	13.0	37.2	14.5	52.0
Green Ext Time (p_c), s	0.0	0.0	0.1	5.4	0.0	7.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	125.9
HCM 2010 LOS	F

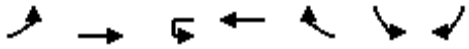
Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	130	40	316	60	20	60	30	364	2638	20	60	2526	120
Future Volume (veh/h)	130	40	316	60	20	60	30	364	2638	20	60	2526	120
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		0.99	1.00		1.00		1.00		1.00	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	1900	1863	1863	1863	1863	1900		1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	141	162	264	65	22	65		396	2867	22	65	2746	130
Adj No. of Lanes	0	1	1	1	1	0		2	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2	2
Cap, veh/h	164	188	304	132	31	91		308	2595	20	83	2306	699
Arrive On Green	0.19	0.19	0.19	0.07	0.07	0.07		0.09	0.50	0.50	0.05	0.45	0.45
Sat Flow, veh/h	847	973	1573	1774	415	1226		3442	5206	40	1774	5085	1542
Grp Volume(v), veh/h	303	0	264	65	0	87		396	1865	1024	65	2746	130
Grp Sat Flow(s),veh/h/ln	1820	0	1573	1774	0	1641		1721	1695	1856	1774	1695	1542
Q Serve(g_s), s	17.8	0.0	18.0	3.9	0.0	5.7		9.9	55.2	55.2	4.0	50.2	5.6
Cycle Q Clear(g_c), s	17.8	0.0	18.0	3.9	0.0	5.7		9.9	55.2	55.2	4.0	50.2	5.6
Prop In Lane	0.47		1.00	1.00		0.75		1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	352	0	304	132	0	122		308	1690	925	83	2306	699
V/C Ratio(X)	0.86	0.00	0.87	0.49	0.00	0.71		1.29	1.10	1.11	0.78	1.19	0.19
Avail Cap(c_a), veh/h	526	0	455	513	0	474		308	1690	925	179	2306	699
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	43.2	0.0	43.3	49.2	0.0	50.1		50.4	27.8	27.8	52.2	30.3	18.1
Incr Delay (d2), s/veh	6.4	0.0	7.9	1.1	0.0	2.9		151.4	55.9	63.5	5.8	90.5	0.0
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	9.6	0.0	8.5	2.0	0.0	2.7		11.1	38.7	44.3	2.1	42.6	2.4
LnGrp Delay(d),s/veh	49.6	0.0	51.2	50.3	0.0	53.0		201.8	83.6	91.3	58.0	120.8	18.1
LnGrp LOS	D		D	D		D		F	F	F	E	F	B
Approach Vol, veh/h		567			152				3285			2941	
Approach Delay, s/veh		50.3			51.8				100.3			114.8	
Approach LOS		D			D				F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	55.1		26.9	10.0	60.1		13.7
Change Period (Y+Rc), s	* 5.1	* 4.9		5.5	* 4.8	* 4.9		5.5
Max Green Setting (Gmax), s	* 9.9	* 50		32.0	* 11	* 49		32.0
Max Q Clear Time (g_c+I1), s	11.9	52.2		20.0	6.0	57.2		7.7
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	0.0		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		101.3
HCM 2010 LOS		F

Notes



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	896	1464	0	1043	120	50	786
Future Volume (veh/h)	896	1464	0	1043	120	50	786
Number	1	6		2	12	3	18
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		1863	1863	1863	1863
Adj Flow Rate, veh/h	974	1591		1134	130	54	854
Adj No. of Lanes	2	2		2	1	1	1
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	1036	2314		1041	466	370	330
Arrive On Green	0.30	0.65		0.29	0.29	0.21	0.21
Sat Flow, veh/h	3442	3632		3632	1583	1774	1583
Grp Volume(v), veh/h	974	1591		1134	130	54	854
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1583	1774	1583
Q Serve(g_s), s	24.5	25.1		26.1	5.6	2.2	18.5
Cycle Q Clear(g_c), s	24.5	25.1		26.1	5.6	2.2	18.5
Prop In Lane	1.00				1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1036	2314		1041	466	370	330
V/C Ratio(X)	0.94	0.69		1.09	0.28	0.15	2.59
Avail Cap(c_a), veh/h	1086	2314		1041	466	370	330
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	30.2	9.7		31.3	24.1	28.6	35.1
Incr Delay (d2), s/veh	14.4	0.7		55.3	0.1	0.1	722.4
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	12.2		20.6	2.5	1.1	74.4
LnGrp Delay(d),s/veh	44.6	10.4		86.6	24.2	28.7	757.5
LnGrp LOS	D	B		F	C	C	F
Approach Vol, veh/h		2565		1264		908	
Approach Delay, s/veh		23.4		80.2		714.2	
Approach LOS		C		F		F	

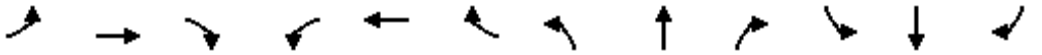
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	31.9	32.8				64.7		24.0
Change Period (Y+Rc), s	* 5.2	* 6.7				* 6.7		5.5
Max Green Setting (Gmax), s	* 28	* 26				* 50		18.5
Max Q Clear Time (g_c+I1), s	26.5	28.1				27.1		20.5
Green Ext Time (p_c), s	0.2	0.0				3.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	171.0
HCM 2010 LOS	F

