APPENDIX B

SHERWIN-WILLIAMS HORTON STREET TURN RESTRICTION ASSESSMENT AND TRANSPORTATION IMPACT ANALYSIS

FEHR PEERS

MEMORANDUM

Date: December 14, 2015

To: Judy Malamut, LSA

From: Kathrin Tellez

Subject: Sherwin-Williams – Horton Street Turn Restriction Assessment

WC14-3200

Fehr & Peers prepared a Draft Transportation Impact Analysis (TIA) for the proposed redevelopment of the Sherwin-Williams site in Emeryville dated December 2015 that identified potential transportation impacts of the project. Information regarding the proposed project, analysis scenarios and parameters is provided in that document. This memorandum focuses on evaluating potential mitigation measures for Impact TC-1:

Impact TC-1: The City of Emeryville *Pedestrian and Bicycle Plan* designates Horton Street as a bicycle boulevard (analysis segments A, B and C). Existing weekday daily traffic volumes on Horton Street are approximately 3,500 vehicles per day (VPD) from south of Sherwin Avenue to north of 53rd Street, exceeding the desired level for a bicycle boulevard west of Hollis Street. With either Project Option A or Option B Project, traffic volumes on Horton Street are expected to increase by approximately 300 to 1,400 VPD, increasing daily traffic volumes by more than 2 percent. This is considered a ***significant impact***.

Mitigation was proposed in the Draft TIA, but the effects of those mitigation measures were not quantifiable and the impact was potentially significant and unavoidable.

In consultation with the Project team, turn restrictions preventing through traffic on Horton Street at several locations was proposed as a mitigation measure, consistent with the potential for Level 4 or Level 5 traffic calming measures along the corridor identified in the *Pedestrian and Bicycle Plan*. Turn restrictions would be accomplished through the construction of a physical barrier that would prevent through vehicle traffic. Barriers would be constructed to permit bicycle travel through the barrier locations; emergency vehicle access along the corridor would be maintained

through permitting emergency vehicles to travel in the opposing direction of travel, if necessary. This may require the prohibition of on-street parking in the intersections influence area where turn restrictions are implemented.

Restricting movements at some intersections along the corridor would shift through traffic to other streets, and would potentially change the travel patterns of trips with an origin or destination along the corridor, potentially reducing vehicle trips on the corridor to levels established by guidelines provided in the *Pedestrian and Bicycle Plan* for a bicycle boulevard. However, the shifts in traffic could result in secondary impacts to other roadway segments or intersections.

Several locations were considered for implementing turn restrictions. For northbound travel along the corridor, turn restrictions at 40th Street would be most effective in reducing through traffic, and would be least disruptive to local circulation than other locations along the corridor. For southbound traffic, several locations were reviewed, including at Stanford Avenue, 45th Street and 53rd Street. Preliminary analysis of the potential traffic shifts indicated that prohibiting southbound travel at 53rd Street would be the most effective in reducing traffic volumes on Horton Street to levels considered appropriate for a bicycle boulevard, as defined by guidance in the *Pedestrian and Bicycle Plan,* as compared to turn restrictions at 45th Street or Stanford Avenue.

To assess the secondary impacts of turn restrictions at locations on Horton Street, the following was assumed:

Horton Street at 40th Street – at this intersection, a barrier would be located on the east side of Horton Street, north of 40th Street, prohibiting the northbound through movement, the eastbound left-turn movement and the westbound right-turn movement. This would result in some vehicle traffic shifting to the Hollis Street corridor and some traffic shifting to Holden and Hubbard Streets. Two-way travel would be maintained beyond the barrier location to facilitate access to local land uses.

Horton Street at 53rd Street – at this intersection, a barrier would be placed on southbound Horton Street on the south side of 53rd Street, prohibiting the southbound through movement and the westbound left-turn movement. This would result in some vehicle traffic shifting to the Hollis Street corridor as well as Stanford Avenue. Two-way travel would be maintained beyond the barrier location to facilitate access to local land uses.

The level of traffic that would divert from Horton Street was assessed based on a review of peak hour turning movement counts along the corridor, an estimate of the level of existing traffic with an origin or destination along the corridor, and an estimate of the amount of through traffic on Horton Street using GPS data to identifying the percentage of trips without an origin or destination along the corridor. The GPS data indicates that on a daily basis, approximately 10 percent of vehicle traffic along the corridor does not have an origin or a destination along the corridor and would likely divert to other travel routes with turn restrictions. Of the remaining traffic on Horton Street, approximately 20 to 30 percent have a destination on an east-west street, such as Park Avenue, Sherwin Avenue, 45th Street and 53rd Street, resulting in traffic shifting their primary north-south travel to Hollis, Holden or Hubbard streets, reducing overall travel on Horton Street. The remaining existing traffic has an origin or destination along Horton Street and turn restrictions would shift the location where they access Horton Street, but would not reduce vehicle traffic.

DAILY ROADWAY SEGMENT OPERATIONS

The level of existing traffic that is expected to shift with turn restrictions on Horton Street is presented in **Table 1,** which shows a reduction in traffic on Horton Street and an increase in traffic on 53rd and 45th streets. With turn restrictions, the level of daily traffic on Horton Street would be reduced below the threshold considered desirable for bicycle boulevards based on guidance provided in the *Pedestrian and Bicycle Plan* west of Hollis Street, and it would remain under that level with the addition of traffic from the Sherwin-Williams project. For comparison purposes, results of the roadway segment analysis without turn restrictions, as documented in the December 2015 TIA, is provided as an attachment for the existing, near-term and cumulative scenarios.

TABLE 1
EXISTING CONDITIONS DAILY TRAFFIC ANALYSIS

Roadway	Existing Average Daily Traffic Without Turn Restrictions[1]	Estimated Traffic Diversion[2]	Estimated Average Daily Traffic with Turn Restrictions	Project Daily Added Traffic[3]	Estimated Daily Traffic With Project With Turn Restrictions	Percent Increase
A. Horton Street, north of 53rd Street	***3,480***	-1,540	1,940	530	2,470	27%
B. Horton Street, between 45th and 53rd Street[4]	***3,530***	-2,050	1,480	840	2,320	57%
C. Horton Street, south of Sherwin Avenue	***3,460***	-1,930	1,530	740	2,270	48%
D. 53rd Street, east of Horton Street	600	140	740	190	930	26%
E. 45th Street, east of Horton Street	1,080	20	1,100	590	1,690	54%
F. 45th Street, west of San Pablo Ave	***2,630***	0	***2,630***	140	***2,770***[6]	5%
G. 45th Street, east of San Pablo Ave	1,490	0	1,490	10	1,500	< 1%
H. 53rd Street, west of San Pablo Avenue[5]	***2,440***	0	***2,440***	40	***2,480***[6]	2%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. Based on traffic counts as documented in the December 2015 TIA.
2. Based on existing turning movements along the Horton Street corridor, likely diversion of through traffic to parallel routes, and changes to travel patterns for trips with an origin or destination along the corridor.
3. Based on weekday daily Project trip generation and distribution percentages considering turn restrictions at 40th Street for northbound traffic and 53rd Street for southbound traffic.
4. City's Speed Feedback Counts on Horton Street between 45th Street and 53rd Street is approximately 4,100. This count has not been calibrated to other sources of count data along the corridor and may not be accurate as the count could include bicycles. City has no such numbers for any of the other segments analyzed in the above table.
5. Daily traffic volume estimated based on PM peak hour volumes on the roadway segment.
6. See December 2015 TIA for discussion of this impact; analysis results presented in this memo do not change the conclusions presented in the December 2015 TIA.
Source: Fehr & Peers, 2015

The diversion of traffic from Horton Street would not result in secondary impacts to other bicycle boulevards in the study area. However, two additional bicycle boulevards currently experience traffic volumes greater than desired; 45th and 53rd streets, west of San Pablo Avenue. The implementation of turn restrictions on Horton Street is not projected to increase traffic on these roadway segments, nor does it appreciably change the amount of traffic that would be added with the project. The impacts and mitigation measures for these segments is as noted in the December 2015 TIA.

An assessment of near-term and cumulative roadway segment operations with turn restrictions was also conducted, as presented in **Tables 2** and **3**. Information regarding the near-term and cumulative projects is provided in the December 2015 TIA. With the addition of traffic from projects expected to be built and occupied over the next 5 to 10 years and diverters on Horton Street, daily traffic volumes are expected to remain under 3,000 vehicles a day on Horton Street, and it would remain under that level with the addition of traffic from the Sherwin-Williams project.

Traffic volumes on 45th Street, east of San Pablo Avenue are projected to increase to 1,550 vehicles per day with traffic generated from approved and pending projects that are expected to be constructed in the next 5 to 10 years. The project would increase traffic on this segment by less than 1 percent. Traffic volumes on 45th and 53rd Streets west of San Pablo Avenue would also increase to over 3,000 vehicles per day with the traffic generated from approved and pending projects. Added traffic on 53rd Street is primarily due to the traffic from the Emery Center of Community Life, which would have the elementary school drop-off/pick-up zone located 53rd Street, west of San Pablo Avenue.

The near-term project impact to 45th and 53rd Streets west of San Pablo Avenue and 45th Street east of San Pablo Avenue with turn restrictions on Horton Street is the same as identified in the December 2015 TIA.

TABLE 2
NEAR-TERM CONDITIONS DAILY TRAFFIC ANALYSIS

Roadway	Existing Average Daily Traffic With Turn Restrictions[1]	Added Traffic From Near-Term Projects[2]	Near-term Without Project With Turn Restrictions	Project Daily Added Traffic[3]	Total Daily Traffic Near-Term With Project with Turn Restrictions	Percent Increase
A. Horton Street, north of 53rd Street	1,940	60	2,000	530	2,530	27%
B. Horton Street, between 45th and 53rd Street	1,480	100	1,580	840	2,420	53%
C. Horton Street, south of Sherwin Avenue	1,530	190	1,720	740	2,460	43%
D. 53rd Street, east of Horton Street	740	40	780	190	970	24%
E. 45th Street, east of Horton Street	1,100	70	1,170	590	1,760	50%
F. 45th Street, west of San Pablo Ave	***2,630***	420	***3,050***	140	***3,190***[4]	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***[4]	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,290	***3,730***	40	***3,770***[4]	1%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. See Table 1.
2. Reflects potential routing of new trips to the transportation system considering turn restrictions on Horton Street.
3. Based on weekday daily Project trip generation and distribution percentages considering turn restrictions at 40th Street for northbound traffic and 53rd Street for southbound traffic.
4. See December 2015 TIA for discussion of this impact; analysis results presented in this memo do not change the conclusions presented in the December 2015 TIA.
Source: Fehr & Peers, 2015

TABLE 3
CUMULATIVE CONDITIONS DAILY TRAFFIC ANALYSIS

Roadway	Existing Average Daily Traffic With Diverters[1]	Added Traffic From Near-Term and Cumulative Projects With Diverters[2]	Cumulative Without Project With Diverters Volume	Project Daily Added Traffic[2]	Total Daily Traffic With Project in Cumulative Condition	Percent Increase
A. Horton Street, north of 53rd Street	1,940	1,460	***3,400***	530	***3,930***	16%
B. Horton Street, between 45th and 53rd Street	1,480	190	1,670	840	2,510	50%
C. Horton Street, south of Sherwin Avenue	1,530	190	1,720	740	2,460	43%
D. 53rd Street, east of Horton Street	740	1,200	1,940	190	2,130	10%
E. 45th Street, east of Horton Street	1,100	70	1,170	590	1,760	50%
F. 45th Street, west of San Pablo Ave	***2,630***	420	***3,050***	140	***3,190***[4]	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***[4]	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,750	***4,190***	40	***4,230***[4]	1%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. See Table 1.
2. Reflects potential routing of new trips to the transportation system considering turn restrictions on Horton Street.
3. Based on weekday daily Project trip generation and distribution percentages considering turn restrictions at 40th Street for northbound traffic and 53rd Street for southbound traffic.
4. See December 2015 TIA for discussion of this impact; analysis results presented in this memo do not change the conclusions presented in the December 2015 TIA.
Source: Fehr & Peers, 2015

In the cumulative condition assuming full build-out of the Novartis Campus, traffic volumes on Horton Street, north of 53rd Street could exceed 3,000 vehicles per day. The addition of project trips would increase the volumes further. As it is uncertain if the Novartis project would move forward as previously contemplated, there are potentially opportunities through the design of

that site to orient traffic to 53rd Street and Hollis Street, reducing the level of traffic on Horton Street north of 53rd Street. Additionally, there are dedicated bicycle lanes on Horton Street, north of 53rd Street providing bicyclists with dedicated right-of way. Redesignating this portion of Horton Street from a bicycle boulevard to a Class II bicycle facility could be considered.

The cumulative project impact to 45th west of San Pablo Avenue and 45th Street east of San Pablo Avenue with the turn restriction on Horton Street is the same as identified in the December 2015 TIA.

For the segment of 53rd Street, west of San Pablo Avenue, the diverters would affect the projection on the level of project traffic that would use this roadway, such that the added traffic would be less than 2 percent in the near-term and cumulative condition, reducing the impact to a less-than-significant level.

PEAK HOUR INTERSECTION OPERATIONS

Turn restrictions on Horton Street has the potential to affect peak hour intersection operations on the Horton and Hollis street corridors. To assess the potential for peak hour secondary intersection impacts, peak hour traffic volumes were reassigned to the roadway network at the sixteen intersections noted on **Figure 1**, as these intersections would experience the most peak hour traffic volume change with the turn restrictions on Horton Street. Peak hour intersection operations were evaluated based on the analysis methods described in the December 2015 TIA.

Results of the assessment are presented in **Table 4** for the existing condition, **Table 5** for the near-term condition and **Table 6** for the cumulative condition, including without turn restrictions, with turn restrictions, with turn restrictions with project Option A, and with turn restrictions with project Option B for all scenarios.

In the ***existing*** condition with turn restrictions, operations of the Hollis Street at 45th Street would degrade with vehicles and transit vehicles experiencing significant levels of delay. Peak hour traffic signal warrants would also be met. The addition of traffic from either project Option A or Option B would further degrade operations. Installation of a traffic signal is recommended.

In the ***near-term*** condition with turn restrictions, operations of Hollis Street at 45th Street would further worsen from the existing condition. At the 40th Street at Horton Street intersection

operations would degrade to level of service (LOS) E prior to implementation of turn restrictions, with the turn restrictions slightly improving operations.

The addition of traffic from either project Option A or Option B would further degrade operations of the above intersections and would also result in LOS E conditions for vehicles, including transit vehicles at the Powell Street at Hollis Street intersection. At the Powell Street at Hollis Street intersection, improvements have been identified in the transportation impact fee program. These improvements strive to improve the pedestrian and bicycle realm at the intersection. To improve operations for vehicles, including transit vehicles, additional intersection capacity would need to be provided, which may be contrary to other City goals at these intersections.

In the ***cumulative*** condition with turn restrictions, operations of Hollis Street at 45th Street would degrade with vehicles and transit vehicles experiencing level of service (LOS) F conditions. At the 40th Street at Horton Street intersection operations would degrade to LOS E prior to implementation of turn restrictions, with turn restrictions slightly improving operations.

The addition of traffic from either project Option A or Option B would further degrade operations of the above intersections and would also result in LOS F conditions for vehicles, including transit vehicles at the Powell Street at Hollis Street intersection and at the Park Avenue at Hollis Street intersection. At the Park Avenue at Hollis Street intersection, increasing the cycle length would decrease delay for vehicles, resulting in LOS D operations. However, increasing the cycle length would increase delay for pedestrians as some may need to wait longer to cross the street.

The added traffic at the Hollis Street at 40th Street intersection would also increase vehicle queues for the westbound left-turn movement and the southbound movement. Monitoring and adjusting signal timing would minimize some vehicle queue spillback, but extending the eastbound left-turn pocket to provide at least 200 feet of vehicle storage would minimize the potential for vehicle queue spillback to the through lanes.

This completes our assessment of the potential for turn restrictions closure to mitigate the bicycle boulevard impact on Horton Street, and the analysis of the potential secondary impacts. Please call Kathrin at (925) 930-7100 if you have questions.

Attachments:

Figure 1 Turn Restriction Assumptions and Analysis Locations

TABLE 4
EXISTING CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Existing		Existing Plus Turn Restrictions		Existing Plus Turn Restrictions Plus Project Option A		Existing Plus Turn Restrictions Plus Project Option B	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
8	Powell Street/ Hollis Street	Signal	PM SAT	38 39	D D	40 38	D D	43 39	D D	43 39	D D
10	Horton Street/ Stanford Avenue	AWSC	AM PM SAT	8 10 7	A A A	7 9 7	A A A	7 9 7	A A A	7 9 7	A A A
11	Hollis Street/ Stanford Avenue	Signal	PM SAT	7 3	A A	8 4	A A	9 5	A A	9 5	A A
12	Horton Street/ 53rd Street	AWSC	AM PM SAT	8 10 7	A A A	7 8 7	A A A	8 9 7	A A A	8 9 7	A A A
13	Hollis Street/ 53rd Street	Signal	PM SAT	8 4	A A	9 5	A A	9 6	A A	9 6	A A
14	Horton Street/ 46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	--	--	4 (11) 4 (11) 6 (10)	A (B) A (B) A (A)	5 (11) 4 (11) 7 (10)	A (B) A (B) A (A)
15	Horton Street/ 45th Street	AWSC	AM PM SAT	8 10 7	A A A	7 8 7	A A A	8 8 7	A A A	8 8 7	A A A

TABLE 4
EXISTING CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Existing		Existing Plus Turn Restrictions		Existing Plus Turn Restrictions Plus Project Option A		Existing Plus Turn Restrictions Plus Project Option B	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
16	Hollis Street/ 45th Street	AWSC	PM SAT	32 11	D B	111 12	F B	139 13	F B	140 13	F B
17	Halleck Street/ Sherwin Avenue	Free/ SSSC	AM PM SAT	No Conflicting Movements		No Conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No Conflicting Movements	
18	Hubbard Street/ Sherwin Avenue/ Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)	8 (10) 7 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/ Sherwin Avenue	SSSC	AM PM SAT	1 (11) 1 (13) 1 (9)	A (B) A (B) A (A)	2 (9) 2 (11) 3 (9)	A (A) A (B) A (A)	2 (10) 3 (11) 4 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)
20	Halleck Street/ Park Avenue	SSSC	PM SAT	8 (11) 7 (10)	A (B) A (A)	8 (11) 7 (10)	A (B) A (A)	8 (12) 6 (10)	A (B) A (A)	8 (11) 7 (10)	A (B) A (A)
21	Hubbard Street/ Park Avenue	SSSC	PM SAT	2 2	A A	2 (11) 3 (10)	A (B) A (A)	3 (12) 4 (11)	A (B) A (B)	3 (12) 4 (11)	A (B) A (B)

TABLE 4
EXISTING CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Existing		Existing Plus Turn Restrictions		Existing Plus Turn Restrictions Plus Project Option A		Existing Plus Turn Restrictions Plus Project Option B	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
22	Horton Street/ Park Avenue	AWSC	AM	9	A	8	A	8	A	8	A
			PM	11	B	8	A	9	A	9	A
			SAT	8	A	8	A	8	A	8	A
23	Hollis Street/ Park Avenue	Signal	PM	15	B	19	B	23	C	23	C
			SAT	12	B	13	B	14	B	14	B
24	Horton Street/ 40th Street	Signal	AM	28	C	24	C	25	C	25	C
			PM	47	D	40	D	40	D	40	D
			SAT	46	D	44	D	49	D	49	D
25	Hollis Street/ 40th Street[4]	Signal	PM	31	C	36	D	39	D	39	D
			SAT	31	C	30	C	32	C	32	C

Notes:
1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized
2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour
3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2010 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).
4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.
Source: Fehr & Peers, 2015.

TABLE 5
NEAR-TERM CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Near-Term		Near-Term Plus Turn Restrictions		Near-Term Plus Turn Restrictions Plus Project Option A		Near-Term Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
8	Powell Street/ Hollis Street	Signal	PM SAT	42 39	D D	53 40	D D	62 41	E D	63 41	E D
10	Horton Street/ Stanford Avenue	AWSC	AM PM SAT	8 11 7	A B A	7 9 7	A A A	7 9 7	A A A	7 9 7	A A A
11	Hollis Street/ Stanford Avenue	Signal	PM SAT	7 4	A A	9 6	A A	11 5	B A	11 5	B A
12	Horton Street/ 53rd Street	AWSC	AM PM SAT	8 10 7	A A A	7 8 7	A A A	8 9 7	A A A	8 9 7	A A A
13	Hollis Street/53rd Street	Signal	PM SAT	8 5	A A	9 6	A A	9 6	A A	9 6	A A
14	Horton Street/ 46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	--	--	4 (11) 4 (11) 6 (10)	A (B) A (B) A (A)	5 (11) 4 (11) 7 (10)	A (B) A (B) A (A)

TABLE 5
NEAR-TERM CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Near-Term		Near-Term Plus Turn Restrictions		Near-Term Plus Turn Restrictions Plus Project Option A		Near-Term Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
15	Horton Street/ 45th Street	AWSC	AM PM SAT	8 10 8	A B A	8 8 7	A A A	8 8 7	A A A	8 8 7	A A A
16	Hollis Street/ 45th Street	AWSC	PM SAT	54 12	F B	172 13	F B	206 15	F C	208 15	F C
17	Halleck Street/ Sherwin Avenue	Free	AM PM SAT	No Conflicting Movements		No Conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No Conflicting Movements	
18	Hubbard Street/ Sherwin Avenue/ Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	3 (9) 3 (9) 3 (9)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)	8 (10) 7 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/ Sherwin Avenue	SSSC	AM PM SAT	1 (10) 1 (13) 1 (9)	A (B) A (B) A (A)	2 (10) 2 (11) 3 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)
20	Halleck Street/ Park Avenue	SSSC	PM SAT	8 (12) 7 (10)	A (B) A (A)	8 (12) 7 (11)	A (B) A (B)	8 (12) 6 (10)	A (B) A (A)	9 (12) 7 (10)	A (B) A (A)

TABLE 5
NEAR-TERM CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Near-Term		Near-Term Plus Turn Restrictions		Near-Term Plus Turn Restrictions Plus Project Option A		Near-Term Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
21	Hubbard Street/ Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)	2 (11) 3 (10)	A (B) A (A)	3 (12) 4 (11)	A (B) A (B)	3 (12) 4 (11)	A (B) A (B)
22	Horton Street/ Park Avenue	AWSC	AM PM SAT	9 11 8	A B A	8 9 8	A A A	9 10 8	A A A	9 10 8	A A A
23	Hollis Street/ Park Avenue	Signal	PM SAT	15 12	B B	21 13	C B	31 14	C B	30 14	C B
24	Horton Street/ 40th Street	Signal	AM PM SAT	27 47 59	C D E	23 40 57	C D E	24 41 68	C D E	23 41 68	C D E
25	Hollis Street/40th Street[4]	Signal	PM SAT	32 31	C C	37 31	D C	39 32	D C	39 32	D C

Notes:
1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized
2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour
3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2010 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).
4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.
Source: Fehr & Peers, 2015.