Notes

Appendix C

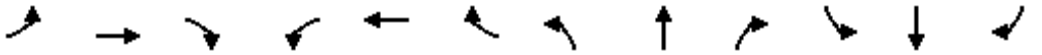
Analysis Worksheets for Existing (2017) plus Proposed Project Mitigated Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	325	4	5	461	1	9	142	31	0	2	12
Future Volume (veh/h)	59	325	4	5	461	1	9	142	31	0	2	12
Number	5	2	12	1	6	16	7	4	14	3	8	18
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	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	65	357	4	5	501	1	13	203	44	0	3	17
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.70	0.70	0.70	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	684	8	12	594	1	18	286	260	0	185	157
Arrive On Green	0.06	0.37	0.37	0.01	0.32	0.32	0.16	0.16	0.16	0.00	0.10	0.10
Sat Flow, veh/h	1774	1839	21	1774	1858	4	112	1745	1583	0	1863	1583
Grp Volume(v), veh/h	65	0	361	5	0	502	216	0	44	0	3	17
Grp Sat Flow(s),veh/h/ln	1774	0	1859	1774	0	1862	1857	0	1583	0	1863	1583
Q Serve(g_s), s	1.8	0.0	7.6	0.1	0.0	12.6	5.5	0.0	1.2	0.0	0.1	0.5
Cycle Q Clear(g_c), s	1.8	0.0	7.6	0.1	0.0	12.6	5.5	0.0	1.2	0.0	0.1	0.5
Prop In Lane	1.00		0.01	1.00		0.00	0.06		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	105	0	692	12	0	595	305	0	260	0	185	157
V/C Ratio(X)	0.62	0.00	0.52	0.42	0.00	0.84	0.71	0.00	0.17	0.00	0.02	0.11
Avail Cap(c_a), veh/h	176	0	776	176	0	777	664	0	567	0	666	567
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	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	12.3	24.9	0.0	15.9	19.9	0.0	18.1	0.0	20.4	20.6
Incr Delay (d2), s/veh	5.8	0.0	0.6	21.9	0.0	6.6	3.0	0.0	0.3	0.0	0.0	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	1.1	0.0	3.9	0.1	0.0	7.5	3.1	0.0	0.5	0.0	0.0	0.2
LnGrp Delay(d),s/veh	28.9	0.0	12.9	46.7	0.0	22.6	22.9	0.0	18.4	0.0	20.5	20.9
LnGrp LOS	C		B	D		C	C		B		C	C
Approach Vol, veh/h		426			507			260			20	
Approach Delay, s/veh		15.4			22.8			22.2			20.9	
Approach LOS		B			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	4.8	23.2		12.8	7.5	20.6		9.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	21.0		18.0	5.0	21.0		18.0
Max Q Clear Time (g_c+I1), s	2.1	9.6		7.5	3.8	14.6		2.5
Green Ext Time (p_c), s	0.0	1.4		0.9	0.0	1.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	695	403	8	0	320	8	7	33	5	3	9	351
Future Volume (veh/h)	695	403	8	0	320	8	7	33	5	3	9	351
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.98	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	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	709	411	0	0	438	11	7	34	5	0	0	430
Adj No. of Lanes	1	1	1	1	1	0	0	1	0	0	1	2
Peak Hour Factor	0.98	0.98	0.98	0.73	0.73	0.73	0.98	0.98	0.98	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	725	1300	1105	1	452	11	10	49	7	0	278	472
Arrive On Green	0.41	0.70	0.00	0.00	0.25	0.25	0.04	0.04	0.04	0.00	0.00	0.15
Sat Flow, veh/h	1774	1863	1583	1774	1809	45	275	1338	197	0	1863	3167
Grp Volume(v), veh/h	709	411	0	0	0	449	46	0	0	0	0	430
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1855	1810	0	0	0	1863	1583
Q Serve(g_s), s	54.4	11.8	0.0	0.0	0.0	33.1	3.5	0.0	0.0	0.0	0.0	18.5
Cycle Q Clear(g_c), s	54.4	11.8	0.0	0.0	0.0	33.1	3.5	0.0	0.0	0.0	0.0	18.5
Prop In Lane	1.00		1.00	1.00		0.02	0.15		0.11	0.00		1.00
Lane Grp Cap(c), veh/h	725	1300	1105	1	0	464	67	0	0	0	278	472
V/C Ratio(X)	0.98	0.32	0.00	0.00	0.00	0.97	0.69	0.00	0.00	0.00	0.00	0.91
Avail Cap(c_a), veh/h	726	1300	1105	51	0	464	67	0	0	0	302	514
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	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	40.2	8.1	0.0	0.0	0.0	51.2	65.7	0.0	0.0	0.0	0.0	57.8
Incr Delay (d2), s/veh	27.9	0.1	0.0	0.0	0.0	33.5	21.9	0.0	0.0	0.0	0.0	18.7
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	32.2	6.1	0.0	0.0	0.0	21.3	2.1	0.0	0.0	0.0	0.0	9.3
LnGrp Delay(d),s/veh	68.1	8.1	0.0	0.0	0.0	84.7	87.5	0.0	0.0	0.0	0.0	76.5
LnGrp LOS	E	A				F	F					E
Approach Vol, veh/h		1120			449			46			430	
Approach Delay, s/veh		46.1			84.7			87.5			76.5	
Approach LOS		D			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	61.9	40.5		26.2	0.0	102.4		9.5
Change Period (Y+Rc), s	5.5	6.0		* 5.6	5.5	* 6		4.4
Max Green Setting (Gmax), s	56.5	34.5		* 22	4.0	* 87		5.1
Max Q Clear Time (g_c+I1), s	56.4	35.1		20.5	0.0	13.8		5.5
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.6		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		61.9
HCM 2010 LOS		E

Notes

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (veh/h)	45	110	168	83	1	149	301	139	42	321	1449	111
Future Volume (veh/h)	45	110	168	83	1	149	301	139	42	321	1449	111
Number		3	8	18		7	4	14		1	6	16
Initial Q (Qb), veh		0	0	0		0	0	0		0	0	0
Ped-Bike Adj(A_pbT)		1.00		0.98		1.00		0.99		1.00		0.99
Parking Bus, Adj		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1676	1676	1676		1676	1676	1676		1676	1676	1676
Adj Flow Rate, veh/h		118	181	89		159	320	148		349	1575	121
Adj No. of Lanes		2	2	1		2	3	1		2	3	1
Peak Hour Factor		0.93	0.93	0.93		0.94	0.94	0.94		0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2		2	2	2		2	2	2
Cap, veh/h		167	488	214		211	765	237		400	2223	683
Arrive On Green		0.05	0.15	0.15		0.07	0.17	0.17		0.13	0.49	0.49
Sat Flow, veh/h		3097	3185	1396		3097	4577	1417		3097	4577	1406
Grp Volume(v), veh/h		118	181	89		159	320	148		349	1575	121
Grp Sat Flow(s),veh/h/ln		1549	1593	1396		1549	1526	1417		1549	1526	1406
Q Serve(g_s), s		4.3	5.9	6.6		5.8	7.2	11.2		12.7	31.1	5.6
Cycle Q Clear(g_c), s		4.3	5.9	6.6		5.8	7.2	11.2		12.7	31.1	5.6
Prop In Lane		1.00		1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h		167	488	214		211	765	237		400	2223	683
V/C Ratio(X)		0.71	0.37	0.42		0.75	0.42	0.62		0.87	0.71	0.18
Avail Cap(c_a), veh/h		524	1770	776		524	1351	418		524	2559	786
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		53.6	43.8	44.1		52.7	43.0	44.6		49.2	23.2	16.7
Incr Delay (d2), s/veh		2.0	1.0	2.6		2.1	1.3	8.9		10.1	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
%ile BackOfQ(50%),veh/ln		1.9	2.7	2.7		2.6	3.1	5.0		6.0	13.2	2.2
LnGrp Delay(d),s/veh		55.6	44.7	46.7		54.8	44.2	53.5		59.3	24.3	16.9
LnGrp LOS		E	D	D		D	D	D		E	C	B
Approach Vol, veh/h			388				627				2045	
Approach Delay, s/veh			48.5				49.1				29.9	
Approach LOS			D				D				C	

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	20.4	57.8	11.7	25.2	16.5	61.7	13.3	23.6
Change Period (Y+Rc), s	5.5	* 5.8	5.5	6.0	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	19.5	* 64	19.5	34.0	19.5	* 64	19.5	64.0
Max Q Clear Time (g_c+I1), s	14.7	23.3	6.3	13.2	10.9	33.1	7.8	8.6
Green Ext Time (p_c), s	0.1	21.9	0.1	5.5	0.1	22.8	0.1	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.2
HCM 2010 LOS	C

Notes

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (veh/h)	21	224	1021	326
Future Volume (veh/h)	21	224	1021	326
Number		5	2	12
Initial Q (Qb), veh		0	0	0
Ped-Bike Adj(A_pbT)		1.00		0.98
Parking Bus, Adj		1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1676	1676	1676
Adj Flow Rate, veh/h		243	1110	354
Adj No. of Lanes		2	3	1
Peak Hour Factor		0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2
Cap, veh/h		295	2068	634
Arrive On Green		0.10	0.45	0.45
Sat Flow, veh/h		3097	4577	1403
Grp Volume(v), veh/h		243	1110	354
Grp Sat Flow(s),veh/h/ln		1549	1526	1403
Q Serve(g_s), s		8.9	20.2	21.3
Cycle Q Clear(g_c), s		8.9	20.2	21.3
Prop In Lane		1.00		1.00
Lane Grp Cap(c), veh/h		295	2068	634
V/C Ratio(X)		0.82	0.54	0.56
Avail Cap(c_a), veh/h		524	2551	782
HCM Platoon Ratio		1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00
Uniform Delay (d), s/veh		51.2	22.8	23.1
Incr Delay (d2), s/veh		2.2	0.4	1.6
Initial Q Delay(d3),s/veh		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.9	8.6	8.5
LnGrp Delay(d),s/veh		53.4	23.3	24.7
LnGrp LOS		D	C	C
Approach Vol, veh/h			1707	
Approach Delay, s/veh			27.9	
Approach LOS			C	
Timer				

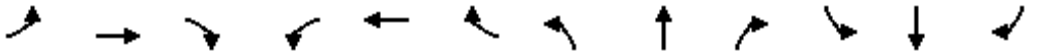
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	112	13	245	34	25	39	34	273	2450	20	36	3322
Future Volume (veh/h)	112	13	245	34	25	39	34	273	2450	20	36	3322
Number	7	4	14	3	8	18		1	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900		1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	129	15	282	43	32	49		281	2526	21	39	3572
Adj No. of Lanes	1	1	0	1	1	0		2	3	0	1	3
Peak Hour Factor	0.87	0.87	0.87	0.79	0.79	0.79		0.97	0.97	0.97	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	142	16	293	57	97	149		262	3445	29	49	3116
Arrive On Green	0.08	0.19	0.19	0.03	0.15	0.15		0.08	0.66	0.66	0.03	0.61
Sat Flow, veh/h	1774	80	1506	1774	664	1017		3442	5202	43	1774	5085
Grp Volume(v), veh/h	129	0	297	43	0	81		281	1645	902	39	3572
Grp Sat Flow(s),veh/h/ln	1774	0	1586	1774	0	1681		1721	1695	1855	1774	1695
Q Serve(g_s), s	17.9	0.0	46.1	6.0	0.0	10.7		18.9	78.9	79.3	5.4	152.0
Cycle Q Clear(g_c), s	17.9	0.0	46.1	6.0	0.0	10.7		18.9	78.9	79.3	5.4	152.0
Prop In Lane	1.00		0.95	1.00		0.60		1.00		0.02	1.00	
Lane Grp Cap(c), veh/h	142	0	308	57	0	246		262	2245	1229	49	3116
V/C Ratio(X)	0.91	0.00	0.96	0.75	0.00	0.33		1.07	0.73	0.73	0.79	1.15
Avail Cap(c_a), veh/h	187	0	317	62	0	246		262	2245	1229	86	3116
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
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
Uniform Delay (d), s/veh	113.1	0.0	99.1	119.1	0.0	95.0		114.6	27.5	27.5	119.8	48.0
Incr Delay (d2), s/veh	30.2	0.0	40.0	32.5	0.0	0.3		75.8	1.1	2.0	9.8	70.1
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
%ile BackOfQ(50%),veh/ln	10.0	0.0	23.6	3.5	0.0	5.0		11.8	37.1	41.3	2.8	91.2
LnGrp Delay(d),s/veh	143.4	0.0	139.1	151.5	0.0	95.3		190.4	28.6	29.6	129.7	118.1
LnGrp LOS	F		F	F		F		F	C	C	F	F
Approach Vol, veh/h		426			124				2828			3696
Approach Delay, s/veh		140.4			114.8				45.0			116.0
Approach LOS		F			F				D			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	24.0	156.9	13.5	53.7	11.7	169.2	25.4	41.7
Change Period (Y+Rc), s	* 5.1	* 4.9	5.5	5.5	* 4.8	* 4.9	5.5	5.5
Max Green Setting (Gmax), s	* 19	* 1.5E2	8.7	49.5	* 12	* 1.6E2	26.2	32.0
Max Q Clear Time (g_c+I1), s	20.9	154.0	8.0	48.1	7.4	81.3	19.9	12.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	8.4	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	89.0
HCM 2010 LOS	F