TABLE 6
CUMULATIVE CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Cumulative		Cumulative Plus Turn Restrictions		Cumulative Plus Turn Restrictions Plus Project Option A		Cumulative Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
8	Powell Street/ Hollis Street	Signal	PM SAT	51 39	D D	75 41	E D	84 44	F D	86 44	F D
10	Horton Street/ Stanford Avenue	AWSC	AM PM SAT	10 13 7	A B A	7 11 7	A B A	9 11 7	A B A	9 12 7	A B A
11	Hollis Street/ Stanford Avenue	Signal	PM SAT	11 5	B A	12 5	B A	15 6	B A	15 6	B A
12	Horton Street/ 53rd Street	AWSC	AM PM SAT	10 12 8	A B A	7 9 7	A A A	8 9 7	A A A	8 9 7	A A A
13	Hollis Street/ 53rd Street	Signal	PM SAT	11 6	B A	22 6	C A	26 6	C A	26 6	C A
14	Horton Street/ 46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	--	--	4 (11) 4 (11) 8 (8)	A (B) A (B) A (A)	5 (11) 4 (11) 8 (8)	A (B) A (B) A (A)
15	Horton Street/ 45th Street	AWSC	AM PM SAT	11 12 8	B B A	8 8 7	A A A	8 8 7	A A A	8 8 7	A A A

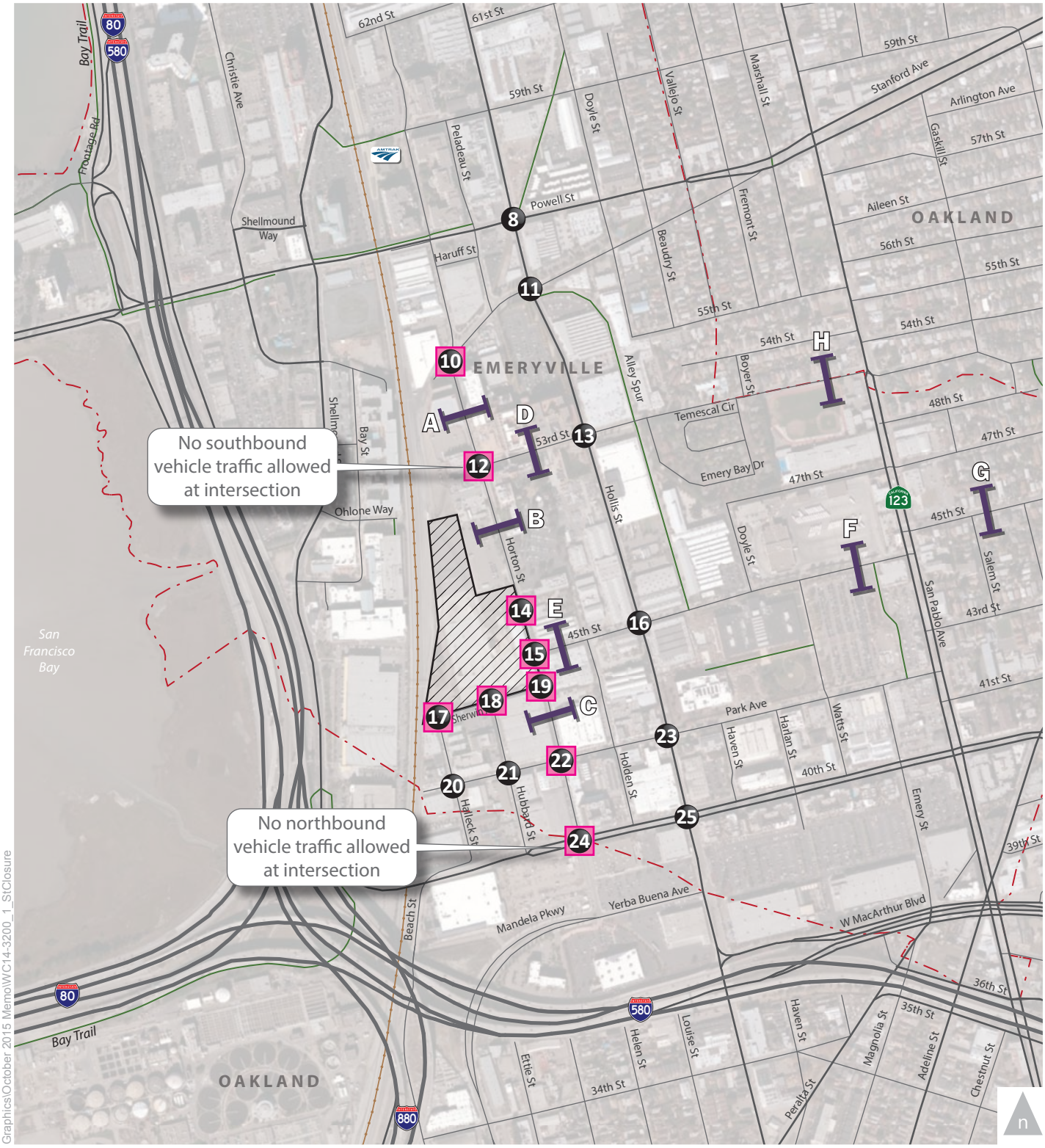
TABLE 6
CUMULATIVE CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Cumulative		Cumulative Plus Turn Restrictions		Cumulative Plus Turn Restrictions Plus Project Option A		Cumulative Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
16	Hollis Street/ 45th Street	AWSC	PM SAT	75 12	F B	284 14	F B	327 17	F C	329 17	F C
17	Halleck Street/ Sherwin Avenue	Free	AM PM SAT	No Conflicting Movements		No Conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No Conflicting Movements	
18	Hubbard Street/ Sherwin Avenue/ Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	3 (9) 3 (9) 3 (9)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)	8 (10) 7 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/ Sherwin Avenue	SSSC	AM PM SAT	1 (12) 1 (16) 1 (10)	A (B) A (C) A (A)	2 (10) 2 (11) 3 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)
20	Halleck Street/ Park Avenue	SSSC	PM SAT	8 (12) 7 (10)	A (B) A (A)	8 (12) 7 (10)	A (B) A (A)	8 (12) 6 (10)	A (B) A (A)	9 (12) 7 (10)	A (B) A (A)
21	Hubbard Street/ Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)	2 (11) 3 (10)	A (B) A (A)	3 (13) 4 (11)	A (B) A (B)	3 (12) 4 (11)	A (B) A (A)

TABLE 6
CUMULATIVE CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Cumulative		Cumulative Plus Turn Restrictions		Cumulative Plus Turn Restrictions Plus Project Option A		Cumulative Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
22	Horton Street/ Park Avenue	AWSC	AM	11	B	8	A	9	A	9	A
			PM	16	C	9	A	10	A	10	A
			SAT	8	A	8	A	8	A	8	A
23	Hollis Street/ Park Avenue	Signal	PM	15	B	53	D	88	F	87	F
			SAT	12	B	13	B	14	B	14	B
24	Horton Street/ 40th Street	Signal	AM	28	C	23	C	24	C	23	C
			PM	61	E	40	D	41	D	41	D
			SAT	60	E	56	E	68	E	68	E
25	Hollis Street/ 40th Street[4]	Signal	PM	34	C	54	D	60	E	60	E
			SAT	31	C	31	C	32	C	32	C

Notes:
1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized
2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour
3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2010 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).
4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.
Source: Fehr & Peers, 2015.



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LEGEND

- # Weekday PM and Saturday Peak Hour Analysis Study Intersection
- Project Site
- Daily Traffic Analysis Location
- # Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Figure 1

Horton Street Turn Restriction Assumptions and Analysis Locations

Sherwin-Williams Mixed-Use Development

Transportation Impact Analysis

Prepared by
FEHR PEERS

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December 2015



Sherwin-Williams Mixed-Use Development

Transportation Impact Analysis

Prepared for:
City of Emeryville
LSA

December 2015

WC14-3200

FEHR & PEERS

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EXECUTIVE SUMMARY

This study presents the analysis and findings of the transportation impact analysis (TIA) for the Sherwin-Williams development (project) located in the City of Emeryville, California.

PROJECT DESCRIPTION AND ANALYSIS PARAMETERS

The project site is located west of Horton Street, east of the railroad tracks, and north of Sherwin Avenue, in the City of Emeryville. Two project development scenarios are currently under consideration, Option A and Option B. Both Options would result in the same level of development on the site, with primary differences related to the location of the park within the site. Both options would result in approximately 79,600 square feet of office, 540 residential units, 10,000 square feet of retail, and 5,000 square feet of restaurant.

Project access would occur from Horton Street, Sherwin Avenue and an extension of Hubbard Street into the site. On-site parking would be provided by a mixture of structured parking and on-street parking. A Class I bicycle facility would be constructed as part of the project along the western boundary of the site, connecting to other existing and planned bicycle facilities in the area.

Project effects on the study area roadway facilities were determined by measuring the effect Project traffic would have on peak hour operations of 30 intersections in the vicinity of the site, as well as eight roadway segments on a daily basis. Conditions were evaluated under Existing, Near-term and Cumulative conditions, both without and with the Project. An assessment of the regional roadway system and vehicle miles of travel (VMT) was also conducted in addition to a site plan review.

FINDINGS AND RECOMMENDATIONS

OFF-SITE FINDINGS

EXISTING CONDITIONS

Bicycle boulevard impacts were identified for three bicycle boulevards in the existing condition:

- Horton Street, from north of 53rd Street to south of Sherwin Avenue
- 45th Street, west of San Pablo Ave
- 53rd Street, west of San Pablo Avenue

Mitigation measures to reduce these impacts to a less-than-significant level, including Level 4 and Level 5 traffic calming measures, were identified.

NEAR-TERM AND CUMULATIVE CONDITIONS

An intersection impact was identified at the 45th Street at Hollis Street intersection in the near-term condition, and a vehicle queue impact was identified at the San Pablo Avenue at 40th Street intersection in the cumulative condition. Mitigation measures to reduce these impacts to a less-than-significant level were identified.

No impacts to the regional roadway system were identified based on an analysis of the congestion management program network. Results of the vehicle miles of travel (VMT) assessment indicated that while the project would increase overall VMT, it would reduce VMT on a per-capita basis as compared to the base condition, and the VMT impact is considered less-than-significant.

The bicycle boulevard impact on Horton Street, north of 53rd Street could remain significant and avoidable in the cumulative condition due to traffic from other projects in the vicinity.

ON-SITE FINDINGS

The project roadway connections to Sherwin Avenue and Horton Street are projected to operate acceptably as currently proposed. Based on a detailed site plan review, recommendations were made to enhance access and circulation for all modes, as detailed in Chapter 8 and summarized below:

- Provide design details of the internal garage circulation and interface with the street system for review, including identification of guest and patron parking supplies, and electric vehicle charging stations.
- Provide pedestrian improvements at the following intersections as and detailed in Chapter 8:
    - Sherwin Avenue at Halleck Street
    - Sherwin Avenue at Hubbard Street
    - Sherwin Avenue at Horton Street
    - 45th Street at Horton Street
- Provide bicycle improvements, including:
    - Class III roadway markings and signage on Sherwin Avenue.
    - Identify a bike share station location within the site

  - Identify location and amount of bicycle parking

- Prepare and implement transportation demand management and parking demand management plans for the project, potentially including the following strategies:
  - Provide time limits on the commercial parking supplies not used by employees to encourage parking turnover for commercial patrons.
  - Provide information to new residents about the availability of transit and bicycle facilities in the area.
  - Monitor building parking demand as the commercial spaces become occupied and implement additional transportation demand management strategies if needed to manage area parking supplies.
  - Designate car share pod(s) within the site.
  - Designate an on-site transportation coordinator.

CHAPTER 1. INTRODUCTION

This document presents the results of the transportation impact analysis (TIA) conducted for the proposed Sherwin-Williams development (project) located in the City of Emeryville, California. This chapter discusses the TIA purpose, study area, analysis methods, criteria used to identify significant impacts, and report organization.

TIA PURPOSE

The TIA purpose is to evaluate the transportation impacts of the proposed redevelopment of the Sherwin-Williams site in Emeryville. The project site is located west of Horton Street, east of the railroad tracks, and north of Sherwin Avenue, in the City of Emeryville. The approximately 10-acre project site is mostly undeveloped except for one vacant building fronting Horton Street and Sherwin Avenue. **Figure 1** shows the project site vicinity.

The existing vacant building (Building 1-31, technically two buildings, but functionally a single building) is a remnant from the decommissioned Sherwin-Williams factory and is classified as a "Tier 1 Architecturally Significant Building" by the City. As part of the project, the existing Building 1-31 would be renovated and five new buildings constructed with a mixture of uses including residential, retail, and office space. A new park would also be constructed and would include a children's play area, dog park, adult fitness area, and sports courts.

Two project development scenarios are currently under consideration, Option A and Option B. Both Options would result in the same level of development on the site, as shown in **Table 1**. The primary difference between the two options is a location swap of Parcel C-1 and the Park, as shown on **Figure 2** for Option A and **Figure 3** for Option B. Both options as proposed would result in approximately 79,600 square feet of office, 540 residential units, 10,000 square feet of retail, and 5,000 square feet of restaurant.

A mixture of surface and structured parking would support site development, including 982 or 929 garage spaces for Options A and B, respectively and approximately 16 on-street parking spaces for both options. Primary access to the site for both options would be provided from new roadways connecting to Horton Street and Sherwin Avenue. Driveway access to the Parcel B-1 parking garage would occur from both Sherwin Avenue and 46th Street. Under Option A, all vehicular access to the Parcel C-1 parking spaces would occur from a new driveway on Sherwin Avenue at Halleck Street; under Option B, access would occur from the extension of Hubbard Street. Access to the remaining parking areas would be provided either from 46th Street, Hubbard Circle or Sherwin Avenue.

TABLE 1
PROJECT DEVELOPMENT SUMMARY

Parcel	Option A	Option B
Parcel A (Existing Buildings 1 and 31)	74,000 square feet of office	
Parcel B-1	175 Residential Units 5,000 square feet restaurants 7,000 square feet retail 116 parking spaces	
Parcel B-2	53 Residential Units 5,600 square feet office 489 parking spaces	
Parcel C-1	104 Residential Units 175 parking spaces	106 Residential Units 111 parking spaces 3,000 square feet retail
Parcel C-2	128 Residential Units 103 parking spaces 3,000 square feet retail	126 Residential Units 114 parking spaces
Parcel D	80 Residential Units 99 parking spaces	
Park Parcel	63,422 square foot park located within interior of site	63,422 square foot park located at southeastern boundary
Total	Office – 79,600 square feet Residential – 540 units Retail – 10,000 square feet Restaurant – 5,000 square feet Parking – 982 garage spaces	Office – 79,600 square feet Residential – 540 units Retail – 10,000 square feet Restaurant – 5,000 square feet Parking – 929 garage spaces

Source: ROMA Design Group, January 2015

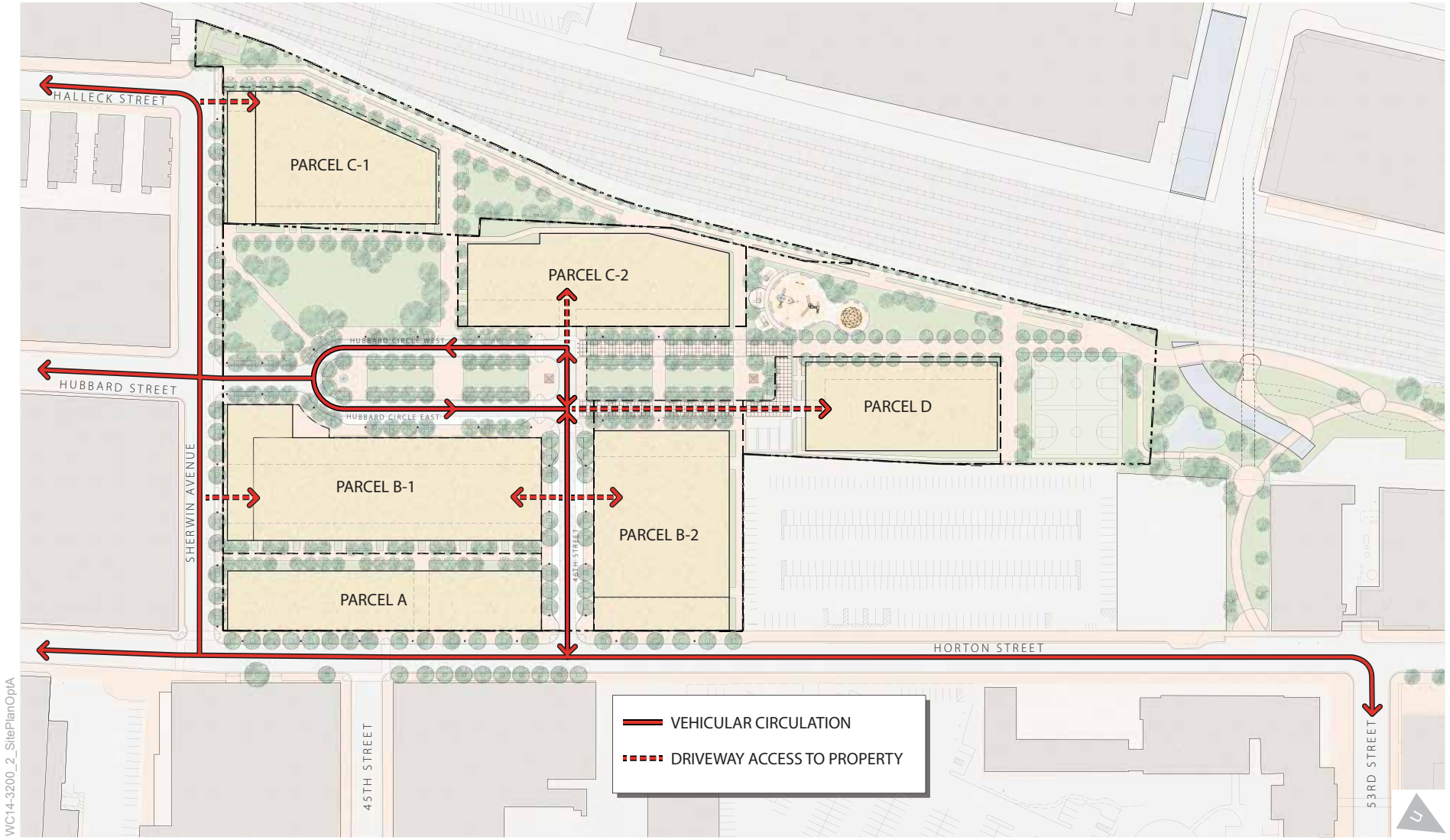


LEGEND

Project Site

Figure 1

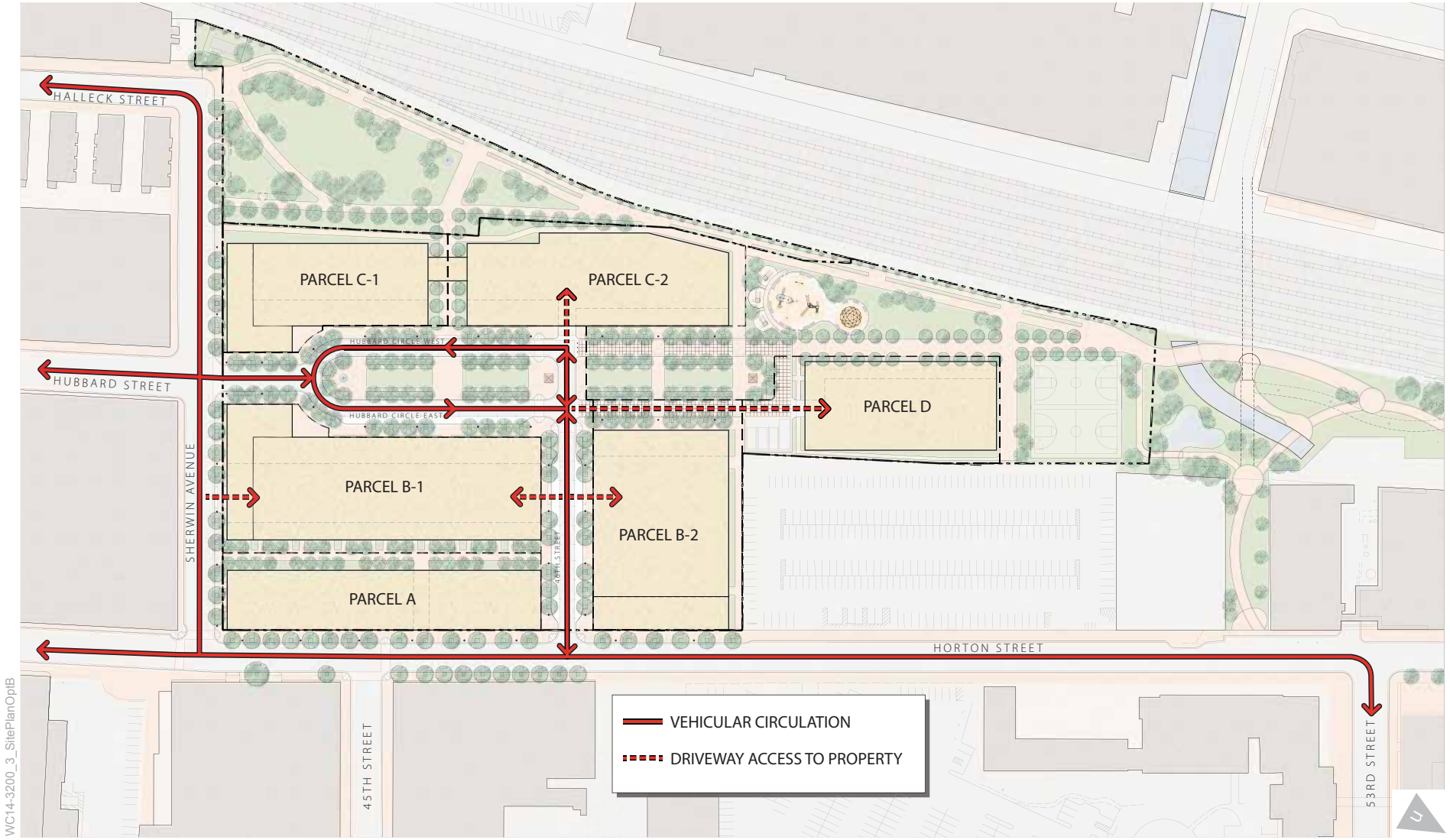
Project Site Vicinity



Source: ROMA DESIGN GROUP, Jan. 20, 2015

Figure 2

Option A Conceptual Project Site Plan and Vehicle Circulation



Source: ROMA DESIGN GROUP, Jan. 20, 2015

Figure 3

Option B Conceptual Project Site Plan

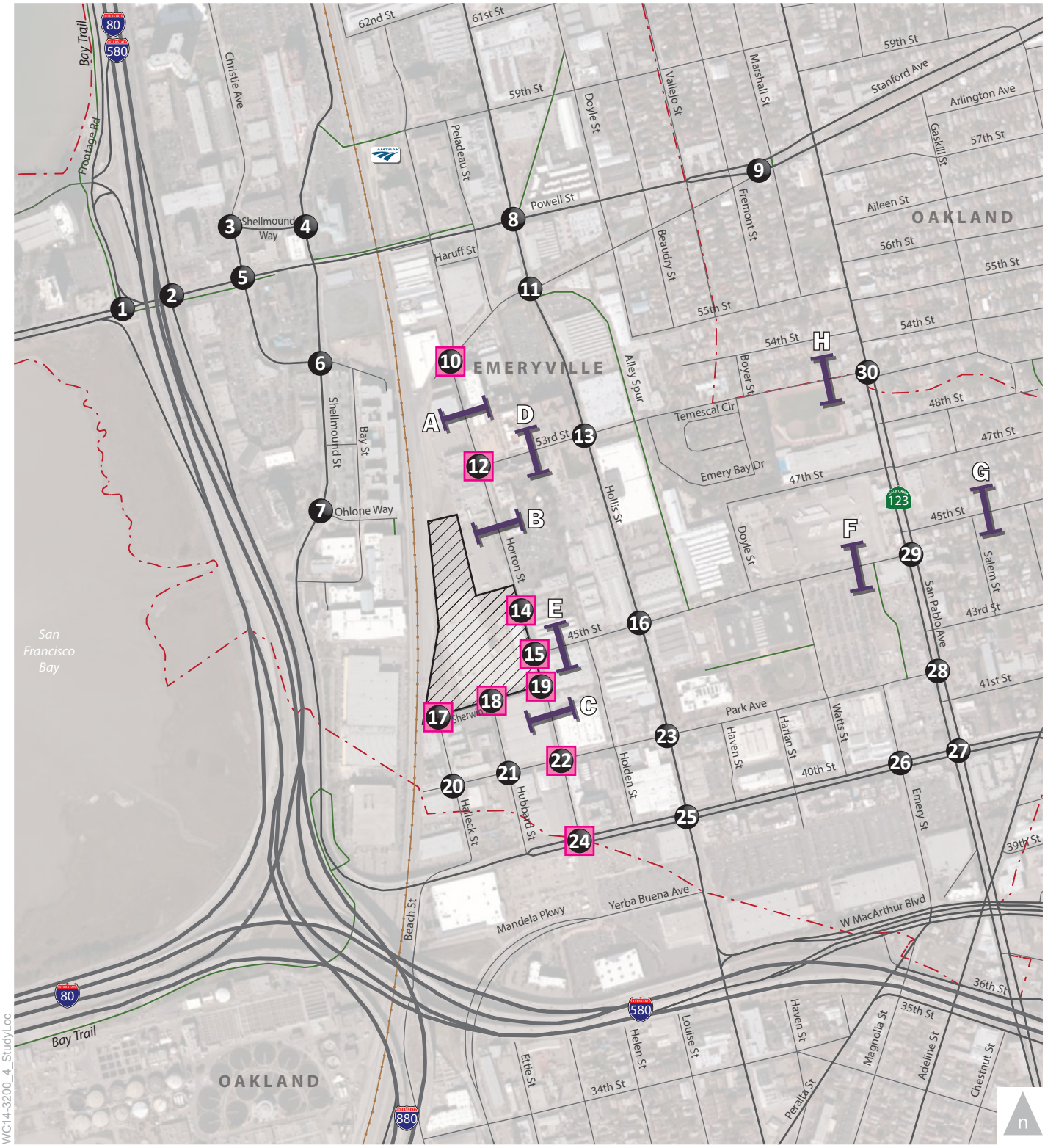
VEHICLE MILES OF TRAVEL

In response to Senate Bill 743 (SB 743), the Office of Planning and Research (OPR) is updating California Environmental Quality Act (CEQA) guidelines to include new transportation-related evaluation metrics. Draft guidelines were developed in August 2014, and updated in August 2015. Public comments received on both drafts are being incorporated into the final guidelines, which have not been released as of the completion date of this document. In response to the draft guidelines, an assessment of the vehicle miles of travel (VMT) generated by the proposed Sherwin-Williams project was prepared as presented in Chapter 4.

PROJECT STUDY AREA

Project impacts on the study area roadway facilities were determined by measuring the effect project traffic would have on intersections during the weekday evening (4:00 to 6:00 PM) and Saturday afternoon (3:00 to 5:00 PM) peak periods when traffic volumes on the surrounding streets are the highest. A total of 30 intersections, as shown on **Figure 4**, were selected as study locations in consultation with the City of Emeryville staff. Weekday morning (7:00 to 9:00 AM) operations were assessed at a subset of intersections closest to the site where project traffic would be concentrated. Study intersections are signalized except for those noted with an asterisk (*). Intersections noted in italics were analyzed during the morning peak hour in addition to the weekday PM and Saturday afternoon peak hours. Daily roadway segment operations were also assessed on portions of Horton, 53rd and 45th streets, as shown on Figure 4.

Roadway segments where project traffic may have impacts on the transportation network were also identified for inclusion in the analysis. The Alameda County Transportation Commission (Alameda CTC) requires the assessment of development-driven impacts to regional roadways for projects that generate more than 100 "net new" PM peak-hour trips. Designated Metropolitan Transportation System (MTS) roadways segments in the vicinity of the study area include Interstate 80, San Pablo Avenue, Stanford Avenue and 40th Street. Weekday PM peak hour operations were evaluated using the Countywide Travel Demand Forecasting Model for 2025 and 2040.