Notes

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	79
Future Volume (veh/h)	79
Number	12
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.98
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1863
Adj Flow Rate, veh/h	85
Adj No. of Lanes	1
Peak Hour Factor	0.93
Percent Heavy Veh, %	2
Cap, veh/h	947
Arrive On Green	0.61
Sat Flow, veh/h	1545
Grp Volume(v), veh/h	85
Grp Sat Flow(s),veh/h/ln	1545
Q Serve(g_s), s	5.6
Cycle Q Clear(g_c), s	5.6
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	947
V/C Ratio(X)	0.09
Avail Cap(c_a), veh/h	947
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	19.7
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	2.4
LnGrp Delay(d),s/veh	19.7
LnGrp LOS	B
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	553	0	15	315	2	4	6	1	0	158	115
Future Volume (veh/h)	19	553	0	15	315	2	4	6	1	0	158	115
Number	5	2	12	1	6	16	7	4	14	3	8	18
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	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	20	595	0	19	399	3	6	9	1	0	216	158
Adj No. of Lanes	1	1	0	1	1	0	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.79	0.79	0.79	0.70	0.70	0.70	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	730	0	42	722	5	15	22	32	0	331	282
Arrive On Green	0.02	0.39	0.00	0.02	0.39	0.39	0.02	0.02	0.02	0.00	0.18	0.18
Sat Flow, veh/h	1774	1863	0	1774	1846	14	730	1096	1583	0	1863	1583
Grp Volume(v), veh/h	20	595	0	19	0	402	15	0	1	0	216	158
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	0	1860	1826	0	1583	0	1863	1583
Q Serve(g_s), s	0.5	13.3	0.0	0.5	0.0	7.8	0.4	0.0	0.0	0.0	5.0	4.2
Cycle Q Clear(g_c), s	0.5	13.3	0.0	0.5	0.0	7.8	0.4	0.0	0.0	0.0	5.0	4.2
Prop In Lane	1.00		0.00	1.00		0.01	0.40		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	43	730	0	42	0	727	37	0	32	0	331	282
V/C Ratio(X)	0.46	0.82	0.00	0.46	0.00	0.55	0.41	0.00	0.03	0.00	0.65	0.56
Avail Cap(c_a), veh/h	191	1241	0	191	0	1239	706	0	612	0	721	612
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	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	12.6	0.0	22.4	0.0	11.0	22.5	0.0	22.4	0.0	17.8	17.5
Incr Delay (d2), s/veh	7.4	2.3	0.0	7.7	0.0	0.7	7.2	0.0	0.4	0.0	2.2	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	0.3	7.2	0.0	0.3	0.0	4.0	0.3	0.0	0.0	0.0	2.8	2.0
LnGrp Delay(d),s/veh	29.8	14.9	0.0	30.1	0.0	11.7	29.7	0.0	22.8	0.0	20.0	19.2
LnGrp LOS	C	B		C		B	C		C		B	B
Approach Vol, veh/h		615			421			16			374	
Approach Delay, s/veh		15.4			12.5			29.2			19.6	
Approach LOS		B			B			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	5.6	22.7		5.4	5.6	22.7		12.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	31.0		18.0	5.0	31.0		18.0
Max Q Clear Time (g_c+I1), s	2.5	15.3		2.4	2.5	9.8		7.0
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	2.0		1.3