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LEGEND

- (#) Weekday PM and Saturday Peak Hour Analysis Study Intersection
- Project Site
- Daily Traffic Analysis Location
- (#) Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Figure 4

Analysis Locations

1. Powell Street/Frontage Road
2. Powell Street/Eastbound I-80 Off-Ramp
3. Shellmound Way/Christie Avenue
4. Shellmound Street/Shellmound Way
5. Powell Street/Christie Avenue
6. Shellmound Street/Christie Avenue
7. Shellmound Street/Ohlone Way
8. Powell Street/Hollis Street
9. Powell Street/Stanford Avenue*
10. *Horton Street/Stanford Avenue**
11. Hollis Street/Stanford Avenue
12. *Horton Street/53rd Street**
13. Hollis Street/53rd Street
14. *Horton Street/Future Project Roadway**
15. *Horton Street/45th Street**
16. Hollis Street/45th Street*
17. *Halleck Street/Sherwin Avenue**
18. *Hubbard Street/Sherwin Avenue/Future Project Roadway**
19. *Horton Street/Sherwin Avenue**
20. Halleck Street/Park Avenue*
21. Hubbard Street/Park Avenue *
22. *Horton Street/Park Avenue**
23. Hollis Street/Park Avenue
24. *Horton Street/40th Street*
25. Hollis Street/40th Street
26. Emery Street/40th Street
27. San Pablo Avenue/40th Street
28. San Pablo Avenue/Park Avenue
29. San Pablo Avenue/45th Street
30. San Pablo Avenue/53rd Street

INTERSECTION ANALYSIS SCENARIOS

For this study, intersection analysis was conducted for existing and future scenarios, both without and with Option A and Option B. The future conditions analysis considers vehicle traffic that would be generated by planned and pending development in the vicinity of the project. Peak hour intersection operations were evaluated for the following scenarios:

- Existing – Based on traffic counts collected in 2015.
- Existing with Project Option A – Existing traffic counts, with traffic generated by project Option A.
- Existing with Project Option B – Existing traffic counts, with traffic generated by project Option B.
- Near-term – Existing traffic with traffic generated by approved and pending projects in the study area that are expected to be constructed and occupied within the next 5 to 10 years.
- Near-term with Project Option A – Near-term volumes with traffic generated by project Option A.
- Near-term with Project Option B – Near-term volumes with traffic generated by project Option B.

- Cumulative – Existing traffic with traffic generated by approved and pending projects in the study area, plus the remaining development potential at the Novartis site.
- Cumulative with Project Option A – Cumulative conditions with traffic generated by project Option A.
- Cumulative with Project Option B – Cumulative conditions with traffic generated by project Option B.

ANALYSIS METHODS

The operations of roadway facilities are described with the term "level of service" (LOS). LOS is a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (i.e., free flow conditions) to LOS F (over capacity conditions). LOS E corresponds to operations "at capacity." When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. Different methods are used to assess signalized and unsignalized (stop-controlled) intersections. The City of Emeryville does not have a level of service policy for vehicles, but strives to achieve a quality of service. Quality of service recognizes that people travel by a variety of modes, not just in vehicles, and that the use of an auto-focused level of service standard does not address the mobility needs for non-auto roadway users.

For this assessment, level of service results are provided as a proxy for evaluating the transportation experience for vehicles, transit, and bicyclists and to guide the development of the transportation system in the project vicinity while balancing the variety of travel modes in the area. Significance criteria are discussed in the next section.

INTERSECTION OPERATIONS

At signalized intersections, the Highway Capacity Manual (HCM) method calculates control delay at an intersection based on average control vehicular delay, using the method described in Chapter 16 of the 2000 HCM. Inputs to the analysis include traffic volumes, lane geometry, signal phasing and timing, pedestrian crossing times, and peak hour factors. Control delay is defined as the delay directly associated with the traffic control device (i.e., a stop sign or a traffic signal) and specifically includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. These delay estimates are considered indicators of driver discomfort and frustration, fuel consumption and lost travel time. The relationship between average control delay and LOS for signalized intersections is summarized in **Table 2**.

TABLE 2
SIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Delay in Seconds
A	Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	< 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity (V/C) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

Source: *Highway Capacity Manual* (Transportation Research Board, 2000).

Operations of the unsignalized intersections were evaluated using the method contained in Chapter 17 of the 2000 HCM. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (Table 3). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement, the left-turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled locations, LOS is computed for the intersection as a whole.

TABLE 3
UNSIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Average Control Per Vehicle (Seconds)
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual* (Transportation Research Board, 2000).

SIGNIFICANCE CRITERIA

The determination of significance for project impacts is based on applicable policies, regulations, goals, and guidelines defined by the City of Emeryville. Project effects were evaluated by comparing results under without project conditions (existing and future scenarios) to results under project conditions. The detailed impact criteria for this study are presented below, which are based on guidance contained in the Appendix G of the CEQA Guidelines, draft updates as described in Senate Bill 743, the City of Emeryville General Plan and recently prepared environmental documents for other projects in the City. A significant transportation-related impact could occur if:

- The project results in increased VMT per capita, and/or results in an average project trip length greater than the regional average as defined by Alameda CTC.
- The project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. A significant impact would be identified:
    - If the addition of project traffic at a study intersection would result in the 95th percentile vehicle queue exceeding the available storage or would increase 95th percentile queue by more than two vehicles where the queue already exceeds the available storage space.

- If the operation of an unsignalized study intersection is projected to decline with the addition of project traffic, and if the installation of a traffic signal based on the Manual on Uniform Traffic Control Devices (MUTCD) Peak Hour Signal Warrant (Warrant 3) would be warranted.

- The project conflicts with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
  - A pedestrian or bicycle impact is considered significant if it would:
    - Disrupt existing facilities;
    - Interfere with planned facilities;
    - Create inconsistencies with adopted system plans, guidelines, policies, or standards; or
    - Not provide secure and safe bicycle parking in adequate proportion to anticipated demand.
  - A bicycle boulevard impact would be considered significant if:
    - The addition of project traffic results in traffic volumes exceeding 1,500 vehicles per day (VPD) for bicycle boulevards east of Hollis Street
    - The addition of project traffic results in traffic volumes exceeding 3,000 vehicles per day for bicycle boulevards west of Hollis Street[1], or
    - For segments that already exceed the guidance outlined in the City of Emeryville Pedestrian and Bicycle Plan, project traffic increases daily vehicle traffic by 2 or more percent.

- A transit impact is considered significant if it would result in development that is inaccessible to transit riders.The project would conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the Alameda County Transportation Commission (Alameda CTC) for designated roads and highways if:
  - Project generated traffic, individually or cumulatively, results in an exceedance of the LOS standard established by the Alameda CTC for designated roads or highways;
  - For a roadway segment of the Alameda CTC Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project; or

[1] Based on Guidance provided in the *City of Emeryville Pedestrian and Bicycle Plan*. Higher volumes can be permitted for short segments with additional treatments.

  - The project causes congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP.[2]

- The project results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks. As this project is not expected to appreciably increase demand for air travel and is located over 5 miles from the nearest airport, this criteria was not further evaluated.
- The project substantially increases traffic hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses.
- The project results in inadequate emergency access.

Although automobile level of service is not assessed as a CEQA metric in this study, intersection levels of service were evaluated to determine if there are recommended improvements to the transportation system that would enhance mobility for vehicle traffic, including transit vehicles, which would not result in secondary impacts to other modes of travel. Intersection improvements may be identified under the following circumstances:

- If a signalized intersection is projected to operate within delay ranges associated with less-than-capacity conditions (i.e., LOS D or better with an average control delay of equal to or less than 55 seconds per vehicle) without the project and the project is expected to cause the facility to operate at a LOS E or F; or
- If an intersection is projected to operate at or over capacity (i.e., LOS E or F) without the project, and the project is expected to increase the average control delay by more than 5 seconds.

For intersections that meet the above criteria, capacity enhancing measures that do not degrade other modes of travel will be considered, including upgrading or installing signal equipment, extending left-turn pocket storage, providing non-motorized facilities to reduce vehicular demand, enhancing capacity on a parallel route and/or enhancing transit access to a site.

CALTRANS FACILITIES

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway facilities (*Guide for the Preparation of Traffic Studies*, Caltrans, December 2002); however, Caltrans recognizes that achieving LOS C/LOS D may not always be feasible. A standard of LOS E or better on a peak hour basis was used as the planning objective for the evaluation of potential impacts to Caltrans

[2] The Alameda County Transportation Commission (ACTC) requires the assessment of development-driven impacts to regional roadways of projects that generate more than 100 "net new" PM peak-hour trips.

facilities of this development (Powell Street/I-80 Ramps and intersections along San Pablo Avenue) as that is the standard set for Caltrans facilities in the study area by the Alameda CTC. The following criteria were used to evaluate potential impacts to Caltrans facilities:

- If a Caltrans facility is projected to operate at LOS E or better without project and the project is expected to cause the facility to operate at LOS F, the impact may be considered significant.
- If a Caltrans facility is projected to operate at LOS F without project and the project is expected to increase delay, the impact may be considered significant.

REPORT ORGANIZATION

This report is organized into the following chapters:

- ***Chapter 1 – Introduction*** describes the analysis methods used for the transportation impact assessment as well as the analysis locations and significance criteria.
- ***Chapter 2 – Existing Conditions*** describes the transportation system near the project site, including the surrounding roadway network, morning, evening, and weekend peak period intersection turning movement volumes, daily volumes, and existing bicycle, pedestrian, and transit facilities.
- ***Chapter 3 – Project Characteristics*** presents project information, including project trip generation, distribution, and assignment.
- ***Chapter 4 – Vehicle Miles of Travel*** presents the results of the VMT assessment conducted for the project for both existing and future conditions.
- ***Chapter 5 – Existing with Project Conditions*** addresses the Existing with Project conditions, including a discussion of potential impacts during the construction phase.
- ***Chapter 6 – Future Conditions*** addresses the near-term (next 5 to 10-years) and longer-term (10+) condition without and with the project.
- ***Chapter 7 – Alameda County Transportation Commission*** Metropolitan Transportation System (MTS) Roadway Analysis presents the impacts of the project on the MTS roadway system.
- ***Chapter 8 – Site Access, Circulation and Parking*** evaluates project site access and circulation for all travel modes, and provides recommendations.

CHAPTER 2. EXISTING CONDITIONS

This chapter describes transportation facilities in the Project study area, including the surrounding roadway network, transit, pedestrian, and bicycle facilities in the vicinity of the site.

EXISTING TRANSPORTATION FACILITIES

EXISTING ROADWAY NETWORK

Regional access to the project site is provided by Interstates (I)-580, I-80, and State Route (SR) 123. Local access to the site is provided by 40th Street, Hollis Street, Stanford Avenue and Powell Street. The project site would be accessed from new roadways connecting to Sherwin Avenue and Horton Street, as well as from driveway(s) on Sherwin Avenue.

The regional and local roadways serving the study area are described below.

I-80 is a freeway connecting San Francisco through the northern United States to the East Coast. The freeway is oriented in a northeast/southwest direction to the west of the project site. I-80 provides five lanes in each direction (four mixed-flow lanes and one high–occupancy vehicle lane) through the East Bay.

I-580 is an east-west freeway that extends from San Rafael to the San Joaquin Valley located south of the project site. It merges with I-80 west of the project site where it continues as I-80 along the bay until they separate in the City of Albany. I-580 provides 5 lanes in each direction south of the site.

San Pablo Avenue (SR 123) is a major north-south arterial located east of the project site, providing an important inter-city link between Oakland and Richmond. As a designated state route through Emeryville, Caltrans is responsible for roadway maintenance and signal operations. Within the study area, San Pablo Avenue is median-separated with two vehicular lanes in each direction. The street is a local commercial corridor, and on-street parking is permitted. San Pablo Avenue is also a local truck route. Sidewalks are continuous along San Pablo Avenue and the posted speed limit is 30 miles per hour (mph). San Pablo Avenue is a designated transit street in the *Emeryville General Plan*.

40th Street is located south of the project site and runs east-west through the cities of Emeryville and Oakland. 40th Street provides two vehicle lanes and a bike lane in each direction. It begins at Shellmound Street in Emeryville and continues east, ending at Howe Street in Oakland. The speed limit is 30 mph

along 40th Street near the project site. 40th Street is a designated transit street. On-street parking is not permitted in the vicinity of the site.

Powell Street is an east-west transit street located north of the project site. Powell Street provides two lanes in each direction with a speed limit of 30 mph. It begins at the Emeryville Marina and continues as Stanford Avenue at San Pablo Avenue.

Stanford Avenue is an east-west oriented roadway north of the project site. Between Horton Street and Hollis Street, it accommodates two-way travel and is a designated transit street. Between Horton Street and Doyle Street, it is also a designated bicycle boulevard. East of Hollis Street, Stanford Avenue provides for eastbound travel only to Powell Street. Stanford Avenue is the continuation of Powell Street with two lanes in each direction until its terminus at Martin Luther King Junior Way in Oakland. On-street parking is permitted east of Doyle Street.

Shellmound Street is a north-south oriented street located west of the project site with two lanes in each direction until Shellmound Way, where it continues with one travel lane in each direction. Shellmound Street is the continuation of 40th Street and extends north into Berkeley where it transitions to an I-80 on-ramp. The speed limit varies between 25 and 30 mph. Shellmound Street is a designated a transit street with Class II and III bicycle facilities.

Halleck Street is a local street that extends for two blocks south of the project site in a north-south orientation. It provides for two-way travel, and accommodates on-street parking and loading for warehouses in the area. Class III Bicycle facilities, connecting to the Bay Trail in the south and the planned South Bayfront pedestrian bridge and Horton Landing Park Paths in the north, are planned on Halleck Street. Existing land uses on Halleck Street often use the travel lane for delivery vehicle loading/unloading, periodically impeding two-way travel.

Hubbard Street is a local street that extends for two blocks south of the project site in a north-south direction. The intersection of Hubbard Street at Sherwin Avenue is anticipated to provide project site access. It provides for two-way travel, and accommodates on-street parking and loading for warehouses in the area. Existing land uses on Hubbard Street often use the travel lane for delivery vehicle loading/unloading, periodically impeding two-way travel.

Sherwin Avenue is an east-west oriented local street that forms the southern boundary of the site. Sherwin Avenue extends two blocks, with one travel lane in each direction from Halleck Street to Horton Street. Project access would be provided from Sherwin Avenue at the intersection of Hubbard Street, as well as from planned driveways. On-street parking is permitted. Class III bicycle facilities are proposed on Sherwin Avenue connecting to the Halleck Street facilities.

Horton Street is a north-south oriented street that begins at Yerba Buena Avenue, south of 40th Street, in the south and continues north to 62nd Street. Horton Street forms the eastern boundary of the project site and provides one travel lane in each direction with a speed limit of 25 mph. Horton Street is a designated a bicycle boulevard, with the portion between Stanford Avenue and 59th Street also designated as a transit street. On-street parking is allowed south of 53rd Street. North of 53rd Street, Class II bicycle facilities are provided on Horton Street.

Hollis Street is a north-south oriented street east of the project site. It typically provides one lane in each direction with a speed limit of 30 mph. Hollis Street begins at Peralta Street in the Oakland and continues north to Folger Avenue in Berkeley. Hollis Street is a designated transit street. On-street parking is allowed on portions of the roadway.

53rd Street extends in an east-west direction from Horton Street to Adeline Street. 53rd Street provides for two-way travel and has a posted speed limit of 25 mph. 53rd Street is a designated a bicycle boulevard. On-street parking is permitted on portions of the street.

45th Street extends in an east-west direction from Horton Street to Broadway in Oakland. 45th Street provides for two-way travel and has a posted speed limit of 25 mph. It is also a designated a bicycle boulevard. On-street parking is permitted on portions of the street.

Park Avenue is an east-west oriented street that begins just west of Halleck Street and terminates at San Pablo Avenue. Park Avenue provides for two-way travel with a speed limit of 25 mph. It is a designated transit street east of Horton Street and a connector street west of Horton Street. On-street parking is generally permitted.

EXISTING PEDESTRIAN FACILITIES

Pedestrian facilities are comprised of sidewalks, crosswalks, and off-street paths. Sidewalks are provided along both sides of most streets in the project vicinity, with missing sidewalk locations shown on **Figure 5**. There are no sidewalks provided along some streets to the south of the project site. Pedestrian access to the western side of the railroad tracks is provided by a pedestrian bridge at the Amtrak station, approximately half a mile north of the project site, as well as from sidewalks on the 40th Street overcrossing.

Crosswalks are located at all signalized intersections within a half mile of the project site. Marked crosswalks are also provided at most unsignalized intersections in the area, except for some locations south of the project site such as on Sherwin Avenue.



LEGEND

No Sidewalk

Project Site

Figure 5

Missing Pedestrian Facilities

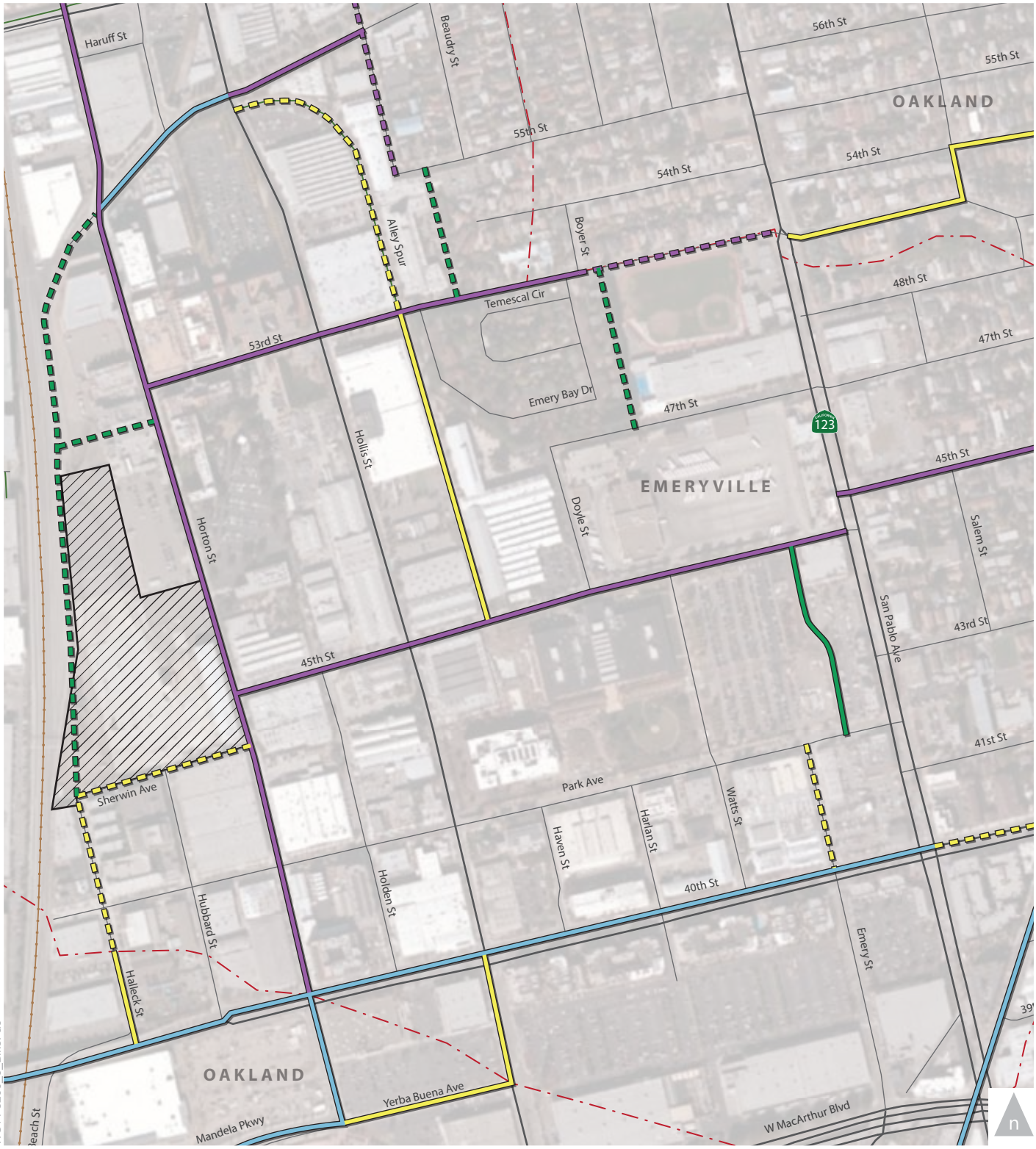
EXISTING BICYCLE FACILITIES

Bicycle facilities include the following:

- Bike paths (Class I) – Paved trails that are separated from roadways.
- Bike lanes (Class II) – Lanes on roadways designated for use by bicycles through striping, pavement legends, and signs.
- Bike routes (Class III) – Designated roadways for bicycle use by signs only; may or may not include additional pavement width for cyclists.
- Bicycle boulevards – Designated low-volume roadways for use by bicycles through signage, pavement markings, intersection crossing treatments, traffic calming, and traffic diversion.

Existing and proposed bicycle facilities within the immediate vicinity (within a 1/2-mile) of the project site are displayed on **Figure 6**. Horton, 53rd and 45th streets are designated bicycle boulevards. A Class I bicycle path is located just west of San Pablo Avenue between 45th Street and Park Avenue. The Bay Trail is also a Class I bicycle path begins at the intersection of Powell Street and Christie Avenue and continues north along the bay to the Berkeley Marina. Class II bicycle lanes are provided on Adeline Street, 40th Street, portions of Horton Street, and a continuation of the Bay Trail on Shellmound Street. Class III bicycle routes are located on portions of Hollis Street, Yerba Buena Road, Halleck Street, and Spur Alley.

A north-south greenway connecting Sherwin Avenue to Stanford Avenue, referred to as the Horton Landing Park Paths, is planned along the western boundary of the project site. It would provide connections from the project area to the South Bayfront area via the planned South Bayfront Bridge, a pedestrian and bicycle connection over the railroad tracks.



WC14-3200_6_BikeFac

LEGEND

Existing	*Proposed*	
		Class I
		Class II
		Class III
		Bicycle Boulevard

Project Site

Figure 6

Existing and Planned Bicycle Facilities

PEDESTRIAN AND BICYCLE OBSERVATIONS

The level of pedestrian and bicycle activity at each of the intersections was documented as presented on **Figure 7** for the weekday evening and Saturday evening peak hours. Pedestrian activity varied by intersection, with the greatest number observed near retail areas (Bay Street Mall and 40th Street), and regional trails (such as the Bay Trail).

Bicycle use is widespread throughout the study area and is consistent with pedestrian activity. In addition to areas of high pedestrian activity, bicyclists were observed along the designated bike facilities, such as Horton Street, which is a designated bicycle boulevard.

ON-STREET PARKING OBSERVATIONS

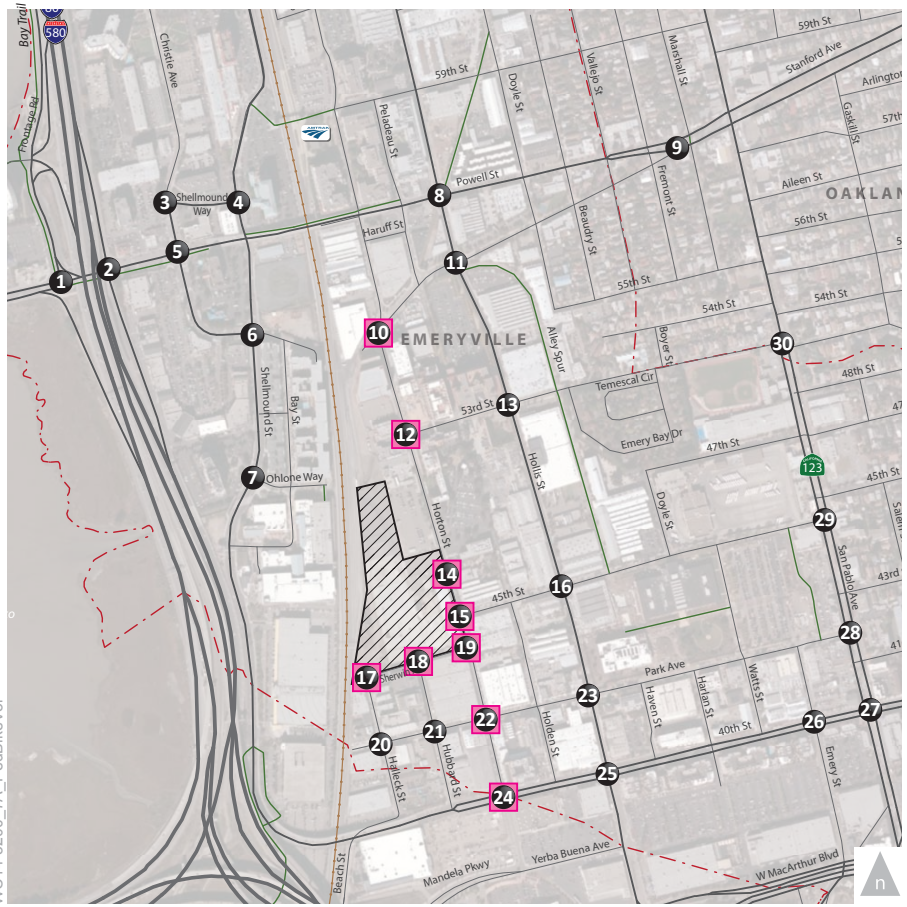
On-street parking is permitted on most portions of the streets surrounding the project site. Observations of parking occupancy indicate that the on-street parking supplies are generally fully occupied for the majority of the day in proximity to the project site.

EXISTING TRANSIT SERVICE

Bus transit service is provided in the study area by AC Transit and Emery-Go-Round. Rail transit is provided by Amtrak and the Bay Area Rapid Transit (BART) system. **Figure 8** shows the existing transit facilities and routes in the study area which include shuttles, buses, rail services, including the location of stops closest to the site. Each transit service is described below.

AC Transit

Several AC Transit Routes serve the area, with stops at the intersection of 40th and Horton Street, an approximately 5-minute walk from the project site. AC Transit connects the study area to neighboring cities in the East Bay as well as the MacArthur BART Station and Downtown Oakland. AC Transit Routes J, F, C, 31 and 26 provide service along 40th Street, south of the project site. AC Transit Routes 802, 72R, 72M, and 72 run along San Pablo Avenue. **Table 4** describes AC Transit service within the project area.



WC14-3200_7A_PedBikeVol

LEGEND

- y(z) — PM (Saturday) Peak Hour Pedestrian Volumes
- Signalized Intersection
- y(z) — PM (Saturday) Peak Hour Bicycle Volumes
- Stop Sign
- # — Weekday PM and Saturday Peak Hour Analysis Study Intersection
- # — Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection
- Project Site

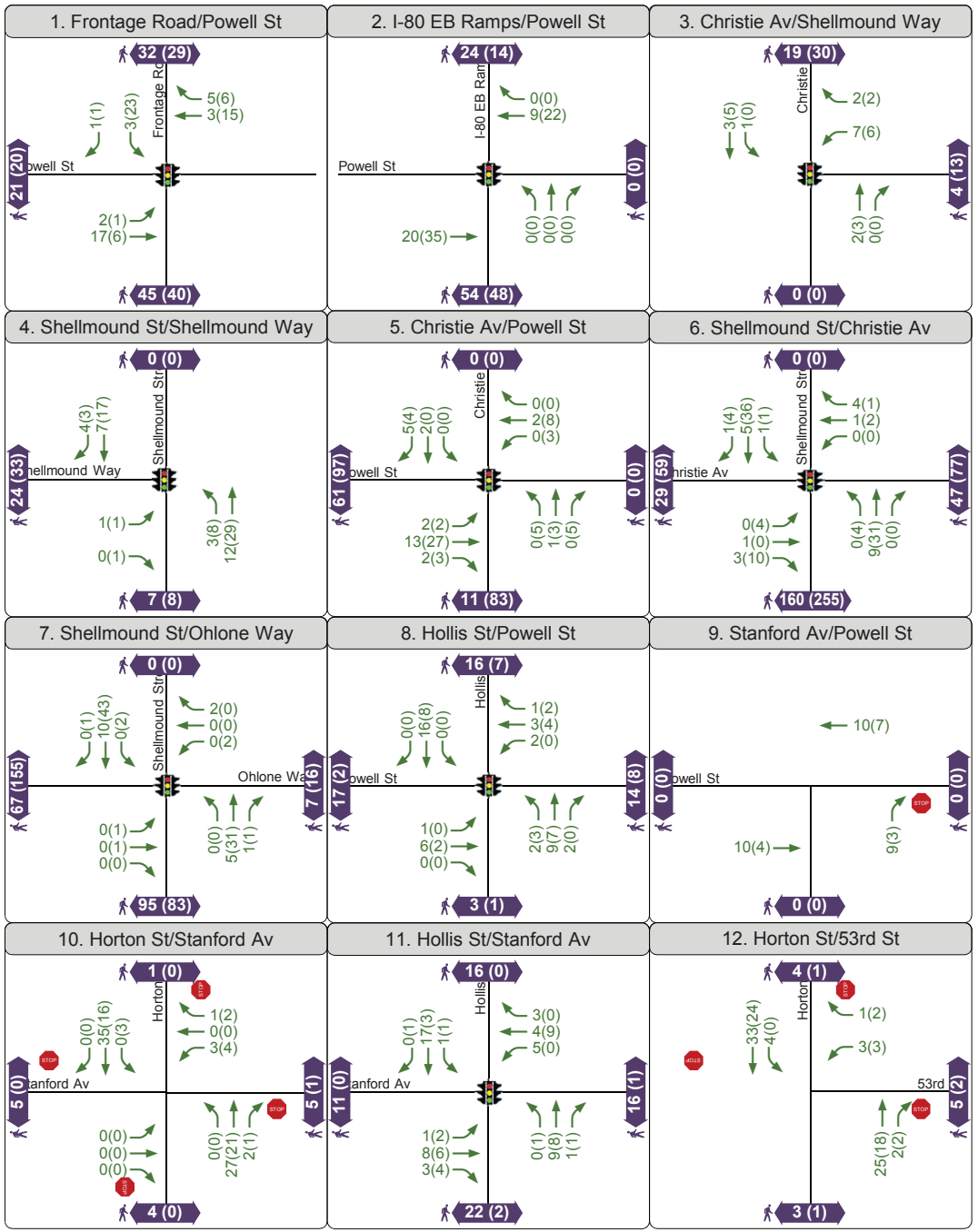
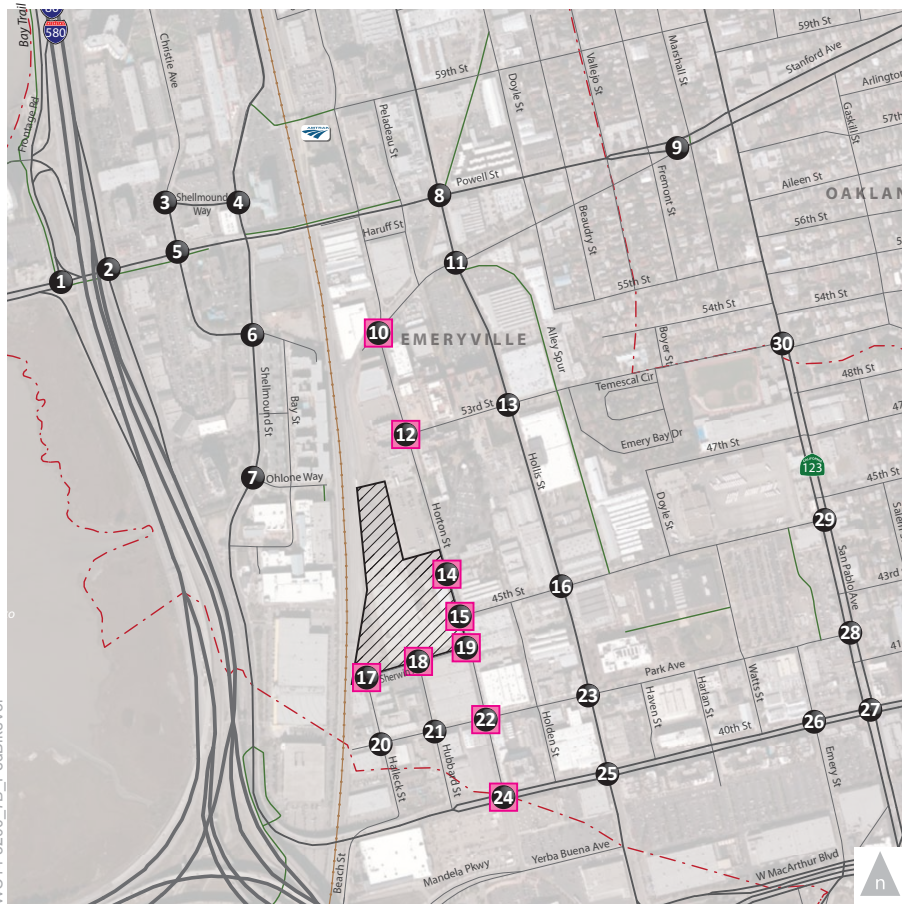


Figure 7A

Existing Pedestrian and Bicycle Volumes



WC14-3200_7B_PedBikeVol

LEGEND

- y(z) — PM (Saturday) Peak Hour Pedestrian Volumes
- y(z) — PM (Saturday) Peak Hour Bicycle Volumes
- # — Weekday PM and Saturday Peak Hour Analysis Study Intersection
- # — Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection
- Project Site
- Signalized Intersection
- STOP — Stop Sign

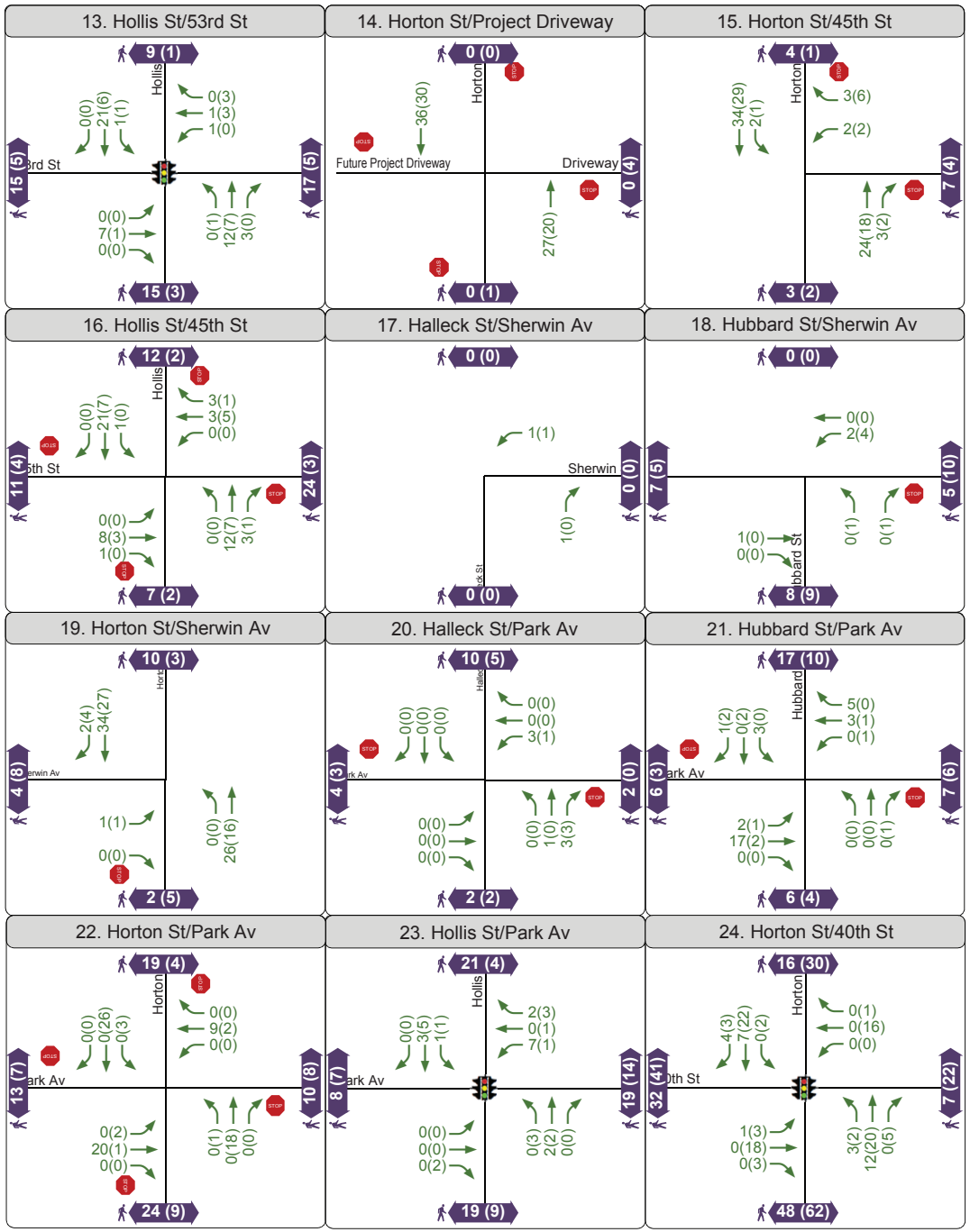
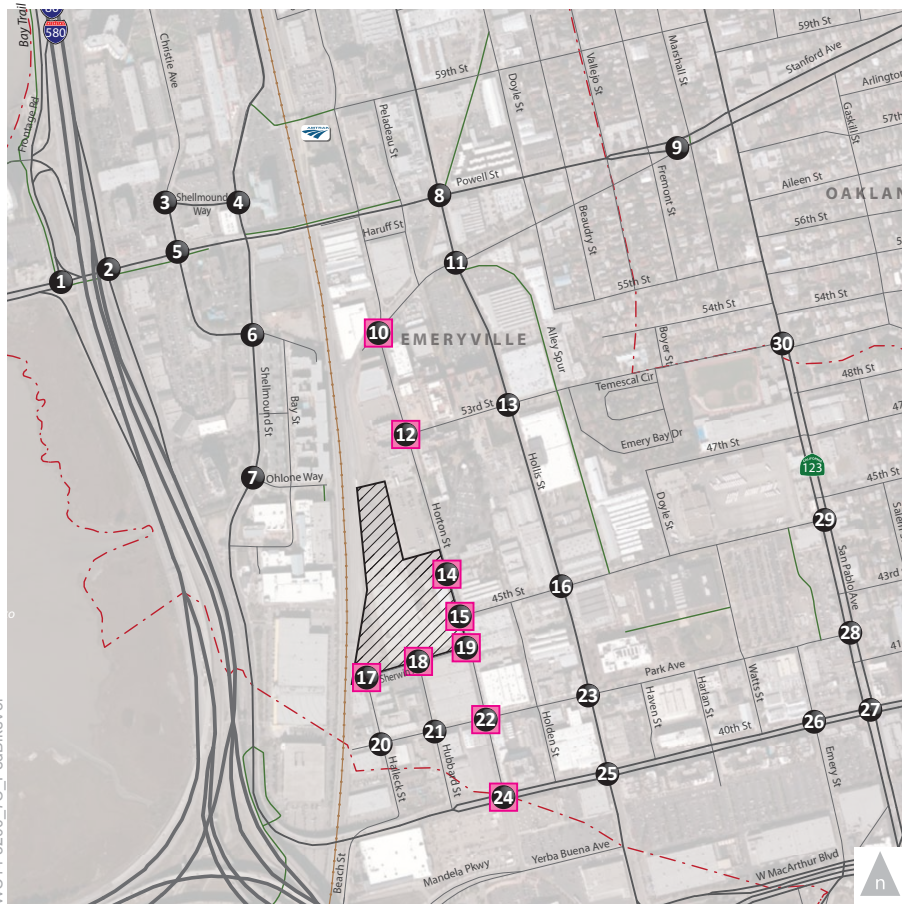
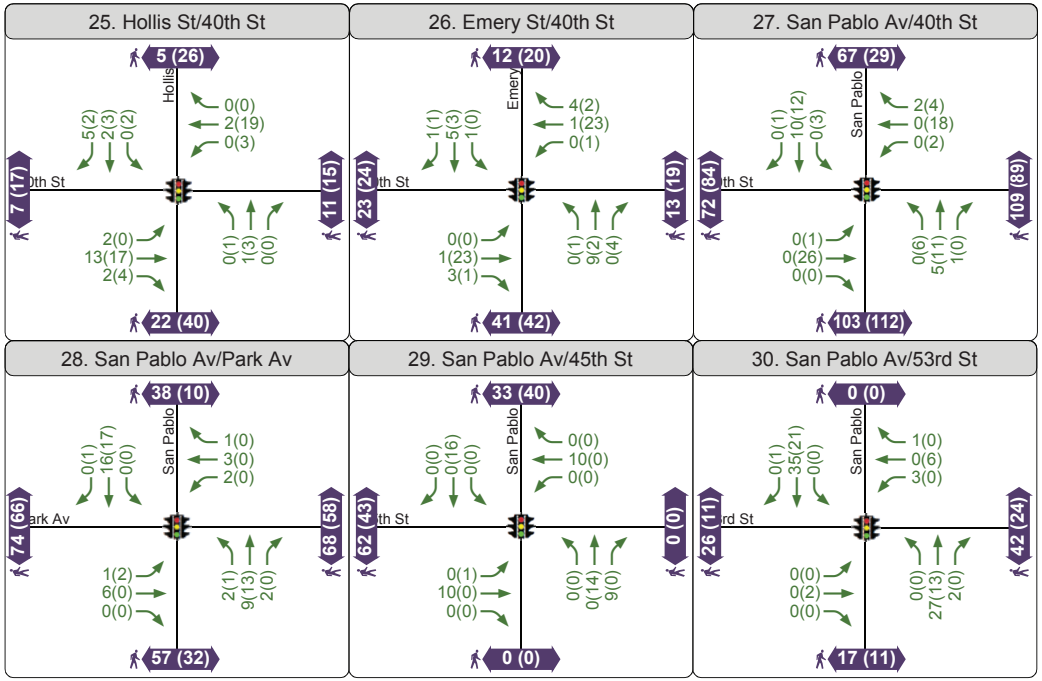


Figure 7B

Existing Pedestrian and Bicycle Volumes





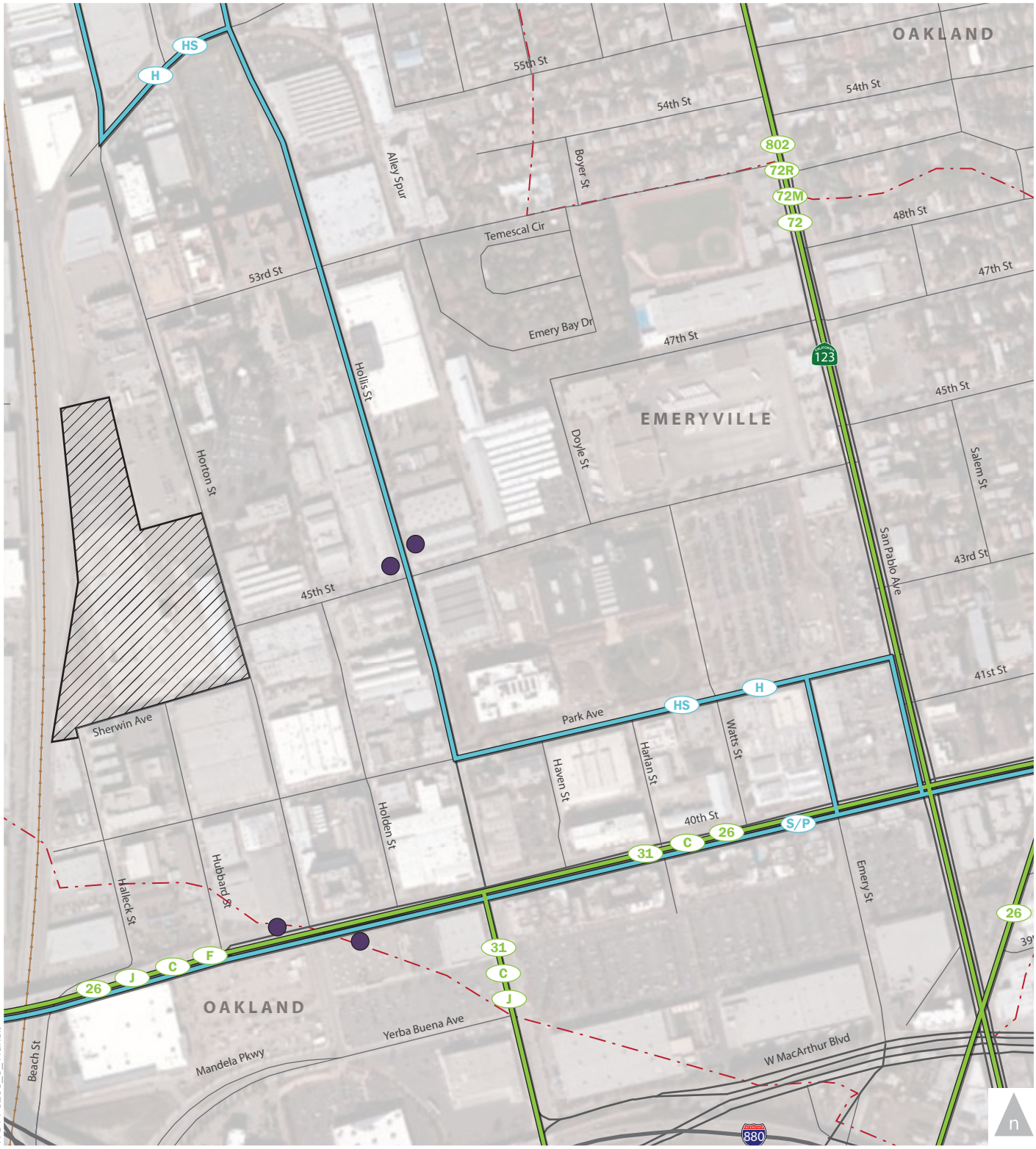
LEGEND

- y(z) — PM (Saturday) Peak Hour Pedestrian Volumes
- Signalized Intersection
- y(z) — PM (Saturday) Peak Hour Bicycle Volumes
- Stop Sign
- # — Weekday PM and Saturday Peak Hour Analysis Study Intersection
- # — Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection
- Project Site

Figure 7C

Existing Pedestrian and Bicycle Volumes

WC14-3200_7C_PedBikeVol



LEGEND

- #X — AC Transit Routes
- X — Emery-Go-Round Routes
- Closest Bus Stop
- Project Site

Figure 8

Existing Transit Routes

TABLE 4
EXISTING WEEKDAY AC TRANSIT SERVICE SUMMARY

Route	Description	Nearest Stop	Hours	Frequency
J	Transbay service from Sacrament Street and University Avenue	40th Street/Horton Street	4:45 pm to 8:00 pm	30 minutes
F	Transbay service from UC Campus	40th Street/Horton Street	6:00 am to 1:00 am	30 minutes
C	Transbay service from Piedmont	40th Street/Horton Street	6:30 am to 8:00 pm	90 minutes during am peak 30 minutes during pm peak
26	To Emeryville Public Market	40th Street/Horton Street	5:40 am to 10:20 pm	20 minutes
31	Alameda to MacArthur BART	40th Street/Hollis Street	5:30 am to 10:00 pm	30 minutes
802	Oakland Amtrak to Berkeley Amtrak	San Pablo Avenue/40th Street	12:40 am to 5:00 am	60 minutes
72R	Oakland to San Pablo	San Pablo Avenue/40th Street	6:00 am to 8:15 pm	12 minutes
72M	Oakland Amtrak to Point Richmond	San Pablo Avenue/40th Street	6:15 am to 12:30 am	30 minutes
72	Oakland Amtrak to San Pablo	San Pablo Avenue/40th Street	5:00 am to 1:00 pm	30 minutes

Source: *actransit.org,* July 2015.

Emery-Go-Round

The Emery-Go-Round system is comprised of four routes, three of which serve the project area, the Hollis South, Hollis and Shellmound/Powell Routes. Buses on the Hollis Routes, which stop at the intersection of Hollis Street/45th Street, operate on 10 minute headways during the peak hours and 15 to 20 minute headways during off-peak hours. Travel time to/from the Hollis Street/45th Street stop to the MacArthur BART station is approximately 5 minutes. The Hollis South Route operates during the morning and evening peak periods on 15-minute headways for a portion of the Hollis Route connecting the MacArthur BART station to the Amtrak station. Stops are provided at the intersection of Hollis Street/45th Street.

Buses on the Shellmound/Powell Route, which stop on 40th Street at Horton Street, operate on 15 minute headways throughout the day. Travel time to/from the 40th Street/Horton Street stop to the MacArthur BART station is approximately 5 minutes.

Amtrak

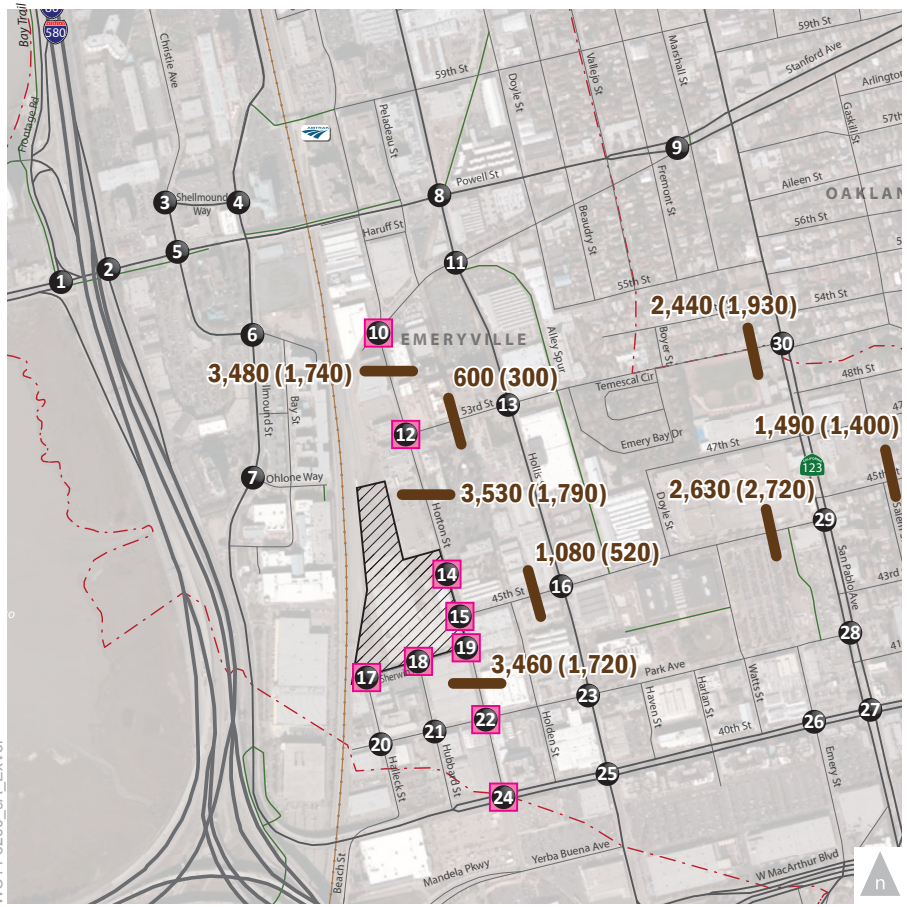
An Amtrak station, providing passenger rail service, is located approximately 1/2 mile to the north of the project site. Service from the Emeryville Amtrak station provides inter-regional travel to Sacramento, the Central Valley, Southern California, and Northern California.

BART

The Bay Area Rapid Transit (BART) system provides regional rail transit service connecting San Francisco, Alameda County, Contra Costa County, and parts of San Mateo County. The nearest BART station to the Project site is the MacArthur BART Station, which is approximately 1.5 miles to the east. From the MacArthur BART station, direct connections to San Francisco, destinations on the Richmond and Fremont lines, and the Pittsburgh Bay Point Line are provided. All Emery-Go-Round routes connect to the MacArthur BART station. The AC Transit routes that serve the study area on San Pablo Avenue (72, 72M, 72R and 802) do not serve the MacArthur BART station but do serve the 19th Street BART/Uptown Transit center. During the peak periods, trains operate on less than 10 minute headways to/from San Francisco. Trains run to/from San Francisco with 15 to 20 minute headways during the off-peak.

EXISTING INTERSECTION VOLUMES AND LANE GEOMETRIES

Weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM), and Saturday (3:00 to 5:00 PM) peak period intersection turning movement counts were conducted at the study intersections in Winter 2015 on clear days with area schools in session. For the study intersections, the single hour with the highest traffic volumes during each count period was identified. Existing lane configurations and signal controls were obtained through field observations. The peak hour vehicle volumes are presented on **Figure 9** along with the existing lane configurations and traffic controls. Detailed traffic count data are contained in **Appendix A**.