Intersection Summary		
HCM 2010 Ctrl Delay		15.8
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	352	7	1	443	9	7	16	1	11	35	764
Future Volume (veh/h)	271	352	7	1	443	9	7	16	1	11	35	764
Number	1	6	16	5	2	12	3	8	18	7	4	14
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		0.98	1.00		1.00	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	1863	1863	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	291	378	0	1	461	9	8	19	1	0	0	860
Adj No. of Lanes	1	1	1	1	1	0	0	1	0	0	1	2
Peak Hour Factor	0.93	0.93	0.93	0.96	0.96	0.96	0.85	0.85	0.85	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	838	712	2	500	10	20	49	3	0	464	1329
Arrive On Green	0.18	0.45	0.00	0.00	0.27	0.27	0.04	0.04	0.04	0.00	0.00	0.25
Sat Flow, veh/h	1774	1863	1583	1774	1820	36	521	1239	65	0	1863	3099
Grp Volume(v), veh/h	291	378	0	1	0	470	28	0	0	0	0	860
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	0	1856	1825	0	0	0	1863	1549
Q Serve(g_s), s	13.3	11.5	0.0	0.0	0.0	20.3	1.2	0.0	0.0	0.0	0.0	18.2
Cycle Q Clear(g_c), s	13.3	11.5	0.0	0.0	0.0	20.3	1.2	0.0	0.0	0.0	0.0	18.2
Prop In Lane	1.00		1.00	1.00		0.02	0.29		0.04	0.00		1.00
Lane Grp Cap(c), veh/h	312	838	712	2	0	510	72	0	0	0	464	1329
V/C Ratio(X)	0.93	0.45	0.00	0.46	0.00	0.92	0.39	0.00	0.00	0.00	0.00	0.65
Avail Cap(c_a), veh/h	312	841	715	86	0	597	113	0	0	0	506	1400
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	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	33.5	15.6	0.0	41.1	0.0	29.0	38.6	0.0	0.0	0.0	0.0	18.8
Incr Delay (d2), s/veh	33.2	0.1	0.0	48.3	0.0	17.1	1.3	0.0	0.0	0.0	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	9.4	5.9	0.0	0.1	0.0	12.7	0.6	0.0	0.0	0.0	0.0	7.8
LnGrp Delay(d),s/veh	66.6	15.8	0.0	89.4	0.0	46.2	39.9	0.0	0.0	0.0	0.0	19.6
LnGrp LOS	E	B		F		D	D					B
Approach Vol, veh/h		669			471			28			860	
Approach Delay, s/veh		37.9			46.2			39.9			19.6	
Approach LOS		D			D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.0	28.6		26.1	5.6	43.1		7.6
Change Period (Y+Rc), s	5.5	6.0		* 5.6	5.5	* 6		4.4
Max Green Setting (Gmax), s	14.5	26.5		* 22	4.0	* 37		5.1
Max Q Clear Time (g_c+I1), s	15.3	22.3		20.2	2.0	13.5		3.2
Green Ext Time (p_c), s	0.0	0.4		0.3	0.0	0.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	305	457	139	107	104	182	849	112	246	2090	124
Future Volume (veh/h)	63	305	457	139	107	104	182	849	112	246	2090	124
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		0.99	1.00		0.99	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	66	318	476	170	130	127	200	933	123	270	2297	136
Adj No. of Lanes	2	3	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.96	0.96	0.96	0.82	0.82	0.82	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	1205	489	186	921	407	248	2185	672	319	2290	713
Arrive On Green	0.03	0.24	0.24	0.05	0.26	0.26	0.07	0.43	0.43	0.09	0.45	0.45
Sat Flow, veh/h	3442	5085	1583	3442	3539	1563	3442	5085	1564	3442	5085	1583
Grp Volume(v), veh/h	66	318	476	170	130	127	200	933	123	270	2297	136
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1721	1770	1563	1721	1695	1564	1721	1695	1583
Q Serve(g_s), s	2.6	6.9	32.0	6.6	3.8	8.8	7.7	17.3	6.6	10.4	60.8	7.0
Cycle Q Clear(g_c), s	2.6	6.9	32.0	6.6	3.8	8.8	7.7	17.3	6.6	10.4	60.8	7.0
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	106	1205	489	186	921	407	248	2185	672	319	2290	713
V/C Ratio(X)	0.62	0.26	0.97	0.91	0.14	0.31	0.81	0.43	0.18	0.85	1.00	0.19
Avail Cap(c_a), veh/h	150	1205	489	186	921	407	250	2185	672	433	2290	713
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	64.6	41.9	46.1	63.5	38.4	40.2	61.7	26.9	23.8	60.3	37.1	22.3
Incr Delay (d2), s/veh	2.2	0.0	33.5	41.6	0.0	0.2	16.2	0.0	0.0	8.5	19.6	0.0
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	1.3	3.2	22.0	4.2	1.9	3.8	4.2	8.1	2.8	5.3	32.6	3.0
LnGrp Delay(d),s/veh	66.8	42.0	79.6	105.1	38.4	40.4	77.9	26.9	23.9	68.8	56.7	22.4
LnGrp LOS	E	D	E	F	D	D	E	C	C	E	F	C
Approach Vol, veh/h		860			427			1256			2703	
Approach Delay, s/veh		64.7			65.6			34.8			56.2	
Approach LOS		E			E			C			E	

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	18.0	65.4	12.8	38.8	15.2	68.2	9.7	41.9
Change Period (Y+Rc), s	5.5	* 7.4	5.5	* 6.8	5.5	* 7.4	5.5	6.8
Max Green Setting (Gmax), s	17.0	* 54	7.3	* 32	9.8	* 61	5.9	33.3
Max Q Clear Time (g_c+I1), s	12.4	19.3	8.6	34.0	9.7	62.8	4.6	10.8
Green Ext Time (p_c), s	0.1	2.0	0.0	0.0	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	53.2
HCM 2010 LOS	D