WC14-3200_9A_ExVol

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

X (Y) Weekday (Saturday) Daily Roadway Segment Volumes

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

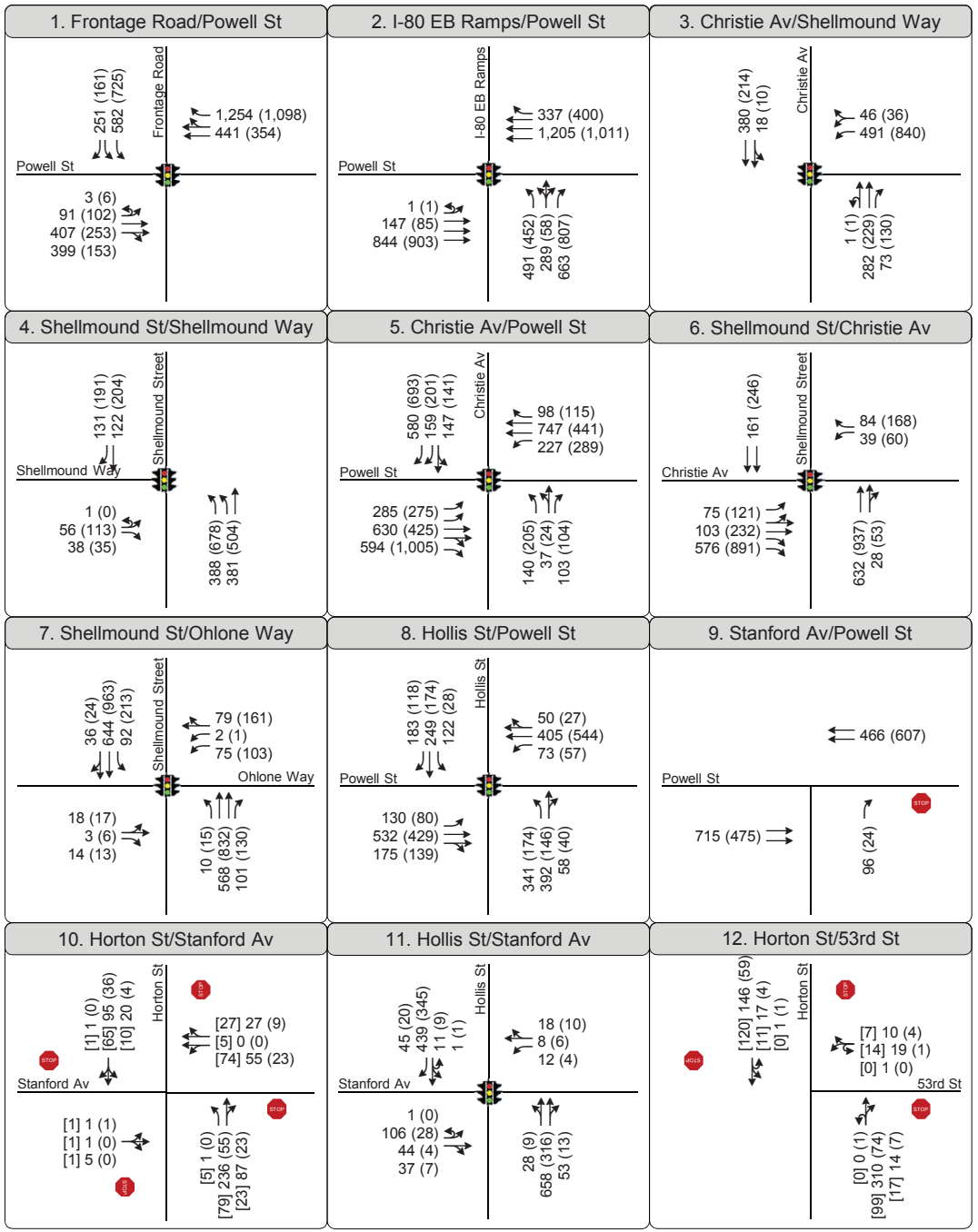
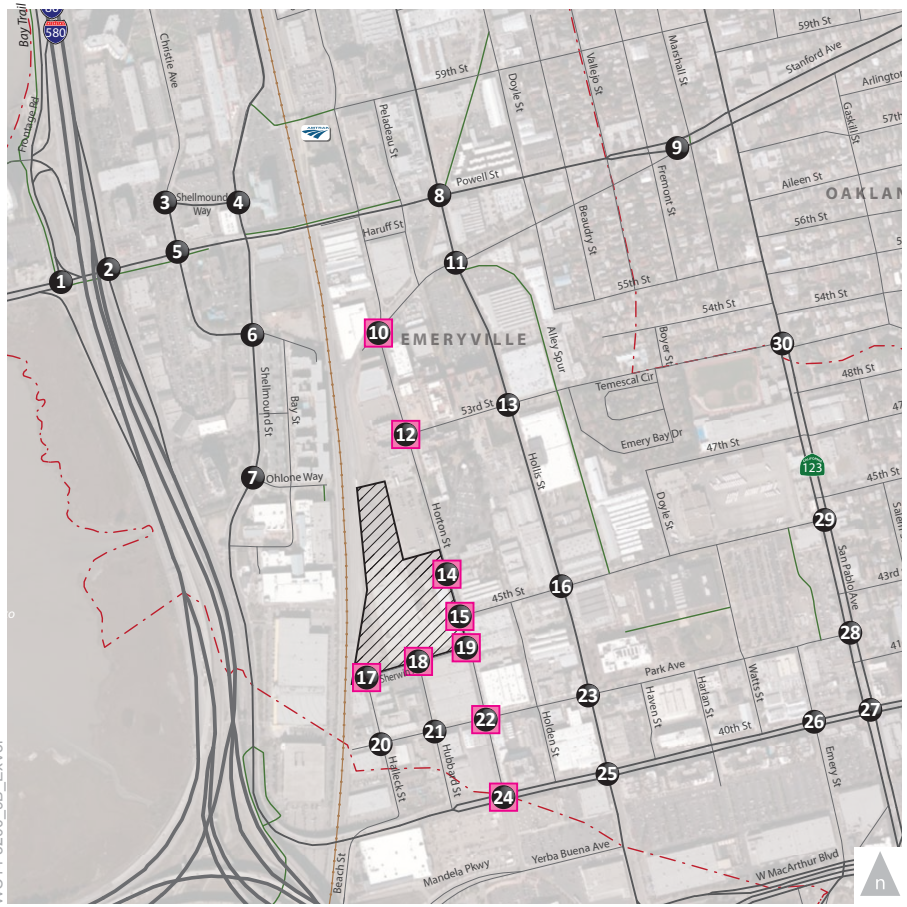


Figure 9A

Existing Peak Hour Volumes, Lane Configurations and Traffic Control



WC14-3200_9B_ExVol

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

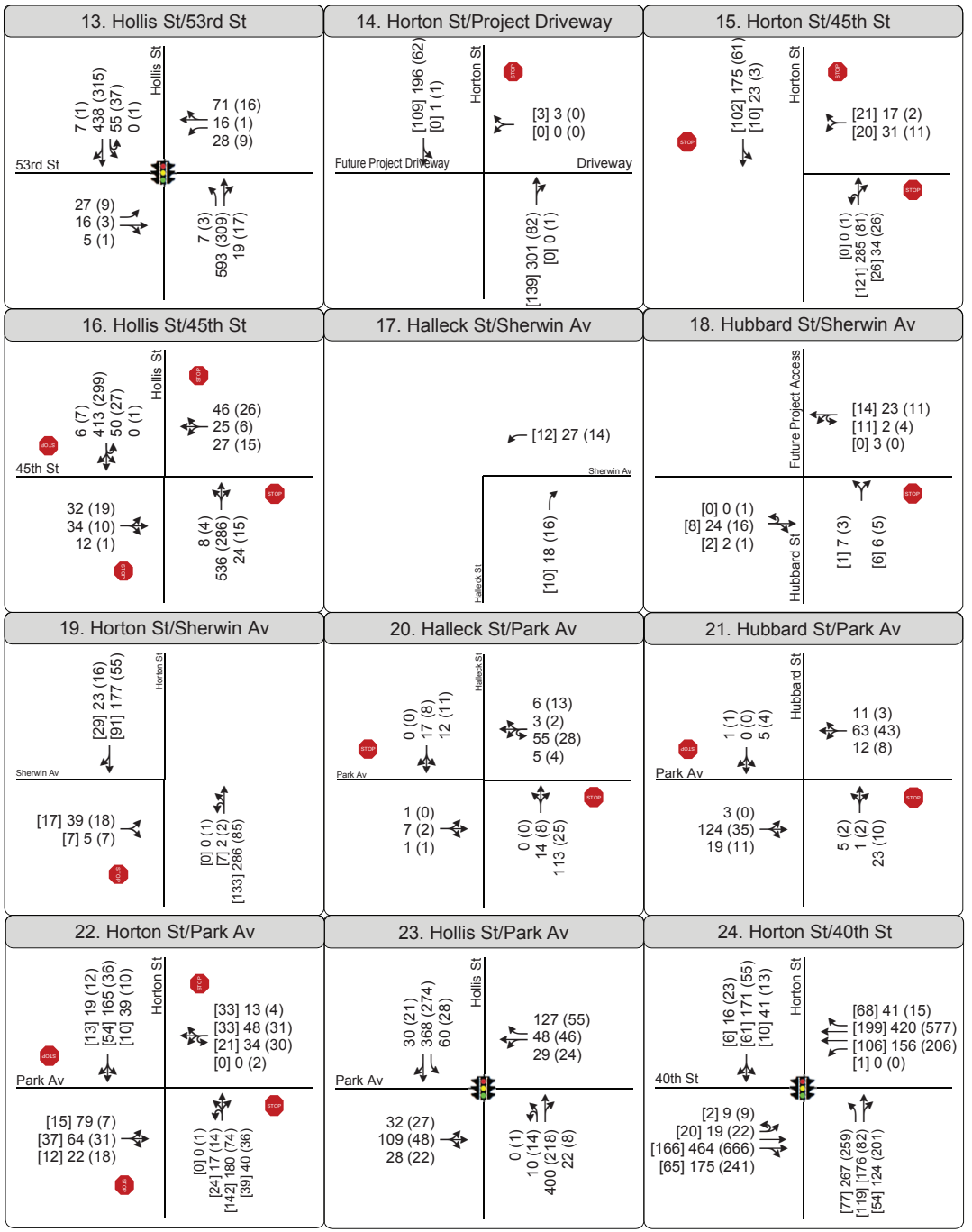
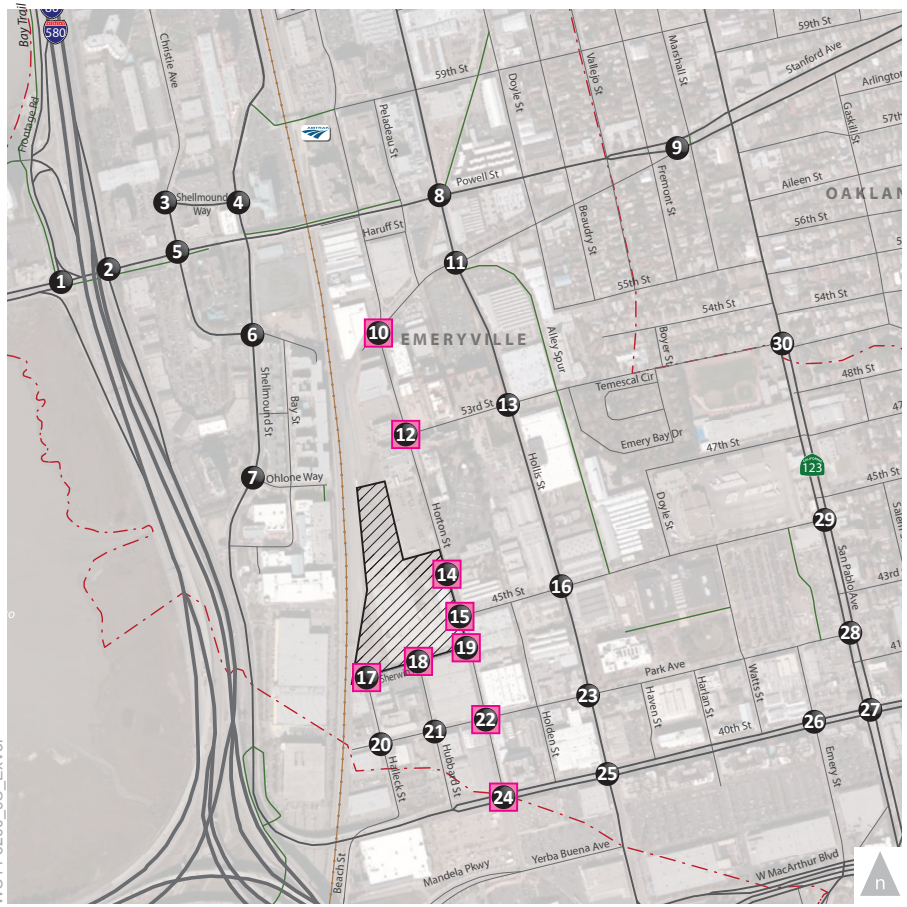
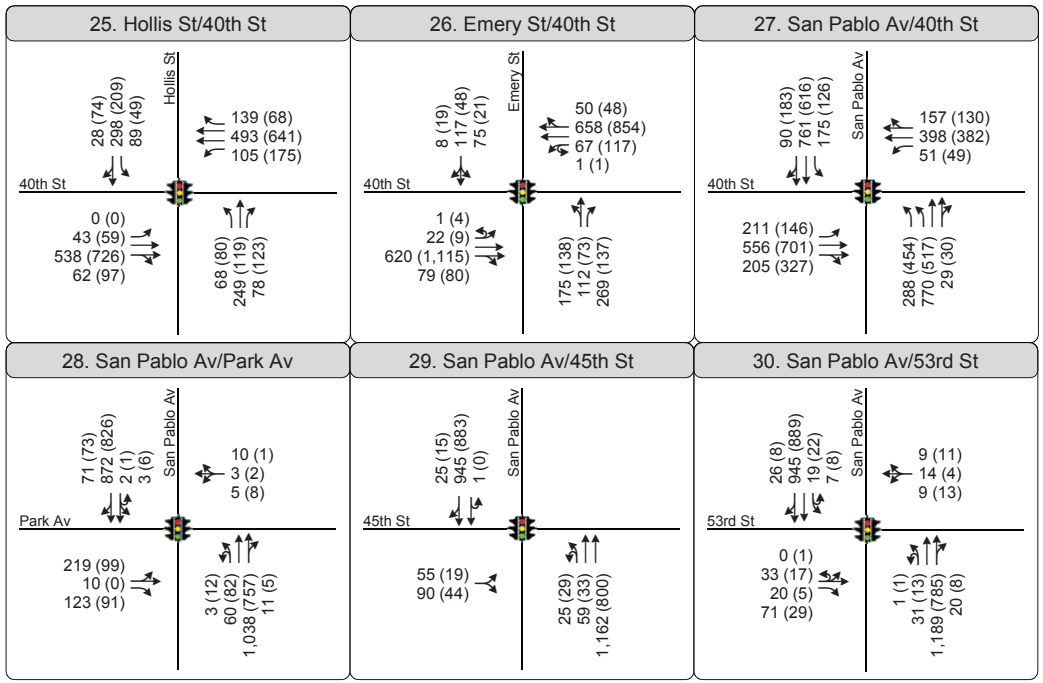


Figure 9B

Existing Peak Hour Volumes, Lane Configurations and Traffic Control





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 9C

Existing Peak Hour Volumes, Lane Configurations and Traffic Control

WC14-3200_9C_ExVol

SIGNAL WARRANTS

Traffic signal warrants were reviewed for the unsignalized study intersections. Peak hour volume and delay signal warrants[3] are not currently satisfied at any of the unsignalized study intersections.

EXISTING INTERSECTION LEVELS OF SERVICE

Existing intersection lane configurations and traffic controls, signal timings, and peak hour turning movement volumes were used to calculate the levels of service for the study intersections during each peak hour. The results of the LOS analysis using the Synchro 8 software program for Existing conditions are presented in **Table 5**. **Appendix B** contains the corresponding LOS calculation sheets.

Intersections on 40th Street and within the Powell Street/Christie Avenue area experience periodic delays greater than shown in Table 6 due to pedestrian activity across the intersection impeding the ability of right-turning vehicles to complete the movement, as well as from vehicle queue spillback between closely spaced intersections. Delay along the Powell Street/Christie Avenue loop area can be greater for some movements than the average delay presented in Table 6 due to vehicle queues that form at the closely spaced intersections that are not able to clear within a cycle, impeding some vehicle movements.

Bicyclists also experience similar levels of delay as vehicles, but since bicyclists can typically maneuver to the front of the intersection on a red light, they can bypass queued vehicles. Pedestrian delay at signalized intersections is a function of when pedestrians arrive at a crossing and the cycle length. Cycle lengths vary from approximately 60 seconds for local street intersections to 120 seconds at regional street intersections that carry through traffic, resulting in average pedestrian delays between 15 and 90 seconds at signalized intersections.

Average and 95th percentile vehicle queues as calculated by Synchro were also reviewed for signalized study intersections. The 95th percentile queues, as detailed in **Appendix C**, exceeded the available storage for intersections in the Powell Street/Christie Avenue area and along the 40th Street corridor during at least one peak hour. When I-80 in the vicinity of Powell Street is operating at capacity, vehicle queues from the on-ramp spillback to Powell Street affecting the operations of the arterial street system.

[3] Unsignalized intersection warrant analysis is intended to examine the general correlation between existing conditions and the need to install new traffic signals. Existing peak-hour volumes are compared against a subset of the standard traffic signal warrants recommended in the Manual of Uniform Traffic Control Devices (MUTCD) and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely on the warrants because the installation of signals can lead to certain types of collisions. The responsible State or local agency should undertake regular monitoring of actual traffic conditions and accident data and conduct a timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

TABLE 5
EXISTING INTERSECTIONS LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Delay[3]	LOS
1	Powell Street/Frontage Road	Signal	PM SAT	41 45	D D
2	Powell Street/Eastbound I-80 Off-Ramp[4]	Signal	PM SAT	29 27	C C
3	Shellmound Way/Christie Avenue[4]	Signal	PM SAT	11 11	B B
4	Shellmound Street/Shellmound Way[4]	Signal	PM SAT	16 22	B C
5	Powell Street/Christie Avenue[4]	Signal	PM SAT	34 50	C D
6	Shellmound Street/Christie Avenue	Signal	PM SAT	29 27	C C
7	Shellmound Street/Ohlone Way	Signal	PM SAT	17 23	B C
8	Powell Street/Hollis Street	Signal	PM SAT	38 39	D D
9	Powell Street/Stanford Avenue	SSSC	PM SAT	1 (12) 1 (11)	A (B) A (B)
10	Horton Street/Stanford Avenue	AWSC	AM PM SAT	8 10 7	A A A
11	Hollis Street/Stanford Avenue	Signal	PM SAT	7 3	A A
12	Horton Street/53rd Street	AWSC	AM PM SAT	8 10 7	A A A
13	Hollis Street/53rd Street	Signal	PM SAT	8 4	A A
14	Horton Street/46th Street (Future Roadway)	SSSC	AM PM SAT	--	--
15	Horton Street/45th Street	AWSC	AM PM SAT	8 10 7	A A A
16	Hollis Street/45th Street	AWSC	PM SAT	32 11	D B
17	Halleck Street/Sherwin Avenue	Free	AM PM SAT	0 0 0	A A A

TABLE 5
EXISTING INTERSECTIONS LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Delay[3]	LOS
18	Hubbard Street/Sherwin Avenue/Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)
19	Horton Street/Sherwin Avenue	SSSC	AM PM SAT	1 (11) 1 (13) 1 (9)	A (B) A (B) A (A)
20	Halleck Street/Park Avenue	SSSC	PM SAT	8 (11) 7 (10)	A (B) A (A)
21	Hubbard Street/Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)
22	Horton Street/Park Avenue	AWSC	AM PM SAT	9 11 8	A B A
23	Hollis Street/Park Avenue	Signal	PM SAT	15 12	B B
24	Horton Street/40th Street	Signal	AM PM SAT	28 47 46	C D D
25	Hollis Street/40th Street[4]	Signal	PM SAT	31 31	C C
26	Emery Street/40th Street[4]	Signal	PM SAT	35 31	C C
27	San Pablo Avenue/40th Street[4]	Signal	PM SAT	37 40	D D
28	San Pablo Avenue/Park Avenue	Signal	PM SAT	19 8	B A
29	San Pablo Avenue/45th Street	Signal	PM SAT	7 6	A A
30	San Pablo Avenue/53rd Street	Signal	PM SAT	13 8	B A

Notes: 1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized

2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour

3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2000 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).

4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.

Source: Fehr & Peers, 2015.

DAILY ROADWAY SEGMENT OPERATION

Automatic machine traffic counts were conducted over a 72-hour period on clear days in January 2015 and June 2015 with area schools in session along Horton Street, 45th Street and 53rd Street, as these roadways are designated bicycle boulevards. The days of data collection included two weekdays and a Saturday. The average daily traffic volumes and peak hour traffic flows on these roadways are summarized below in **Table 6**.

TABLE 6
EXISTING DAILY TRAFFIC VOLUMES

Roadway	Average Weekday			Saturday	
	Average Daily Traffic[1]	Peak Hour Traffic[2]	Daily Fluctuation[3]	Daily Traffic	Peak Hour Traffic
A. Horton Street, north of 53rd Street	***3,480***	520	±1%	1,740	70
B. Horton Street, 45th to 53rd Streets[4]	***3,530***	520	±4%	1,790	70
C. Horton Street, south of Sherwin Avenue	***3,460***	480	±1%	1,720	70
D. 53rd Street, east of Horton Street	600	60	±2%	300	20
E. 45th Street, east of Horton Street	1,080	120	±0%	520	30
F. 45th Street, west of San Pablo Ave	***2,630***	250	±4%	***2,720***	270
G. 45th Street, east of San Pablo Ave	1,490	150	±1%	1,400	160
H. 53rd Street, east of San Pablo Avenue[5]	***2,440***	200	--	***1,930***	80

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.

1. Average daily two-way traffic measured over two days (except as noted).
2. Average peak hour volume from the two weekdays of data collection.
3. Percent difference between the two days of data collection.
4. City's Speed Feedback Counts on Horton Street between 45th Street and 53rd Street is approximately 4,100. This count has not been calibrated to other sources of count data along the corridor and may not be accurate as the count could include bicycles. City has no such numbers for any of the other segments analyzed in the above table.
5. Daily traffic volume estimated based on PM peak hour volumes on the roadway segment, and the ratio of daily to peak hour volumes from parallel roadways.

Source: Fehr & Peers, 2015.

Horton Street carries approximately 3,500 vehicles on a typical weekday, exceeding the desired level of vehicle traffic on a bicycle boulevard west of Hollis Street, which is less than 3,000 vehicles per day. Traffic volumes on the roadways were fairly consistent on both weekdays of data collection, with a variation in daily volume between one and four percent.

Traffic volumes on 45th and 53rd streets, west of San Pablo also exceed the desired level of vehicle traffic on a bicycle boulevard east of Hollis Street, which is less than 1,500 vehicles per day on both weekday and Saturday conditions.

CHAPTER 3. PROJECT CHARACTERISTICS

This chapter provides an overview of the proposed land use components within the project and describes the expected trip generation, distribution, and assignment characteristics, allowing for an evaluation of the impacts of development on the surrounding roadway network. The amount of traffic associated with the project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the Project site was estimated.
2. **Trip Distribution** – The *direction* trips would use to approach and depart the site was projected.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

PROJECT DESCRIPTION

Two project development scenarios are currently under consideration, Option A and Option B. Both Options would result in the same level of development on the site. The primary difference between the two options is a location swap of Parcel C-1 and the Park, and the amount of on-site parking spaces. Both options as proposed would result in approximately 79,600 square feet of office, 540 residential units, 10,000 square feet of retail, and 5,000 square feet of restaurant, as summarized previously in Table 1.

TRIP GENERATION

Trip generation refers to the process of estimating the amount of vehicular traffic a project might add to the local roadway network. In addition to estimates of daily traffic, estimates were also created for the peak one-hour periods during the morning (AM) and evening (PM) commute hours, when traffic volumes on adjacent streets are typically at their highest. For this project, estimates for peak Saturday conditions were also prepared since traffic volumes in the area are higher on Saturdays than weekdays due to the retail centers on Shellmound Street and 40th Street.

The traditional methods commonly used by traffic engineers to calculate the trip generating potential of developments in urban areas with a variety of travel options can overestimate their impacts because the methods do not accurately reflect the amount of trips made by transit, biking, and/or walking. This results in increased development costs due to oversized infrastructure, and skewed public perception of the likely impacts of development.



The most common method used by traffic engineers is outlined in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9th Edition). This method contains data primarily collected at suburban, single-use, freestanding sites. This limits the applicability of the data to urban areas, such as the project, which is located in a dense, walkable, urban setting with a mix of land uses, and with nearby local and regional transit service. This method does not adequately account for key variables that influence travel such as development density and scale, location efficiency, land use mix in close proximity to the site, urban design and transit orientation.

Two significant new research studies provide the opportunity to improve the state of practice. One study sponsored by the US EPA[4] and another by the Transportation Research Board[5] have developed means to improve trip generation estimation for mixed-use developments (MXDs) and those located in urban areas. The two studies examined over 260 MXD sites throughout the U.S. and, using different approaches, developed new quantification methods. Fehr & Peers has reviewed the two methods, including the basis, capabilities, and appropriate uses of each, to produce a new method (MXD+) that combines the strengths of the two individual methods. MXD+ recognizes that traffic generation by mixed-use and other forms of sustainable development relate closely to the density, diversity, design, destination accessibility, transit proximity, and scale of development. MXD+ improves the accuracy of vehicle trip estimation and gives planners a tool to balance land use mix and to incorporate urban design, context compatibility, and transit orientation to create lower impact development.

The MXD+ methodology starts with ITE trip generation estimates but then adjusts those estimates to account for the mixed-use and environment characteristics. Use of the MXD+ methodology requires more input data than a traditional trip generation application. Data detailing the geographic layout of the site, land use in the surrounding area, including retail and employment opportunities, and socioeconomic data of both the site and the surrounding area were collected to inform the MXD+ methodology. Sources used to collect this data include the Metropolitan Transportation Commission (MTC) travel demand model, Census and American Community Survey (ACS), the Bay Area Travel Survey (BATS), and the project site plan.

The MXD+ model has been approved for use by the EPA[6]. It has also been peer-reviewed in the ASCE Journal of Urban Planning and Development[7], peer-reviewed in a 2012 TRB paper evaluating various

[4] *Traffic Generated by Mixed-Use Developments—A Six-Region Study Using Consistent Built Environmental Measures* (Ewing et al, ASCE UP0146, Sept 2011).

[5] National Cooperative Highway Research Program (NCHRP) Report 684 *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments* (Bochner et al, March 2011).

[6] Trip Generation Tool for Mixed-Use Developments (2012). www.epa.gov/dced/mxd_tripgeneration.html

[7] "Traffic Generated by Mixed-Use Developments—Six-Region Study Using Consistent Built Environmental Measures." Journal of Urban Planning and Development, 137(3), 248–261.

smart growth trip generation methodologies[8], recommended by San Diego Association of Governments (SANDAG) for use on mixed-use smart growth developments[9], and has been used successfully in multiple certified Environmental Impact Reports in California.

For 27 mixed-use sites that were surveyed in California and across the country, the ITE method overestimated daily traffic generation by 24 percent and peak hour traffic by 35 percent to 37 percent. The MXD+ method explains 97 percent of the variation in trip generation among MXDs, compared to 65 percent for the methods previously recommended by ITE. While remaining slightly (2 percent to 4 percent) conservative to avoid systematically understating impacts, MXD+ substantially reduces the 35 percent - 37 percent average overestimate of traffic generation produced by conventional ITE methods. The MXD+ method has been locally validated to dozens of transit oriented development (TOD) sites in the Bay Area and across the country. Outputs of this tool include external vehicle trip generation, internal trips, and external walking/bicycling/transit trips. This tool has been used to refine trip generation estimates for recently approved projects in Emeryville, including Marketplace and Site A projects.

Table 7 shows the estimated trip generation for the project. In terms of ITE trip generation, which represents the total trip generation of the project for all travel modes, the project is expected to generate approximately 5,540 weekday daily trips, including about 460 morning peak hour and 540 evening peak hour trips. On a typical Saturday, the project would generate approximately 4,940 trips, including 430 during the peak hour. However, there are a number of factors that would reduce the overall number of trips made by a vehicle to/from this site, including a number of trips expected to be internal to Emeryville as walk/bike trips, or transit trips.

Based on the MXD+ model, is it expected that on a typical weekday, approximately 10 percent of trips would remain internal to the development. It is expected that approximately 15 percent of trips would arrive at/depart the site by walking or biking as the primary model of travel, with 15 percent of weekday peak hour (10 percent of weekday daily) and 10 percent of weekend trips via transit. The remaining trips would occur via an automobile. Although some trips to the retail component could be pass-by trips, which are trips that make an interim stop on an already planned trip, route deviation from 40th Street or San Pablo Avenue would result in new traffic in the immediate vicinity of the project site. Therefore, no pass-by reduction was taken for this analysis. When considering the MXD+ reductions described above, the project is expected to generate approximately 3,600 daily vehicle trips, including approximately 280 weekday morning peak hour and 320 weekday evening peak hour trips to the regional roadway network. On a Saturday, the project could generate up to 3,220 vehicle trips, including 280 peak hour trips.

[8] Shafizadeh, Kevan, Richard Lee et al. "Evaluation of the Operation and Accuracy of Available Smart Growth Trip Generation Methodologies for Use in California". Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.

[9] SANDAG Smart Growth Trip Generation and Parking Study. http://www.sandag.org/index.asp?projectid=378&fuseaction=projects.detail

TABLE 7
TRIP GENERATION ESTIMATES

Use	Size	Weekday							Saturday			
		Daily	AM Peak Hour			PM Peak Hour			Daily	Peak Hour		
			In	Out	Total	In	Out	Total		In	Out	Total
Retail[1]	10,000 square feet (sf)	430	6	4	10	18	19	37	500	25	23	48
Restaurant[2]	5,000 sf	640	30	24	54	29	20	49	790	37	33	70
Office[3]	79,600sf	880	109	15	124	20	99	119	200	18	16	34
	Total Commercial Trips	1,950	145	43	188	67	138	205	1,490	80	72	152
Residential[4]	540 Units	3,590	55	220	275	218	117	335	3,450	141	140	281
	Total Trip Generation	*5,540*	*200*	*263*	*463*	*285*	*255*	*540*	*4,940*	*221*	*212*	*433*
	Less Trip Reductions											
	Internal Trips[5]	-550	-20	-26	-46	-29	-26	-55	-490	-22	-21	-43
	External Walk/Bike Trips[6]	-830	-30	-39	-69	-43	-38	-81	-740	-33	-32	-65
	External Transit Trips[7]	-550	-30	-39	-69	-43	-38	-81	-490	-22	-21	-43
Net New Vehicle Trips to Network[8]		***3,610***	***120***	***159***	***279***	***170***	***153***	***323***	***3,220***	***144***	***138***	***282***

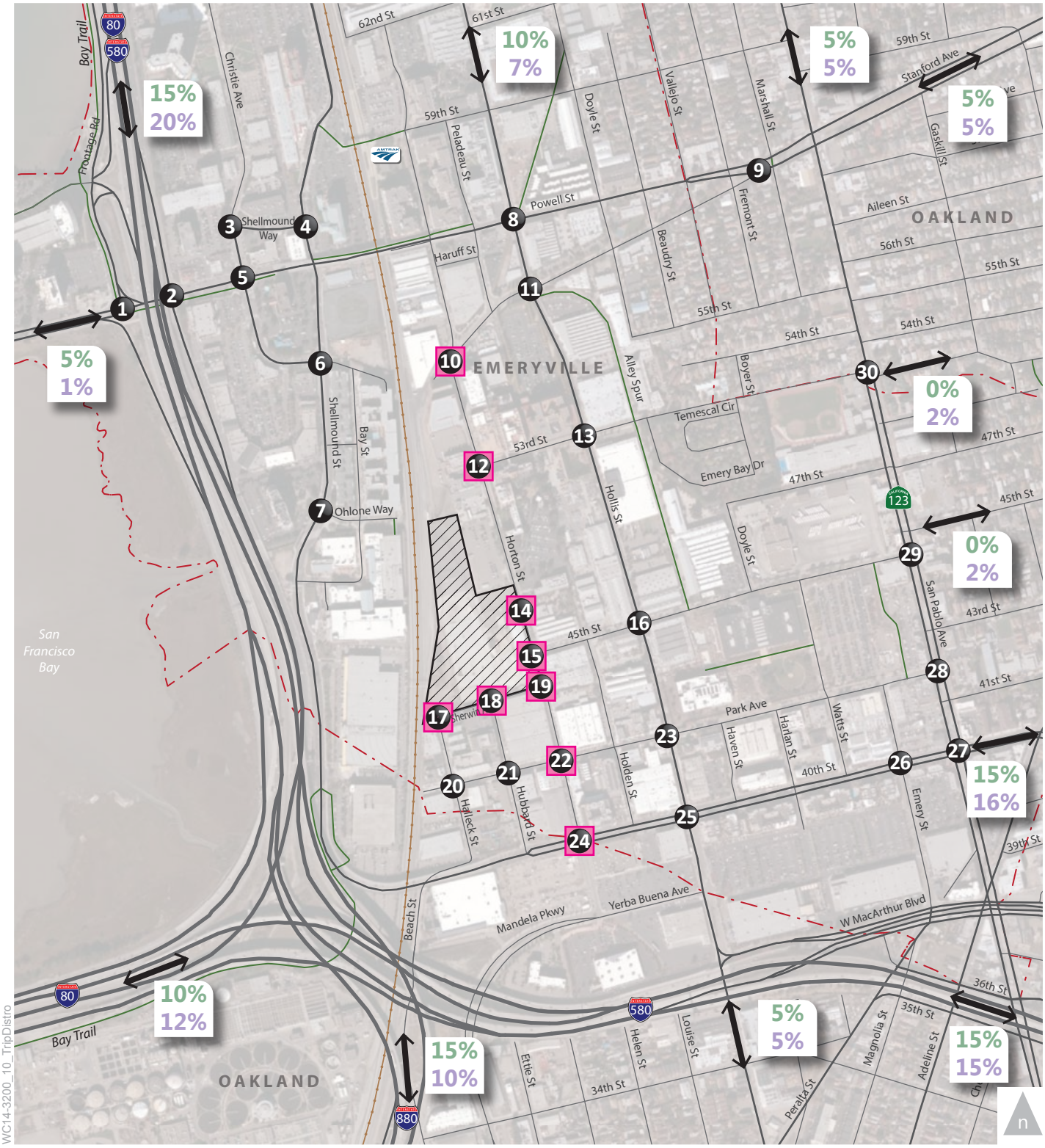
1. Based on *Trip Generation* (9th Edition) trip generation rates for land use 820, General Retail
2. Based on *Trip Generation* (9th Edition) trip generation rates for land use 932, High-turnover sit-down Restaurant assuming Breakfast service.
3. Based on *Trip Generation* (9th Edition) trip generation rates for land use 710, Non-medical office
4. Based on *Trip Generation* (9th Edition) trip generation rates for land use 220, Apartment
5. It is estimated that approximately 10 percent of trips would remain internal to the development.
6. 15 percent of trips are expected to be external walk/bike trips.
7. 10 percent of weekday daily, 15 percent of weekday peak hour trips and 10 percent of weekend trips are expected to be transit trips to/from the site.
8. The net vehicle trip estimates using the MXD+ method in conjunction with ITE trip generation rates represents a 30-40% reduction compared to using the ITE methodology alone.

Source: Fehr & Peers, 2015

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution is defined as the direction of approach and departure that vehicles would use to arrive at and depart from the site. The trip distribution estimates were developed based on the locations of complementary land uses and existing travel patterns in the area. Project trip distribution percentages are shown on **Figure 10**.

The project trips were assigned to the roadway system based on the directions of approach and departure discussed above. **Figure 11** shows the net new project trips assigned to each turning movement by intersection for Option A and **Figure 12** depicts the project trip assignment under Option B. Although total vehicle trip generation is the same, the vehicle routing under each option is different as there are different driveway locations.



WC14-3200_10_TripDistro

LEGEND

- (#) Weekday PM and Saturday Peak Hour Analysis Study Intersection
- (#) Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection
- Project Site
- X% / Y% — Residential Project Trip Distribution / Commercial Project Trip Distribution

Figure 10

Project Trip Distribution



WC14-3200_11A_PTA-OptA

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

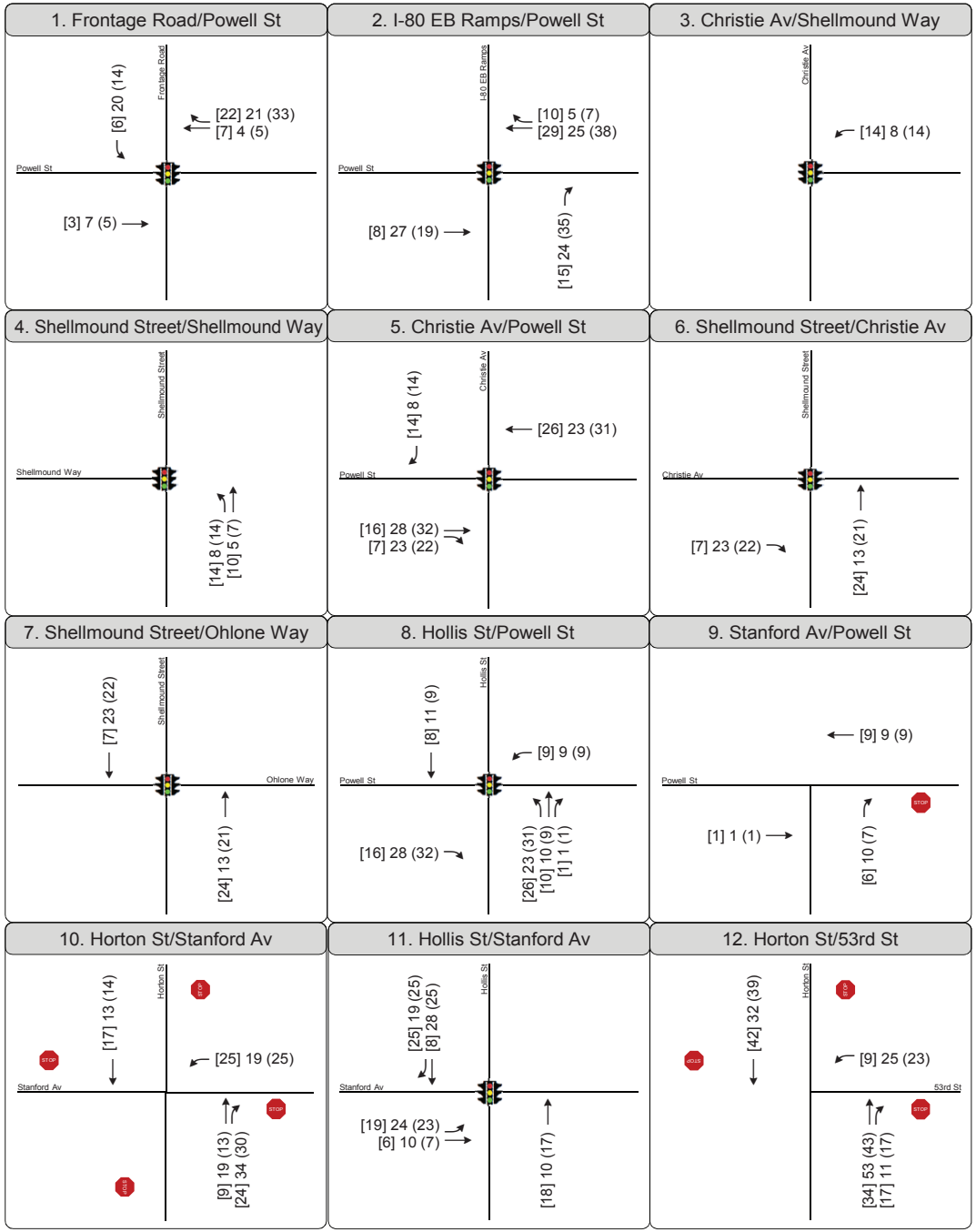
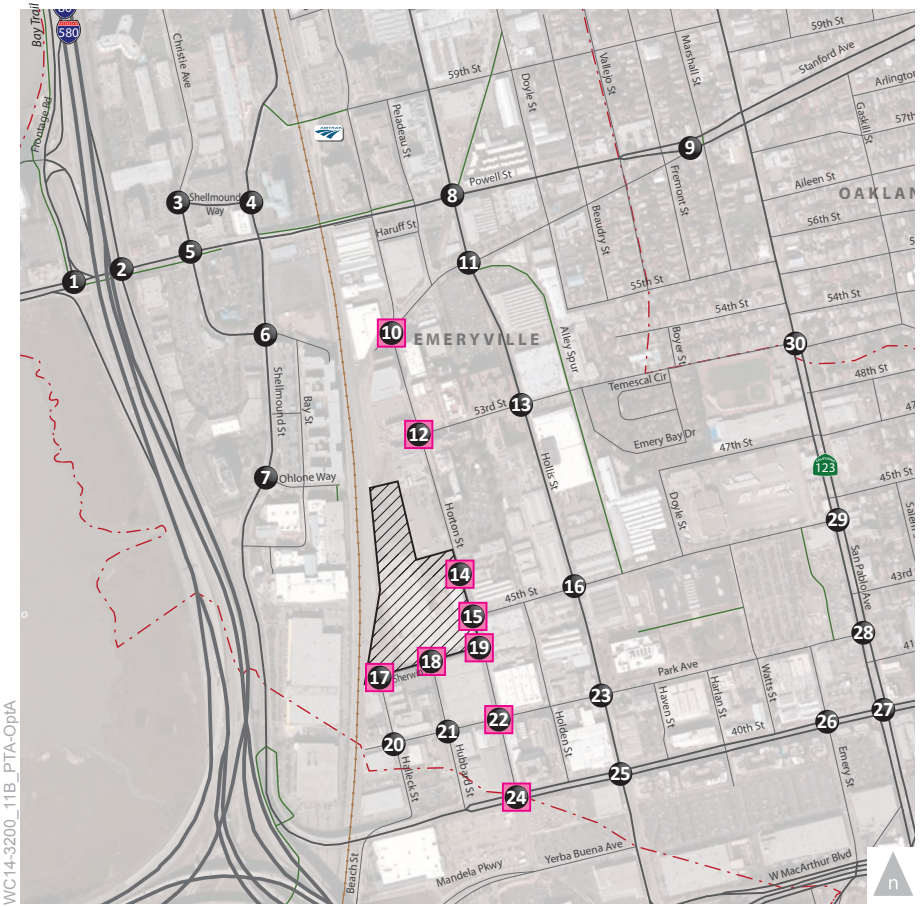


Figure 11A

Project Trip Assignment – Option A



WC14-3200_11B_PTA-OptA

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

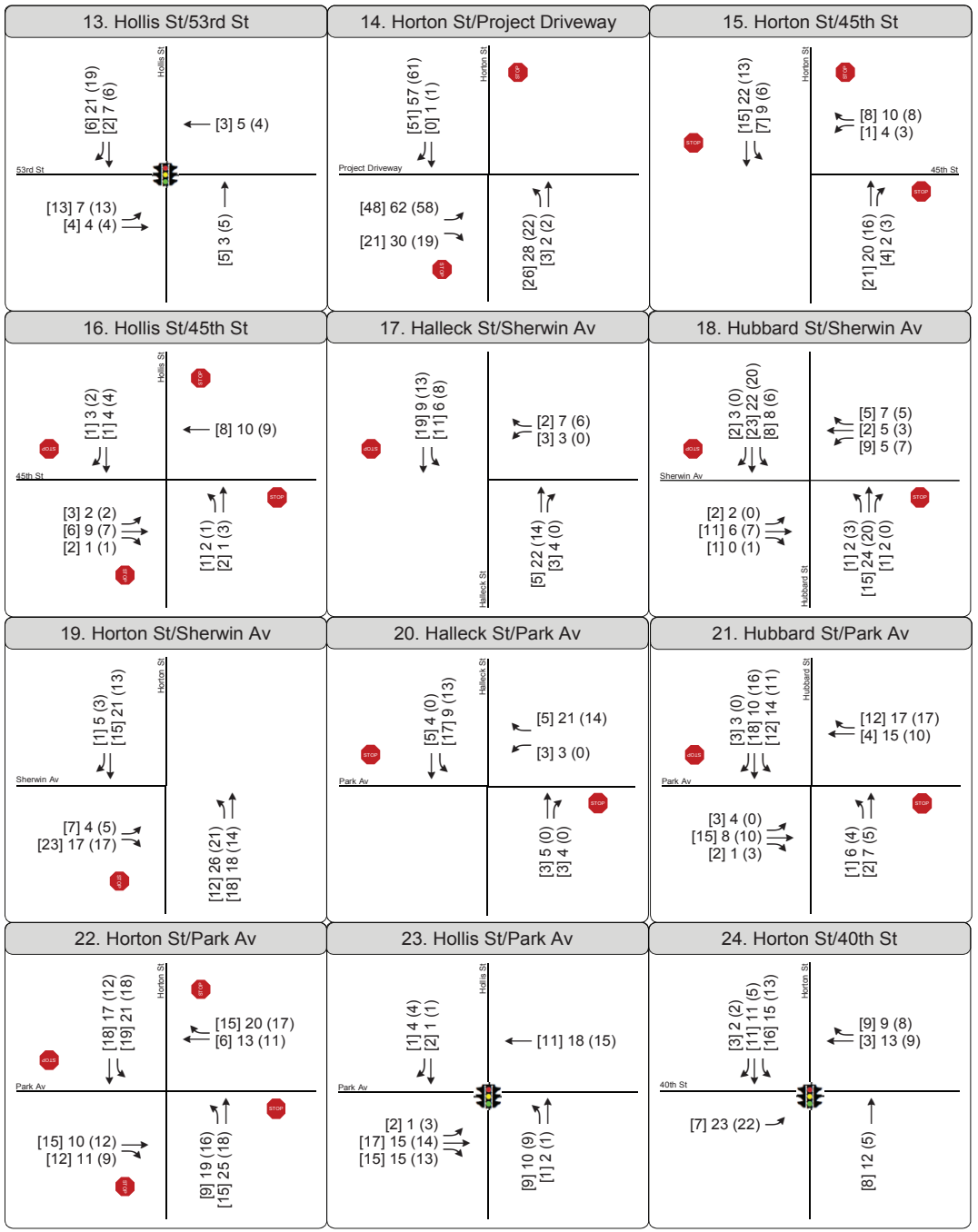
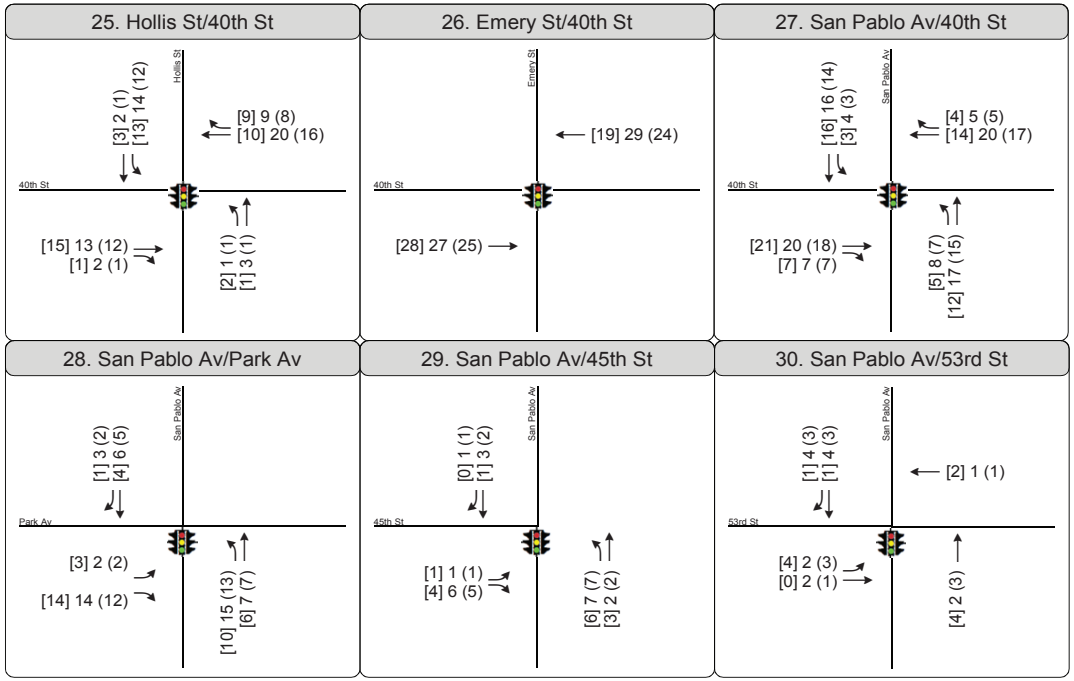


Figure 11B

Project Trip Assignment – Option A





WC14-3200_11C_PTA-OptA

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 11C

Project Trip Assignment – Option A



WC14-3200_12A_PTA-OptB

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

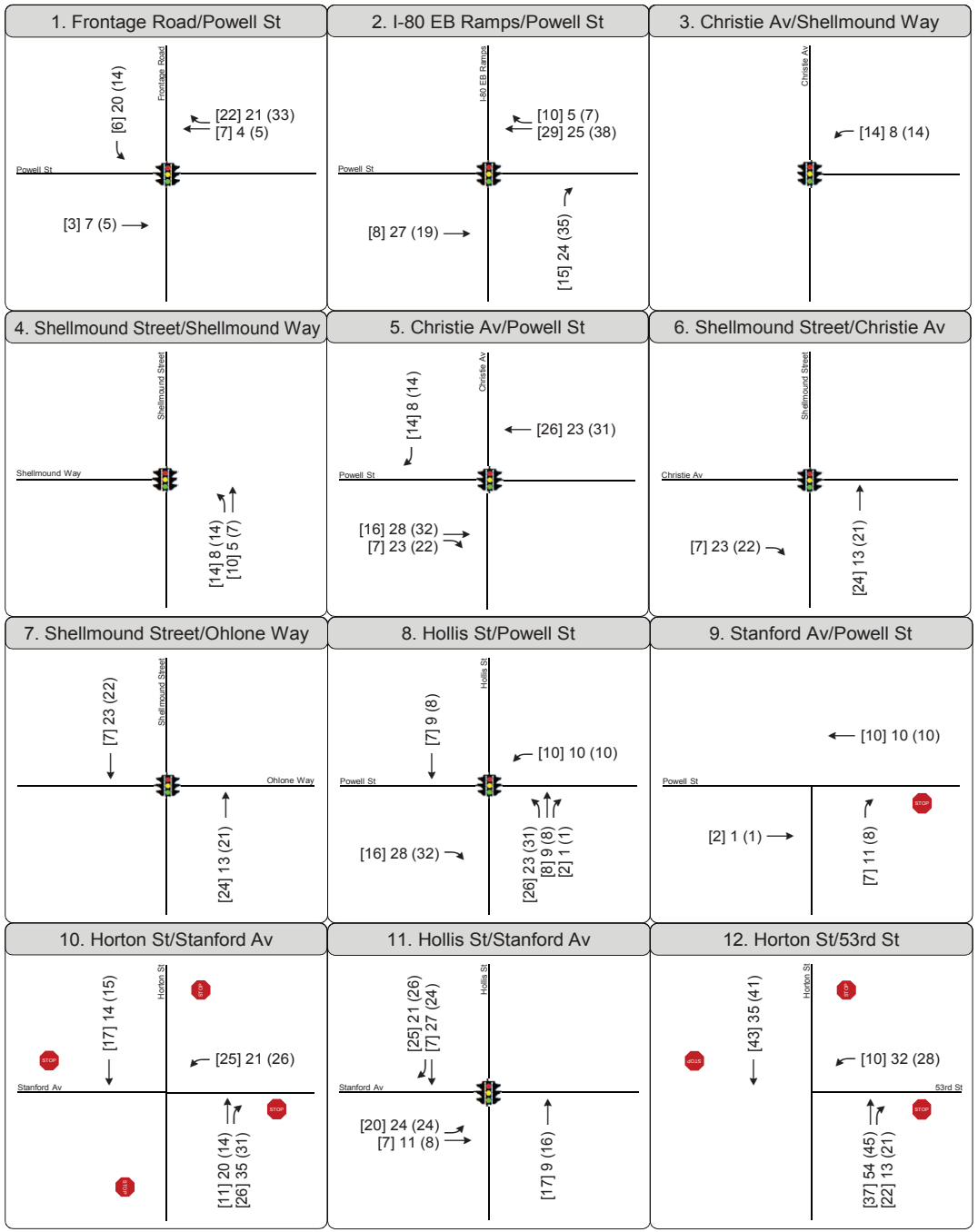
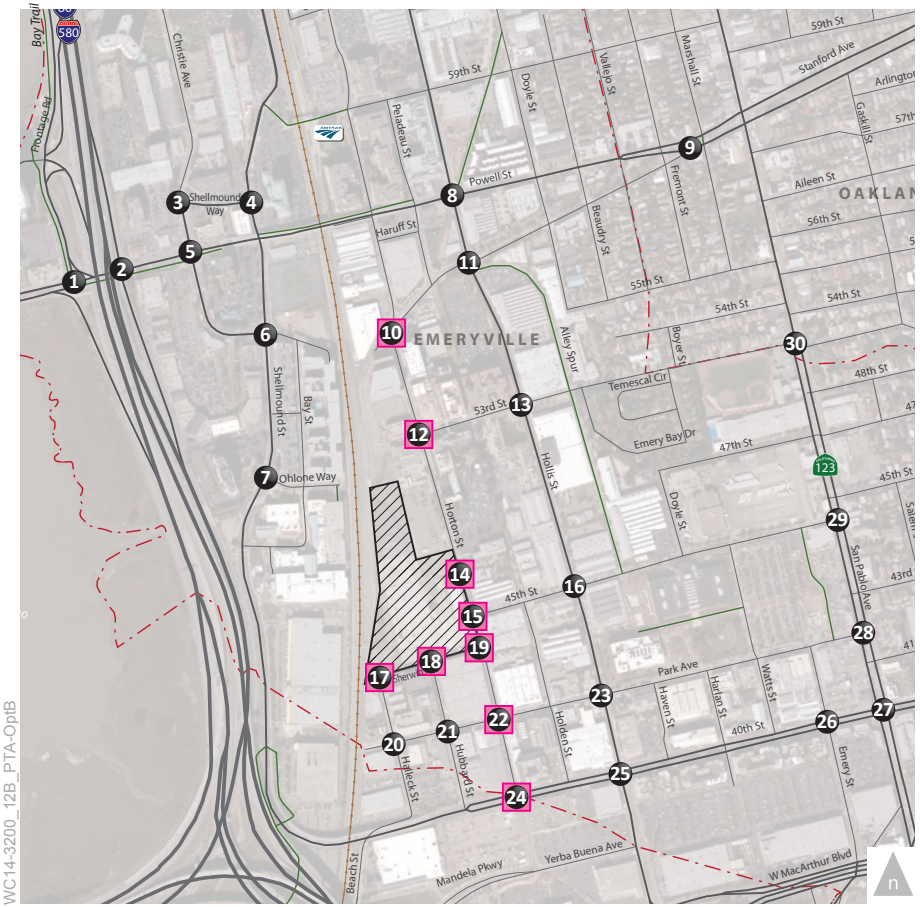


Figure 12A

Project Trip Assignment – Option B



WC14-3200_12B_PTA-OptB

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

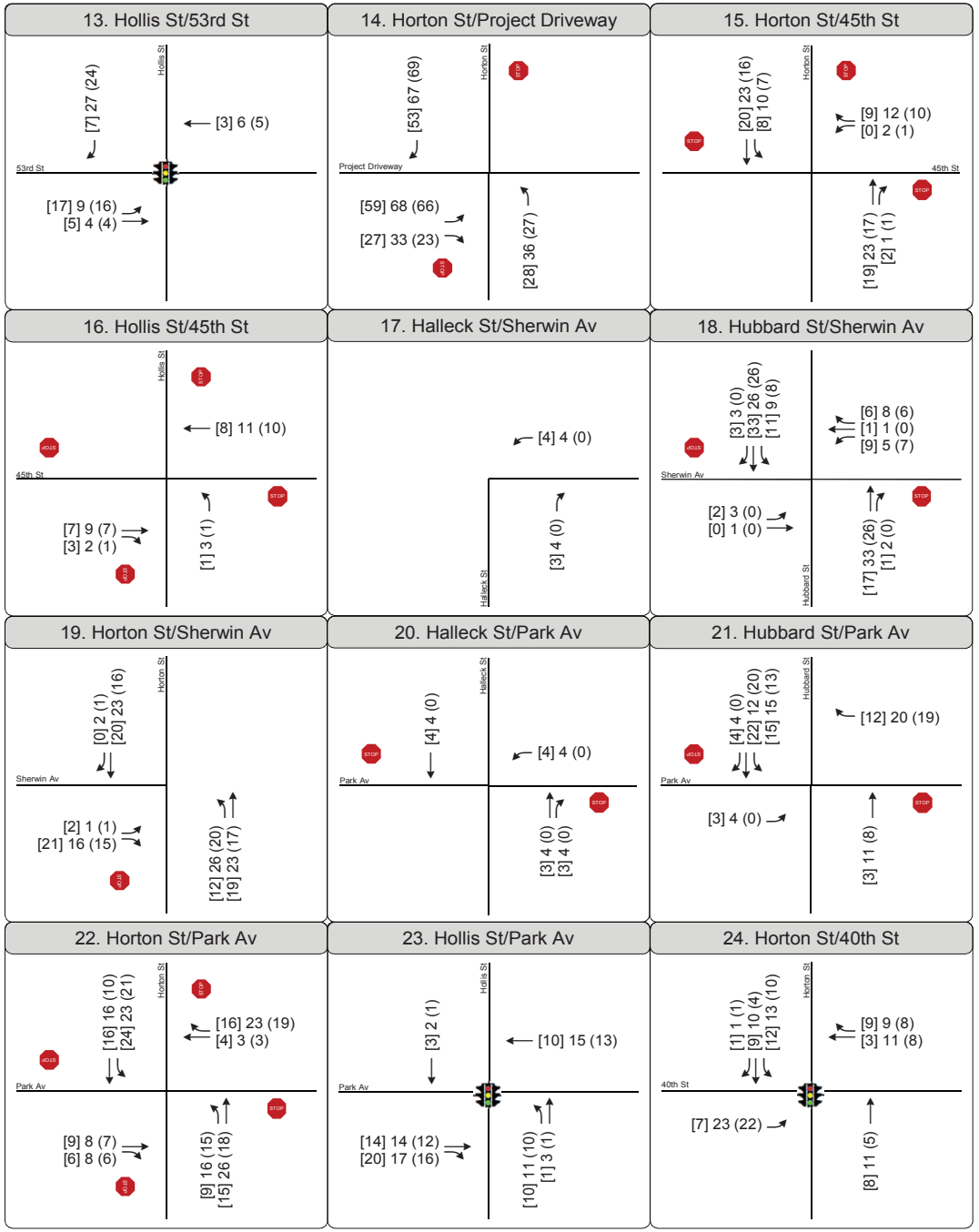
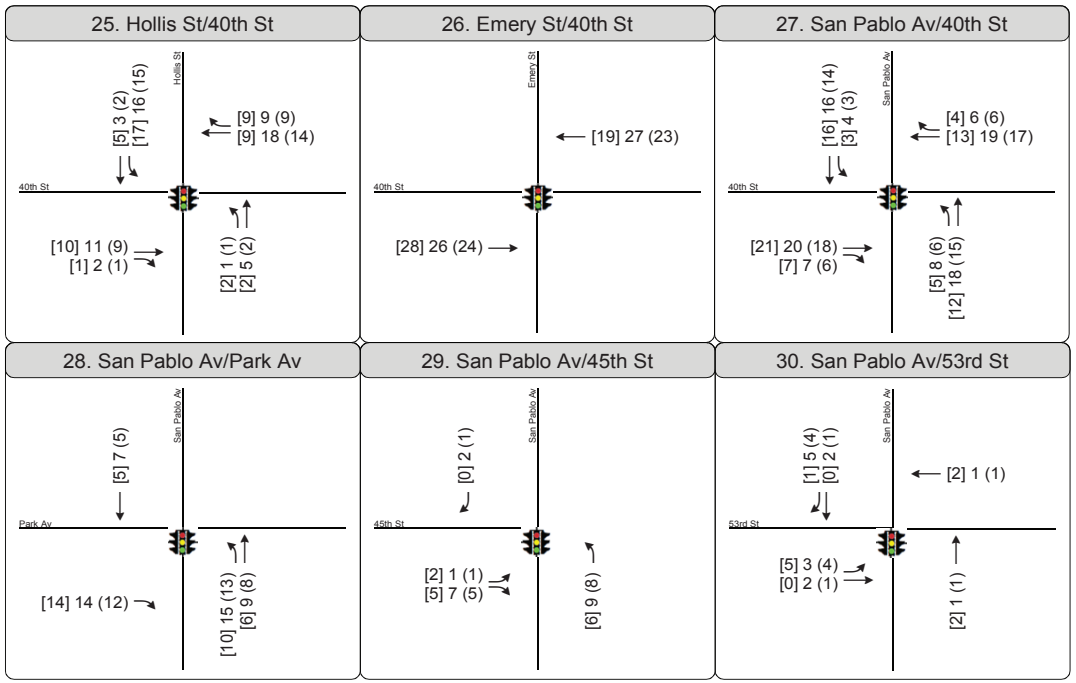


Figure 12B

Project Trip Assignment – Option B





WC14-3200_12C_PTA-OptB

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 12C

Project Trip Assignment – Option B

CHAPTER 4. VEHICLE MILES OF TRAVEL

In response to Senate Bill 743 (SB 743), the Office of Planning and Research (OPR) is updating California Environmental Quality Act (CEQA) guidelines to include new transportation-related evaluation metrics. Draft guidelines were developed in August 2014, with updated draft guideline prepared August 2015. New guidelines have not yet been adopted and the final guidelines may change based on the comments received.

The following provides a brief project description, language of the draft CEQA guidelines related to VMT, and results of the VMT assessment for the Sherwin-Williams project. Thresholds of significance are also presented.

DRAFT CEQA GUIDELINES

Proposed changes to Appendix G of the CEQA guidelines, as presented in *Proposed Updates to the CEQA Guidelines, Preliminary Discussion Draft (August 2015)*[10] provides the potential basis for the evaluation of vehicle miles of travel generated by a project.

> **Text of Proposed Amendments to Appendix G**
>
> *b) Cause substantial additional vehicle miles traveled (per capita, per service population, or other appropriate measure)?*
>
> *c) Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes or by adding new roadways to the network)?*

As the proposed project would not construct mixed-flow lanes, nor would it add additional roadways to the network beyond those needed for project site access and circulation, this chapter focuses on the potential VMT impact of the project.

Significance Criteria

Based on the information provided in the draft update to the CEQA guidelines, a new significance threshold was developed for the purposes of evaluating the VMT impact of the Sherwin-Williams project.

[10] Full document can be found here:
http://www.opr.ca.gov/docs/Preliminary_Discussion_Draft_Package_of_Amendments_to_the_CEQA_Guidelines_Aug_11_2015.pdf

- The project results in increased VMT per capita, and/or results in an average project trip length greater than the regional average as defined by Alameda County Transportation Commission (Alameda CTC).

As the Alameda CTC has not yet set regional average trip lengths for various land uses, an impact would be assessed if the project results in increased VMT per capita as compared to the no project condition.

ANALYSIS METHODS

To estimate vehicle miles of travel within the City of Emeryville, both without and with the project, Fehr & Peers used the Alameda CTC travel demand model. The first step in the process was to review the land use and roadway network assumptions within the base year model, reflective of 2010 conditions, and future conditions, reflective of 2040. These are the most current base year and future year models that are available.

The model is a representation of the transportation networks and land uses that comprise the Bay area region and contains approximately 2,700 travel analysis zones (TAZs) which represent the land uses within Alameda County and neighboring counties. Additional details regarding the model can be found on the Alameda CTC website[11]. Of the total TAZs, 17 represent the City of Emeryville with the project site represented by TAZ 1427, which also includes the land uses associated with neighboring development. The non-residential project uses (see project description) were then converted to total employment using the following factors:

- Office – one employee per each 250 square feet (characterized as other employment in the model), equating to 318 employees in 79,600 square feet
- Retail – one employee per each 500 square feet (characterized as retail employment in the model), equating to 20 employees in 10,000 square feet
- Restaurant – one employee per each 250 square feet (characterized as service employment in the model), equating to 20 employees in 5,000 square feet

Residential and employment totals for the City of Emeryville and the project zone are shown in **Table 8** for the base year and **Table 9** for the future year.

As shown in Table 8 the City of Emeryville is represented in the base year model with 5,700 residential units, correlating to a population of approximately 10,000. The model also includes approximately 16,640

[11] Alameda County Transportation Commission, 2015. Countywide Travel Demand Model. Full documentation can be found here: http://www.alamedactc.org/app_pages/view/8079

jobs in Emeryville. Based on a review of the land uses assumptions for the TAZ that contains the project site, it does not appear that proposed project uses are reflected in the existing conditions model. By 2040, Emeryville is expected to have 11,635 households, equating to a population of around 21,000. The number of jobs is also expected to increase to approximately 24,100.

For the purposes of this assessment, Project land use was assumed in addition to the growth already assumed in the model. With the project, the population in Emeryville is expected to increase by approximately 950 people, and the number of jobs would increase by approximately 360.

TABLE 8
ALAMEDA CTC TRAVEL DEMAND MODEL
BASE YEAR CITY OF EMERYVILLE AND PROJECT SITE LAND USES

Model Data	Base Year (2010)							
	Residential				Employment			
	Single Family House-holds	Multi Family House-holds	Total House-holds	Pop-ulation	Retail	Service	Other	Total
City of Emeryville Existing Totals (A)	862	4,842	5,704	10,024	2,623	9,481	4,540	16,644
TAZ 1427 Without Project included in City Total (Project Zone from Model) (B)	0	87	87	154	24	135	703	862
Sherwin-Williams (C)	0	540	540	946	20	20	318	358
Project Area Totals (TAZ 1427 Data Plus Project) (D)	0	627	627	1,100	44	155	1,021	1,210
City of Emeryville Total With Project (A+C)	862	5,382	6,244	10,970	2,643	9,501	4,858	17,002

Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model.

TABLE 9
ALAMEDA CTC TRAVEL DEMAND MODEL
FUTURE YEAR CITY OF EMERYVILLE AND PROJECT SITE LAND USES

Model Data	Future Year (2040)							
	Residential				Employment			
	Single Family House-holds	Multi Family House-holds	Total House-holds	Pop-ulation	Retail	Service	Other	Total
City of Emeryville Totals (A)	905	10,730	11,635	21,077	3,669	14,154	6,305	24,128
TAZ 1427 Without Project included in City Total (Project Zone from Model) (B)	0	483	483	875	60	398	860	1,318
Sherwin-Williams (C)	0	540	540	946	20	20	318	358
Project Area Totals (TAZ 1427 Data Plus Project) (D)	0	1,023	1,023	1,821	80	418	1,178	1,666
City of Emeryville Total With Project (A+C)	905	11,270	12,175	22,023	3,689	14,174	6,623	24,486

Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model.

Modeling Approach

To assess the VMT generated by the project, three methods were used. The City of Emeryville is measured as a whole to understand the project's influence on overall city-wide travel behavior. As opposed to analyzing project trips, analyzing project VMT requires the context of understanding how the proposed project will interact with the outside world, as adding housing to a jobs-rich area could reduce average vehicle trip length on a per capita basis, while adding jobs to an area with limited residential population could increase average trip length.

The first method tracks all vehicular trips generated by the City of Emeryville across the entire regional network and assigns a portion of the trip length for trips with an origin or destination outside Emeryville to the total (Origin-Destination Method – Shared Accounting). The second method captures only vehicle trips made within the City of Emeryville boundaries, regardless of their origin or destination (boundary

method). The third method is the sum of the length of all trips generated by the project (Origin-Destination Method – Total Accounting). Each method is discussed in more detail below.

The resulting metrics for each accounting method are the total VMT, and a summary of the average VMT per household and service population (residents and workers) for without and with Project conditions. This allows for a calculation of the net-change in VMT with the project. All methodologies were implemented within the Alameda CTC travel demand model, where the number of trips on a roadway link are multiplied by the link distance and then summed according to the accounting methods described below.

Origin-Destination Method – Shared Accounting

An origin-destination (OD) method tracks all vehicular trips generated by the City of Emeryville (including the proposed Project) across the entire regional network. Four types of trips are isolated, which shares the responsibility of trips with other jurisdictions:

- Internal-Internal (II) trips: Include all trips that begin and end within the City of Emeryville.
- Internal-External (IX) trips: Include one-half of all trips that begin in within city limits and end outside city limits. The City of Emeryville assumes half the responsibility of these kinds of trips.
- External-Internal (XI) trips: Include one-half of all trips that begin outside city limits and end inside city limits. The City of Emeryville assumes half the responsibility of these kinds of trips.
- External-External (XX) trips: Trips that begin and end outside the City of Emeryville are not included. The City of Emeryville assumes no responsibility for External-External trip type VMTs.

To estimate VMT per service population, trips are multiplied by the trip distance for all trip types to estimate VMT and then divided by the sum of residential and working population of the City of Emeryville.

Boundary Method

A boundary based estimate captures all the VMT on a roadway network within a specified geographic area such as the city limits. A limitation of this method is that it does not capture trips that extend beyond a jurisdictions boundary and includes through traffic on regional roadway facilities. However, this information can use useful in estimating total greenhouse gas emissions within a specified geographic area.

Origin-Destination Method – Total Accounting

The Origin-Destination Method –Total Accounting is similar to the shared accounting method except that the full trip length of trips outside the jurisdictional boundaries is captured, as opposed to only half of the

entire trip. The model is used to trace each trip from its origin/destination and is more accurate than applying a regional average trip length to the vehicle trip generation. External-external trips are still not included in this accounting system.

ANALYSIS RESULTS

The base and future year Alameda CTC Models were executed for the without and with project scenarios. Results are shown in **Table 10** and **Table 11** for the Origin-Destination Method – Shared Accounting method, **Table 12** and **Table 13** for the Boundary Method and **Table 14** and **Table 15** for the Origin-Destination Method – Total Accounting.

As shown in Table 10, based on the Shared Accounting method, the existing VMT per household in Emeryville is approximately 65 miles, which captures trips made to and from a place of residence, and also includes other types of trips such as work, shopping, or social/recreational trips. On a per capita basis, including residents and workers, approximately 14 vehicle miles of travel per day are generated. The addition of project land uses would increase total VMT, but would reduce VMT on a per household and per capita basis as it would add housing to an area that is well served by transit, and close to jobs and other services.

In the future, VMT per household in Emeryville is expected to decrease to approximately 47 miles per household and 12 miles per capita, as shown on Table 11. The project would result in a slight decrease in VMT per household and a slight increase in VMT per capita in the future condition.

TABLE 10
BASE YEAR ORIGIN-DESTINATION METHOD – SHARED ACCOUNTING

Scenario	Households	Population	Employment	Daily VMT	VMT / HH	VMT per Capita (Pop + Emp)
Year 2010	5,704	10,024	16,644	374,273	65.62	14.03
Year 2010 with Project	6,244	10,970	17,002	387,657	62.06	13.88
Project Increment	*540*	*946*	*358*	*13,384*	*-3.56*	*-0.15*

Note: Annualized VMT is typically 354 times the daily VMT to account for less vehicle miles of travel on weekends, holidays and summer periods.
Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model, Fehr & Peers, 2015.

TABLE 11
FUTURE YEAR ORIGIN-DESTINATION METHOD – SHARED ACCOUNTING

Scenario	Households	Population	Employment	Daily VMT	VMT / HH	VMT per Capita (Pop + Emp)
Year 2040	11,635	21,077	24,128	553,102	47.54	12.24
Year 2040 with Project	12,175	22,023	24,486	570,228	46.84	12.26
Project Increment	*540*	*946*	*358*	*17,126*	*-0.70*	*0.02*

Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model, Fehr & Peers, 2015.

As shown in Table 12, based on the Boundary method, the existing VMT on all roads within Emeryville is approximately 285,000 miles, with VMT per household of approximately 50 miles. On a per capita basis, including residents and workers, approximately 10.7 vehicle miles of travel per day are generated. The addition of project land uses would increase total VMT within the City of Emeryville boundaries by approximately 2,800 miles, with the remainder of the trip length occurring outside the City boundaries. The addition of project land uses would increase total VMT under this accounting method, but would also reduce VMT on a per household and capita basis.

In the future, VMT on Emeryville's roadways is expected to increase to approximately 357,000 miles per day, with an average of 31 miles of travel per household. The project would contribute to increased VMT and VMT per capita would increase slightly under this method in 2040, but it would be less than the base year condition.

TABLE 12
BASE YEAR BOUNDARY METHOD

Scenario	Households	Population	Employment	Daily VMT[3]	VMT / HH	VMT per Capita (Pop + Emp)
Year 2010	5,704	10,024	16,644	285,198	50.00	10.69
Year 2010 with Project	6,244	10,970	17,002	288,060	46.12	10.30
Project Increment	*540*	*946*	*358*	*2,862*	*-3.88*	*-0.39*

Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model, Fehr & Peers, 2015.

TABLE 13
FUTURE YEAR BOUNDARY METHOD

Scenario	Households	Population	Employment	Daily VMT[3]	VMT / HH	VMT per Capita (Pop + Emp)
Year 2040	11,635	21,077	24,128	357,300	30.71	7.90
Year 2040 with Project	12,175	22,023	24,486	360,400	29.60	7.75
Project Increment	*540*	*946*	*358*	*3,100*	*-1.10*	*-0.15*

Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model, Fehr & Peers, 2015.

As shown in Table 14, based on the total accounting method, land uses in Emeryville generate approximately 742,000 vehicle miles of travel per day, accounting for the entire trip length with VMT per capita, including residents and workers, of approximately 27.85 miles of travel per day. The addition of project land uses would increase total VMT generated by City of Emeryville land uses by approximately 26,000 miles. However, the project would decrease VMT per household and per capita.

In 2040, total VMT generated by land uses in Emeryville would increase to approximately 1,100,000 miles. The project would contribute to increased VMT, but would reduce VMT per household. VMT per capita would increase slightly under this method in 2040, but it would be less than the base year condition.

TABLE 14
BASE YEAR ORIGIN-DESTINATION METHOD – TOTAL ACCOUNTING

Scenario	Households	Population	Employment	Daily VMT[3]	VMT / HH	VMT per Capita (Pop + Emp)
Year 2010	5,704	10,024	16,644	742,583	130.19	27.85
Year 2010 with Project	6,244	10,970	17,002	768,744	123.12	27.48
Project Increment	*540*	*946*	*358*	*26,161*	*-7.07*	*-0.37*

Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model, Fehr & Peers, 2015.

TABLE 15
FUTURE YEAR ORIGIN-DESTINATION METHOD – TOTAL ACCOUNTING

Scenario	Households	Population	Employment	Daily VMT[3]	VMT / HH	VMT per Capita (Pop + Emp)
Year 2040	11,635	21,077	24,128	1,096,043	94.20	24.25
Year 2040 with Project	12,175	22,023	24,486	1,129,342	92.76	24.28
Project Increment	*540*	*946*	*358*	*33,299*	*-1.44*	*0.03*

Source: Alameda CTC Model, City of Emeryville based on ABAG P13 Model, Fehr & Peers, 2015.

VMT CONCLUSIONS

All three vehicle trip accounting methods indicate that while the project would contribute to increased vehicle miles of travel, it would cause VMT per household to decrease in both the base year and future year. VMT per capita would decrease with the project in the near-term, but could increase as compared to the future without project scenario. However, future VMT per capita would be less than the base year VMT per capita. As the Alameda CTC has not yet set thresholds for average trip lengths, and the project is expected to contribute to decrease VMT per household and per capita as compare the base year no project conditions, we conclude that the VMT impact of the proposed Sherwin-Williams project is ***less-than-significant*** based on the proposed significance criteria.

CHAPTER 5. EXISTING WITH PROJECT TRAFFIC CONDITIONS

This chapter evaluates potential off-site traffic impacts under Existing with Project conditions.

EXISTING WITH PROJECT TRAFFIC VOLUMES

The project traffic volumes from Figure 11 and Figure 12 were added to the existing traffic volumes from Figure 9 to estimate the Existing with Project traffic volumes, as shown on **Figure 13** for Option A and **Figure 14** for Option B. No intersection improvements were assumed at any of the study intersections, except for the new project connections to Sherwin Avenue and Horton Street.