Notes

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (veh/h)	35	251	565	258	11	248	297	213	71	226	1037	216
Future Volume (veh/h)	35	251	565	258	11	248	297	213	71	226	1037	216
Number		3	8	18		7	4	14		1	6	16
Initial Q (Qb), veh		0	0	0		0	0	0		0	0	0
Ped-Bike Adj(A_pbT)		1.00		0.99		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
Adj Sat Flow, veh/h/ln		1676	1676	1676		1676	1676	1676		1676	1676	1676
Adj Flow Rate, veh/h		295	665	304		306	367	263		248	1140	237
Adj No. of Lanes		2	2	1		2	3	1		2	3	1
Peak Hour Factor		0.85	0.85	0.85		0.81	0.81	0.81		0.91	0.91	0.91
Percent Heavy Veh, %		2	2	2		2	2	2		2	2	2
Cap, veh/h		340	763	339		335	1089	338		295	1684	522
Arrive On Green		0.11	0.24	0.24		0.11	0.24	0.24		0.10	0.37	0.37
Sat Flow, veh/h		3097	3185	1414		3097	4577	1421		3097	4577	1418
Grp Volume(v), veh/h		295	665	304		306	367	263		248	1140	237
Grp Sat Flow(s),veh/h/ln		1549	1593	1414		1549	1526	1421		1549	1526	1418
Q Serve(g_s), s		11.5	24.7	25.6		12.0	8.2	21.3		9.7	25.8	15.6
Cycle Q Clear(g_c), s		11.5	24.7	25.6		12.0	8.2	21.3		9.7	25.8	15.6
Prop In Lane		1.00		1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h		340	763	339		335	1089	338		295	1684	522
V/C Ratio(X)		0.87	0.87	0.90		0.91	0.34	0.78		0.84	0.68	0.45
Avail Cap(c_a), veh/h		340	781	347		335	1115	346		325	1684	522
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		53.9	45.0	45.3		54.3	38.9	43.9		54.8	32.8	29.5
Incr Delay (d2), s/veh		19.9	11.2	25.7		28.1	0.6	14.3		15.1	1.4	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
%ile BackOfQ(50%),veh/ln		5.9	12.1	12.4		6.4	3.5	9.7		4.8	11.1	6.3
LnGrp Delay(d),s/veh		73.8	56.1	71.0		82.4	39.5	58.1		69.9	34.2	30.8
LnGrp LOS		E	E	E		F	D	E		E	C	C
Approach Vol, veh/h			1264				936				1625	
Approach Delay, s/veh			63.8				58.8				39.1	
Approach LOS			E				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	17.2	51.6	19.0	35.3	17.7	51.1	18.8	35.5
Change Period (Y+Rc), s	5.5	* 5.8	5.5	6.0	5.5	* 5.8	5.5	6.0
Max Green Setting (Gmax), s	12.9	* 46	13.5	30.0	15.4	* 44	13.3	30.2
Max Q Clear Time (g_c+I1), s	11.7	47.6	13.5	23.3	12.2	27.8	14.0	27.6
Green Ext Time (p_c), s	0.0	0.0	0.0	3.4	0.1	11.1	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

Notes

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (veh/h)	36	226	1477	132
Future Volume (veh/h)	36	226	1477	132
Number		5	2	12
Initial Q (Qb), veh		0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1676	1676	1676
Adj Flow Rate, veh/h		260	1698	152
Adj No. of Lanes		2	3	1
Peak Hour Factor		0.87	0.87	0.87
Percent Heavy Veh, %		2	2	2
Cap, veh/h		308	1703	528
Arrive On Green		0.10	0.37	0.37
Sat Flow, veh/h		3097	4577	1418
Grp Volume(v), veh/h		260	1698	152
Grp Sat Flow(s),veh/h/ln		1549	1526	1418
Q Serve(g_s), s		10.2	45.6	9.3
Cycle Q Clear(g_c), s		10.2	45.6	9.3
Prop In Lane		1.00		1.00
Lane Grp Cap(c), veh/h		308	1703	528
V/C Ratio(X)		0.85	1.00	0.29
Avail Cap(c_a), veh/h		387	1703	528
HCM Platoon Ratio		1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00
Uniform Delay (d), s/veh		54.5	38.6	27.2
Incr Delay (d2), s/veh		10.9	21.2	0.6
Initial Q Delay(d3),s/veh		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		4.8	22.5	3.7
LnGrp Delay(d),s/veh		65.4	59.8	27.8
LnGrp LOS		E	E	C
Approach Vol, veh/h			2110	
Approach Delay, s/veh			58.2	
Approach LOS			E	
Timer				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	186	36	180	61	23	57	33	155	2687	23	2	62
Future Volume (veh/h)	186	36	180	61	23	57	33	155	2687	23	2	62
Number	7	4	14	3	8	18		1	6	16		5
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97		1.00		0.98		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900		1863	1863	1900		1863
Adj Flow Rate, veh/h	224	43	217	79	30	74		167	2889	25		68
Adj No. of Lanes	1	1	0	1	1	0		2	3	0		1
Peak Hour Factor	0.83	0.83	0.83	0.77	0.77	0.77		0.93	0.93	0.93		0.91
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2
Cap, veh/h	164	49	249	102	70	173		212	2949	25		86
Arrive On Green	0.09	0.19	0.19	0.06	0.15	0.15		0.06	0.57	0.57		0.05
Sat Flow, veh/h	1774	266	1344	1774	467	1152		3442	5199	45		1774
Grp Volume(v), veh/h	224	0	260	79	0	104		167	1881	1033		68
Grp Sat Flow(s),veh/h/ln	1774	0	1610	1774	0	1619		1721	1695	1854		1774
Q Serve(g_s), s	13.5	0.0	22.9	6.4	0.0	8.5		7.0	78.9	79.7		5.5
Cycle Q Clear(g_c), s	13.5	0.0	22.9	6.4	0.0	8.5		7.0	78.9	79.7		5.5
Prop In Lane	1.00		0.83	1.00		0.71		1.00		0.02		1.00
Lane Grp Cap(c), veh/h	164	0	298	102	0	244		212	1923	1052		86
V/C Ratio(X)	1.37	0.00	0.87	0.77	0.00	0.43		0.79	0.98	0.98		0.79
Avail Cap(c_a), veh/h	164	0	391	121	0	354		233	1923	1052		379
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	66.4	0.0	57.9	68.0	0.0	56.4		67.7	30.8	30.9		68.8
Incr Delay (d2), s/veh	199.4	0.0	12.9	18.2	0.0	0.4		13.3	15.6	23.5		6.0
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
%ile BackOfQ(50%),veh/ln	15.7	0.0	11.3	3.7	0.0	3.8		3.7	40.7	47.3		2.9
LnGrp Delay(d),s/veh	265.7	0.0	70.8	86.2	0.0	56.8		81.0	46.3	54.4		74.8
LnGrp LOS	F		E	F		E		F	D	D		E
Approach Vol, veh/h		484			183				3081			
Approach Delay, s/veh		161.0			69.5				50.9			
Approach LOS		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	14.1	85.6	13.9	32.6	11.9	87.8	19.0	27.5
Change Period (Y+Rc), s	* 5.1	* 4.9	5.5	5.5	* 4.8	* 4.9	5.5	5.5
Max Green Setting (Gmax), s	* 9.9	* 84	10.0	35.5	* 31	* 63	13.5	32.0
Max Q Clear Time (g_c+I1), s	9.0	75.0	8.4	24.9	7.5	81.7	15.5	10.5
Green Ext Time (p_c), s	0.0	5.7	0.0	0.5	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	54.5
HCM 2010 LOS	D