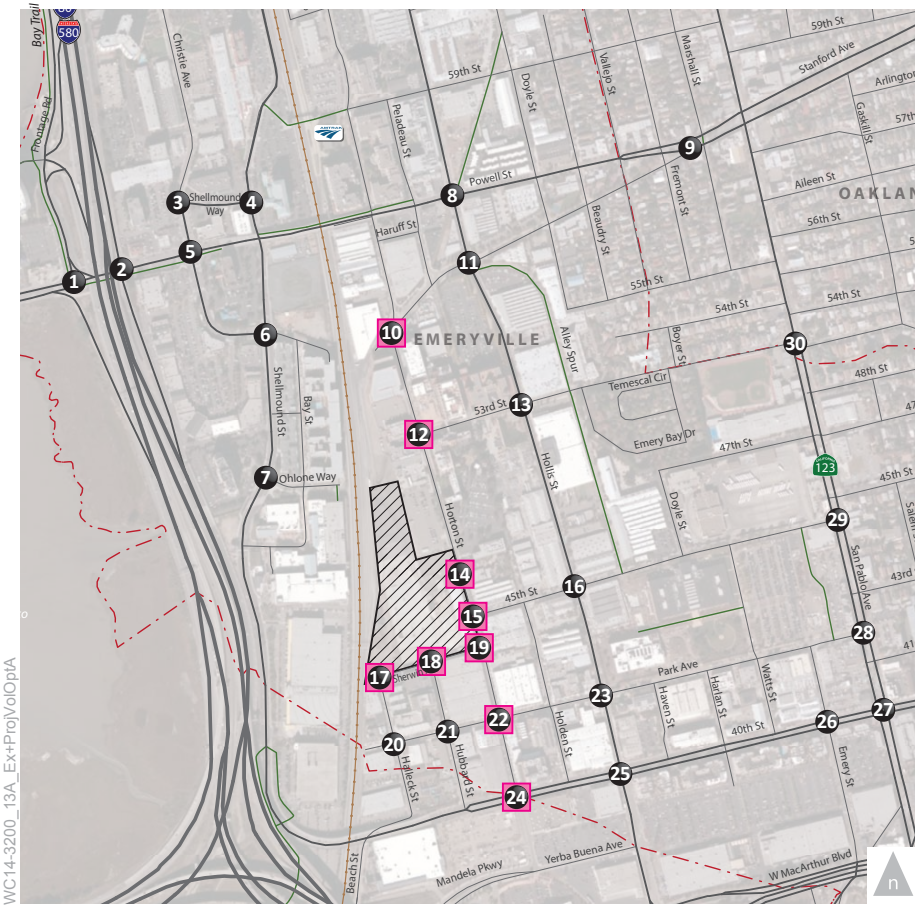
ANALYSIS OF EXISTING WITH PROJECT CONDITIONS

Existing with Project conditions were evaluated using the same methods described in Chapter 1. The Existing with Project analysis results are presented in **Table 16**, based on the traffic volumes presented on Figure 13 and Figure 14. Signal timings remained unchanged from the analysis of existing conditions. The corresponding LOS calculation sheets are included in **Appendix B**.

The addition of project traffic would increase average delay slightly at the study intersections, but would not appreciably change operations from the existing condition. At the Hollis Street/45th Street intersection, the addition of project traffic would increase delay resulting in LOS E operations. As peak hour signal warrants would not be satisfied, this change in operations is considered less-than-significant.

The change in 95th percentile vehicle queues was reviewed for the signalized study intersections (detailed table provided in **Appendix C**). The addition of project traffic would not result in new locations where vehicle queues would extend beyond the available storage, nor would it increase the 95th percentile vehicle queue at locations where it already exceeds the available storage by more than 50 feet. Therefore, the queue impact is considered less-than-significant.

Peak hour volume and delay warrants were reviewed for the unsignalized study intersection with the addition of project traffic. The addition of project traffic would not result in signal warrants being satisfied in the Existing with Project condition. Signal warrant worksheets are provided in **Appendix D**.



WC14-3200_13A_Ex+ProjVolOptA

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

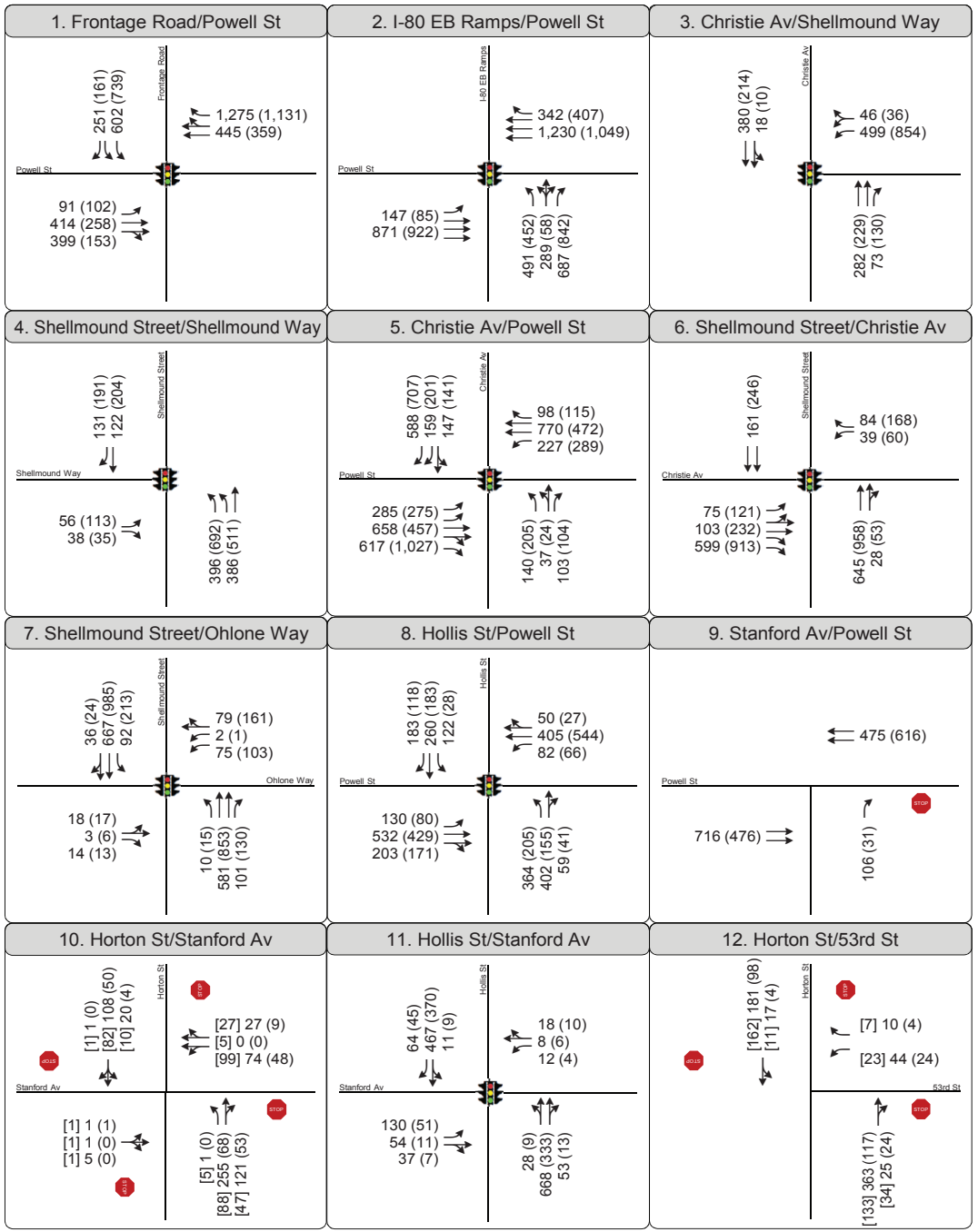
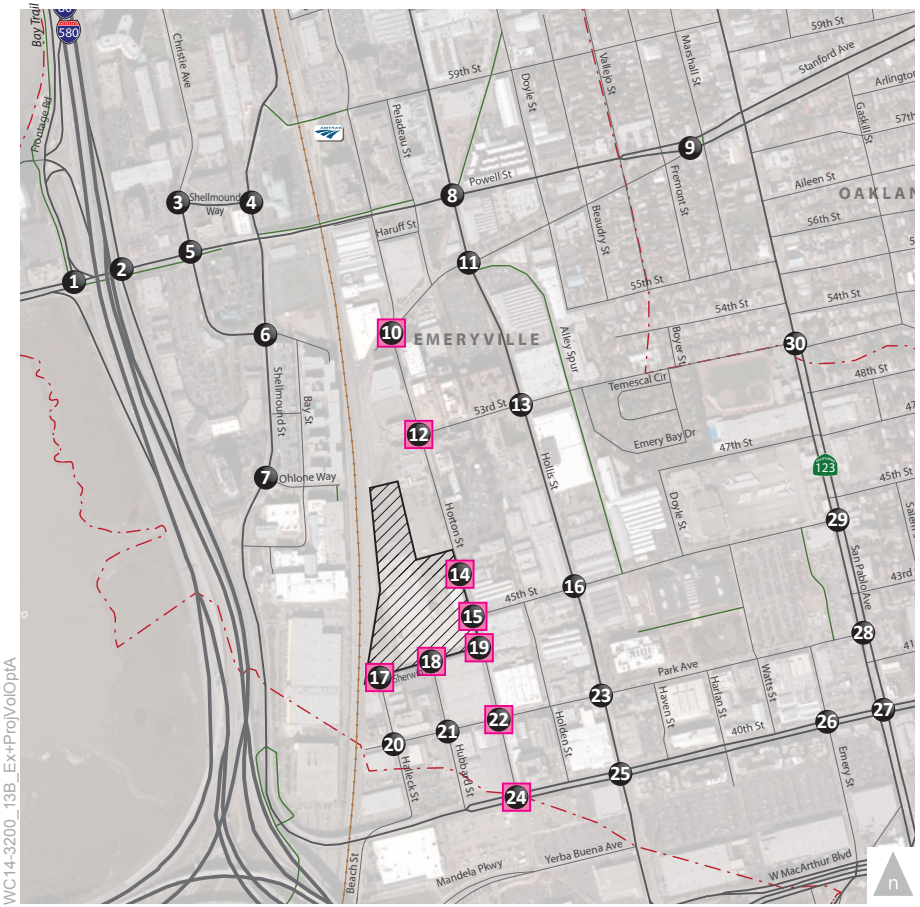


Figure 13A

Existing With Project Peak Hour Volumes – Option A



WC14-3200_13B_Ex+ProjVolOptA

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

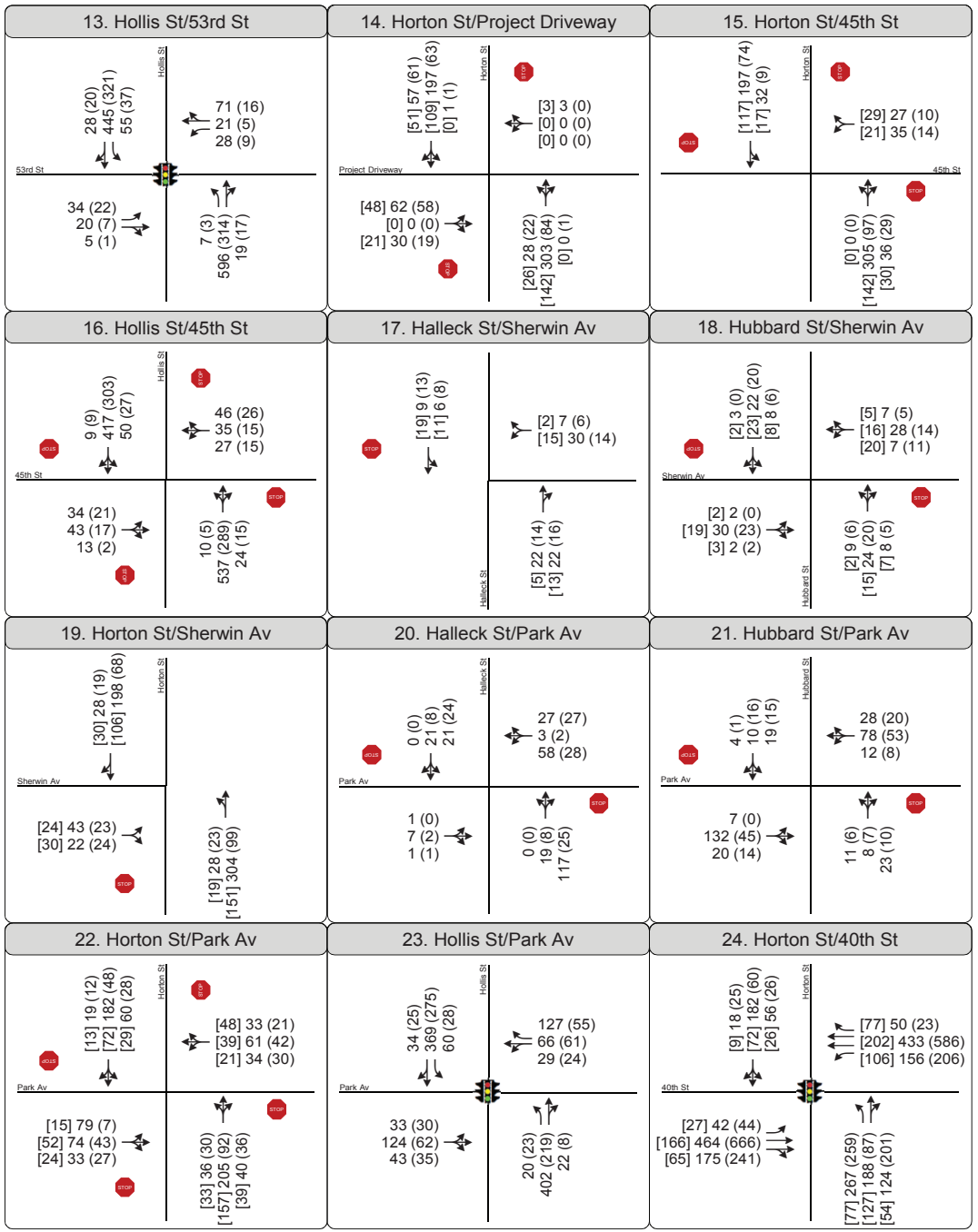
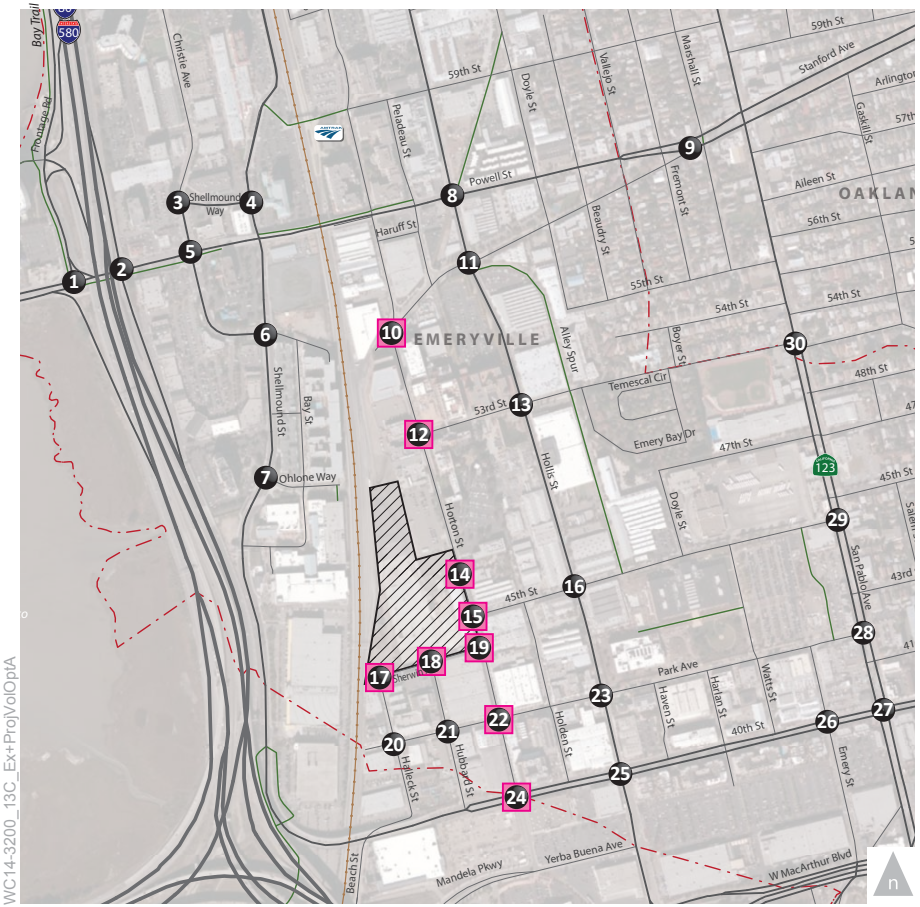
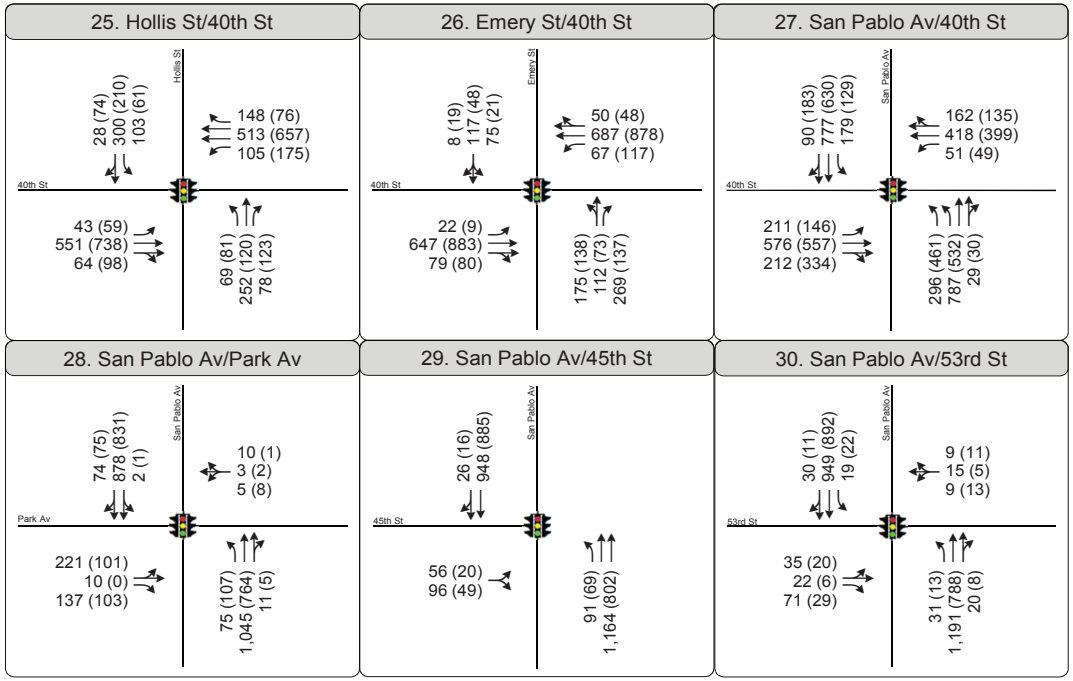


Figure 13B

Existing With Project Peak Hour Volumes – Option A





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 13C

Existing With Project Peak Hour Volumes – Option A

WC14-3200_13C_Ex+ProjVolOptA



WC14-3200_14A_Ex+ProjVolOptB

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

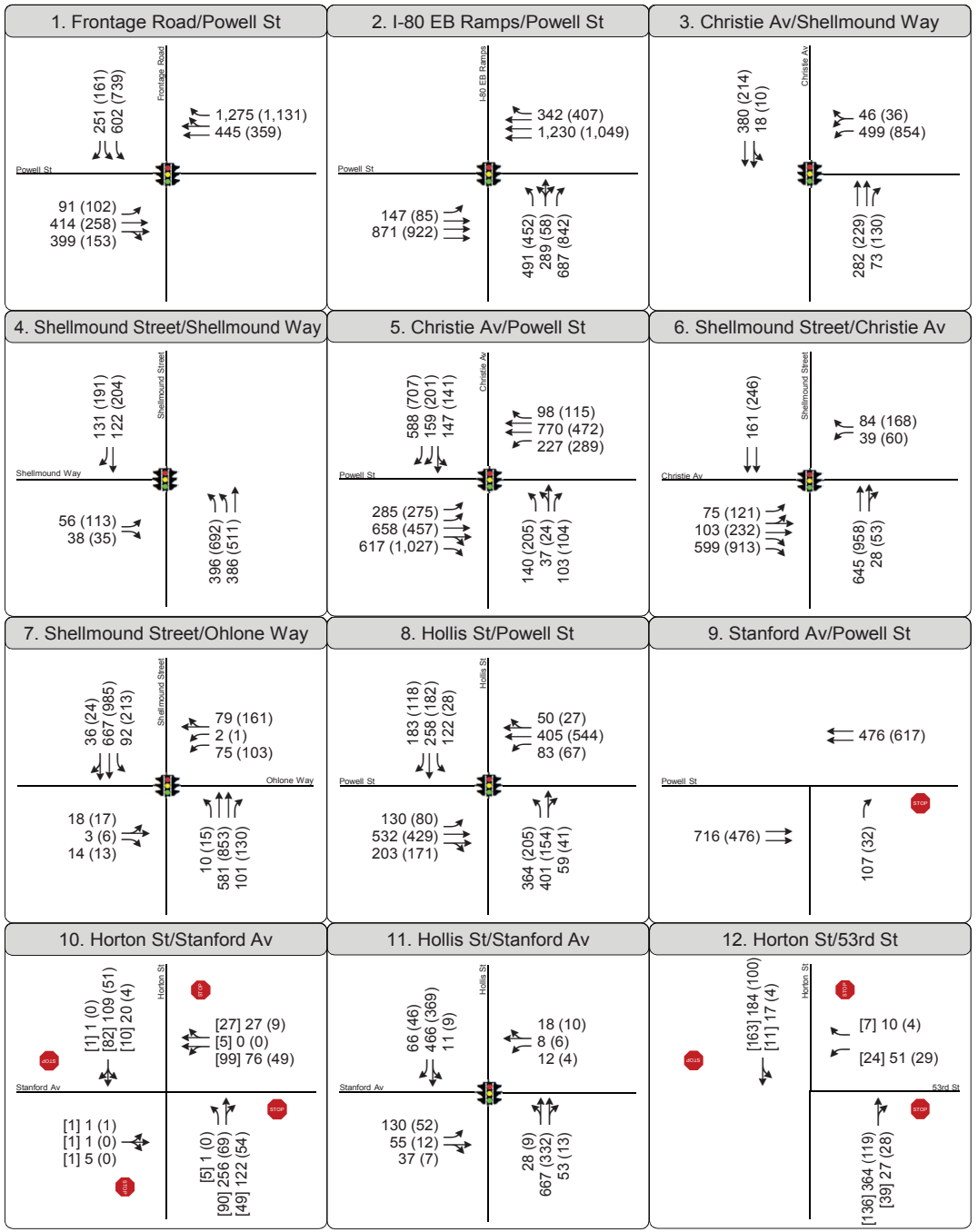


Figure 14A

Existing With Project Peak Hour Volumes – Option B



WC14-3200_14B_Ex+ProjVolOptB

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

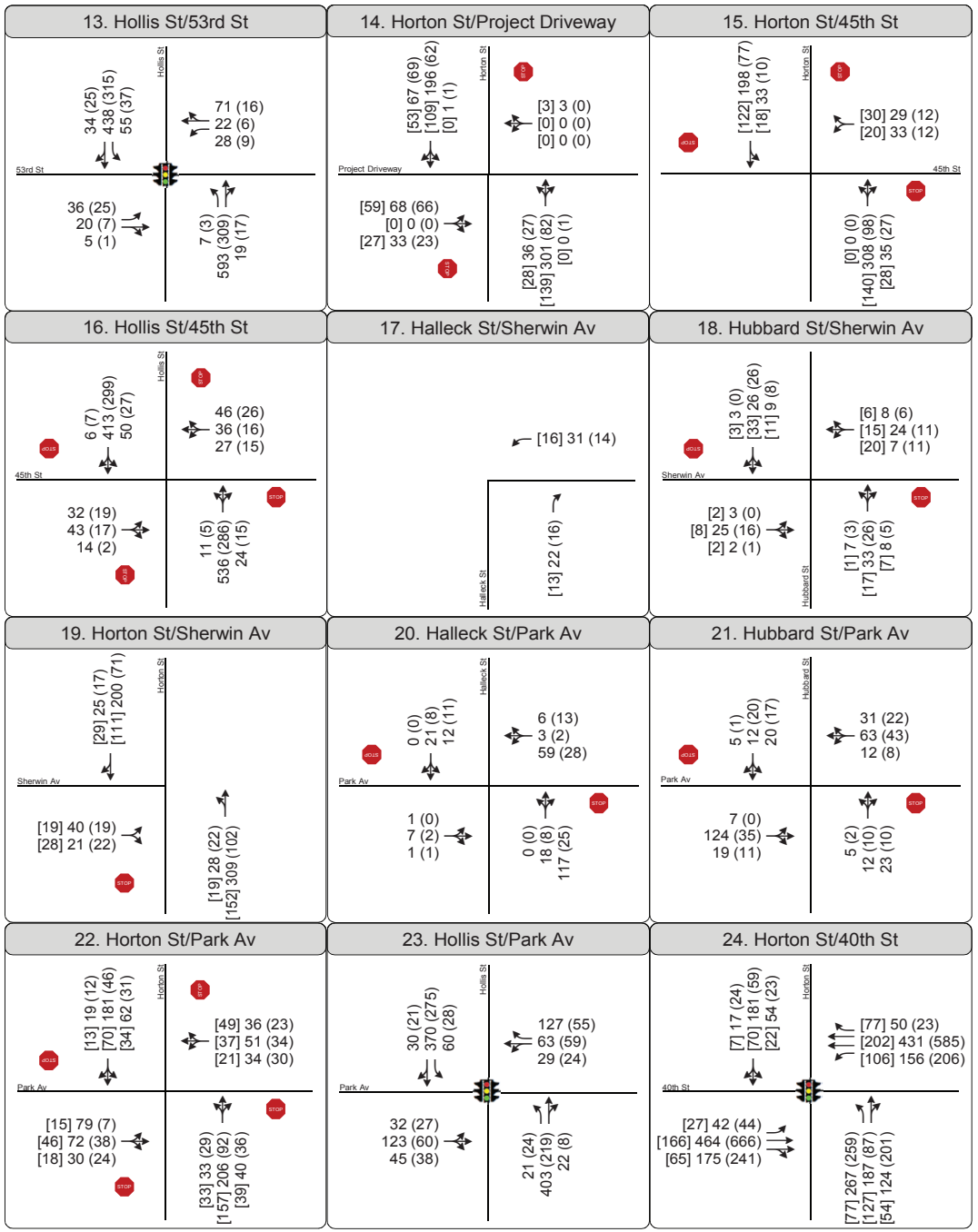