Notes

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	2440	96
Future Volume (veh/h)	2440	96
Number	2	12
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		0.99
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863
Adj Flow Rate, veh/h	2681	105
Adj No. of Lanes	3	1
Peak Hour Factor	0.91	0.91
Percent Heavy Veh, %	2	2
Cap, veh/h	2807	868
Arrive On Green	0.55	0.55
Sat Flow, veh/h	5085	1572
Grp Volume(v), veh/h	2681	105
Grp Sat Flow(s),veh/h/ln	1695	1572
Q Serve(g_s), s	73.0	4.7
Cycle Q Clear(g_c), s	73.0	4.7
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2807	868
V/C Ratio(X)	0.96	0.12
Avail Cap(c_a), veh/h	2911	900
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	1.00
Uniform Delay (d), s/veh	31.0	15.7
Incr Delay (d2), s/veh	8.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.2	2.0
LnGrp Delay(d),s/veh	39.3	15.7
LnGrp LOS	D	B
Approach Vol, veh/h	2854	
Approach Delay, s/veh	39.3	
Approach LOS	D	
Timer		

Appendix D

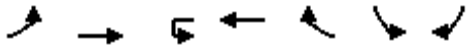
Analysis Worksheets for Cumulative (2040) plus Proposed Project Mitigated Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	624	30	30	1290	1092	80	130	50	287	10	90
Future Volume (veh/h)	490	624	30	30	1290	1092	80	130	50	287	10	90
Number	1	6	16	5	2	12	3	8	18	7	4	14
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	533	678	33	33	1402	0	87	141	54	312	11	98
Adj No. of Lanes	1	2	0	2	3	1	1	1	0	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	460	1917	93	61	1591	495	110	167	64	320	568	254
Arrive On Green	0.26	0.56	0.56	0.02	0.31	0.00	0.06	0.13	0.13	0.09	0.16	0.16
Sat Flow, veh/h	1774	3436	167	3442	5085	1583	1774	1284	492	3442	3539	1583
Grp Volume(v), veh/h	533	349	362	33	1402	0	87	0	195	312	11	98
Grp Sat Flow(s),veh/h/ln	1774	1770	1833	1721	1695	1583	1774	0	1776	1721	1770	1583
Q Serve(g_s), s	26.5	11.1	11.1	1.0	26.8	0.0	4.9	0.0	11.0	9.2	0.3	5.7
Cycle Q Clear(g_c), s	26.5	11.1	11.1	1.0	26.8	0.0	4.9	0.0	11.0	9.2	0.3	5.7
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	460	988	1023	61	1591	495	110	0	231	320	568	254
V/C Ratio(X)	1.16	0.35	0.35	0.54	0.88	0.00	0.79	0.00	0.85	0.98	0.02	0.39
Avail Cap(c_a), veh/h	460	1388	1437	168	2903	904	147	0	608	320	1235	553
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	12.4	12.4	49.8	33.3	0.0	47.3	0.0	43.5	46.3	36.2	38.4
Incr Delay (d2), s/veh	93.7	0.1	0.1	2.7	0.7	0.0	13.1	0.0	3.3	43.5	0.0	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	24.9	5.5	5.7	0.5	12.6	0.0	2.8	0.0	5.6	6.3	0.1	2.5
LnGrp Delay(d),s/veh	131.6	12.5	12.5	52.5	34.0	0.0	60.4	0.0	46.8	89.8	36.2	38.8
LnGrp LOS	F	B	B	D	C		E		D	F	D	D
Approach Vol, veh/h		1244			1435			282			421	
Approach Delay, s/veh		63.5			34.4			51.0			76.5	
Approach LOS		E			C			D			E	

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	32.0	36.9	11.9	21.5	6.9	62.0	15.0	18.4
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	26.5	* 58	8.5	* 36	* 5	* 80	9.5	* 35
Max Q Clear Time (g_c+I1), s	28.5	28.8	6.9	7.7	3.0	13.1	11.2	13.0
Green Ext Time (p_c), s	0.0	3.3	0.0	0.1	0.0	1.0	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	51.7
HCM 2010 LOS	D

Notes

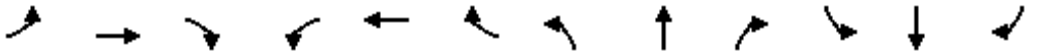


Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	874	1234	0	1318	110	50	619
Future Volume (veh/h)	874	1234	0	1318	110	50	619
Number	1	6		2	12	3	18
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863
Adj Flow Rate, veh/h	950	1341		1433	120	0	731
Adj No. of Lanes	2	2		2	1	1	2
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	964	2600		1441	645	274	1376
Arrive On Green	0.28	0.73		0.41	0.41	0.00	0.15
Sat Flow, veh/h	3442	3632		3632	1583	1774	3167
Grp Volume(v), veh/h	950	1341		1433	120	0	731
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1583	1774	1583
Q Serve(g_s), s	30.2	17.8		44.4	5.3	0.0	17.0
Cycle Q Clear(g_c), s	30.2	17.8		44.4	5.3	0.0	17.0
Prop In Lane	1.00				1.00	1.00	1.00
Lane Grp Cap(c), veh/h	964	2600		1441	645	274	1376
V/C Ratio(X)	0.99	0.52		0.99	0.19	0.00	0.53
Avail Cap(c_a), veh/h	964	2603		1441	645	274	1376
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	39.4	6.2		32.5	20.9	0.0	22.9
Incr Delay (d2), s/veh	25.4	0.1		22.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.8	8.6		25.9	2.3	0.0	8.2
LnGrp Delay(d),s/veh	64.8	6.3		54.7	21.0	0.0	23.1
LnGrp LOS	E	A		D	C		C
Approach Vol, veh/h		2291		1553		731	
Approach Delay, s/veh		30.6		52.1		23.1	
Approach LOS		C		D		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	36.0	51.5				87.5		22.5
Change Period (Y+Rc), s	* 5.2	* 6.7				* 6.7		5.5
Max Green Setting (Gmax), s	* 31	* 45				* 81		17.0
Max Q Clear Time (g_c+I1), s	32.2	46.4				19.8		19.0
Green Ext Time (p_c), s	0.0	0.0				3.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Notes

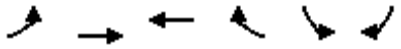


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1038	160	50	790	428	20	20	30	1039	140	490
Future Volume (veh/h)	110	1038	160	50	790	428	20	20	30	1039	140	490
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	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	1900	1863	1863	1863
Adj Flow Rate, veh/h	120	1128	174	54	859	0	22	22	33	1129	152	533
Adj No. of Lanes	1	2	0	2	3	1	1	1	0	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	1195	184	94	1675	522	27	34	52	1185	1346	602
Arrive On Green	0.08	0.39	0.39	0.03	0.33	0.00	0.01	0.05	0.05	0.34	0.38	0.38
Sat Flow, veh/h	1774	3076	473	3442	5085	1583	1774	674	1011	3442	3539	1583
Grp Volume(v), veh/h	120	648	654	54	859	0	22	0	55	1129	152	533
Grp Sat Flow(s),veh/h/ln	1774	1770	1779	1721	1695	1583	1774	0	1684	1721	1770	1583
Q Serve(g_s), s	7.3	38.5	38.8	1.7	14.9	0.0	1.3	0.0	3.5	34.9	3.0	34.3
Cycle Q Clear(g_c), s	7.3	38.5	38.8	1.7	14.9	0.0	1.3	0.0	3.5	34.9	3.0	34.3
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.60	1.00		1.00
Lane Grp Cap(c), veh/h	147	688	691	94	1675	522	27	0	86	1185	1346	602
V/C Ratio(X)	0.82	0.94	0.95	0.58	0.51	0.00	0.83	0.00	0.64	0.95	0.11	0.89
Avail Cap(c_a), veh/h	216	767	771	161	1809	563	99	0	540	1335	2300	1029
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	32.2	32.3	52.4	29.5	0.0	53.6	0.0	50.8	34.9	21.9	31.6
Incr Delay (d2), s/veh	8.9	17.9	18.7	2.1	0.1	0.0	20.8	0.0	2.9	13.5	0.0	2.5
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	3.9	22.1	22.5	0.8	6.9	0.0	0.8	0.0	1.7	18.8	1.5	15.3
LnGrp Delay(d),s/veh	58.2	50.1	50.9	54.5	29.6	0.0	74.4	0.0	53.7	48.4	21.9	34.1
LnGrp LOS	E	D	D	D	C		E		D	D	C	C
Approach Vol, veh/h		1422			913			77			1814	
Approach Delay, s/veh		51.1			31.1			59.6			42.0	
Approach LOS		D			C			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	14.5	40.8	7.1	46.6	8.1	47.3	43.0	10.7
Change Period (Y+Rc), s	5.5	* 4.9	5.5	* 5.1	* 5.1	* 4.9	5.5	* 5.1
Max Green Setting (Gmax), s	13.3	* 39	6.1	* 71	* 5.1	* 47	42.3	* 35
Max Q Clear Time (g_c+I1), s	9.3	16.9	3.3	36.3	3.7	40.8	36.9	5.5
Green Ext Time (p_c), s	0.0	1.8	0.0	0.5	0.0	1.6	0.6	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	43.0
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	896	1464	1043	120	50	786
Future Volume (veh/h)	896	1464	1043	120	50	786
Number	1	6	2	12	3	18
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	1863	1863	1863	1863
Adj Flow Rate, veh/h	974	1591	1134	130	0	912
Adj No. of Lanes	2	2	2	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1036	2374	1101	493	340	1560
Arrive On Green	0.30	0.67	0.31	0.31	0.00	0.19
Sat Flow, veh/h	3442	3632	3632	1583	1774	3167
Grp Volume(v), veh/h	974	1591	1134	130	0	912
Grp Sat Flow(s),veh/h/ln	1721	1770	1770	1583	1774	1583
Q Serve(g_s), s	24.5	23.8	27.6	5.5	0.0	17.0
Cycle Q Clear(g_c), s	24.5	23.8	27.6	5.5	0.0	17.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1036	2374	1101	493	340	1560
V/C Ratio(X)	0.94	0.67	1.03	0.26	0.00	0.58
Avail Cap(c_a), veh/h	1086	2430	1101	493	340	1560
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	30.2	8.7	30.5	22.9	0.0	16.0
Incr Delay (d2), s/veh	14.4	0.6	35.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.7	11.7	18.7	2.4	0.0	7.9
LnGrp Delay(d),s/veh	44.6	9.3	65.5	23.0	0.0	16.4
LnGrp LOS	D	A	F	C		B
Approach Vol, veh/h		2565	1264		912	
Approach Delay, s/veh		22.7	61.2		16.4	
Approach LOS		C	E		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.9	34.3				66.2		22.5
Change Period (Y+Rc), s	* 5.2	* 6.7				* 6.7		5.5
Max Green Setting (Gmax), s	* 28	* 28				* 61		17.0
Max Q Clear Time (g_c+I1), s	26.5	29.6				25.8		19.0
Green Ext Time (p_c), s	0.2	0.0				3.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes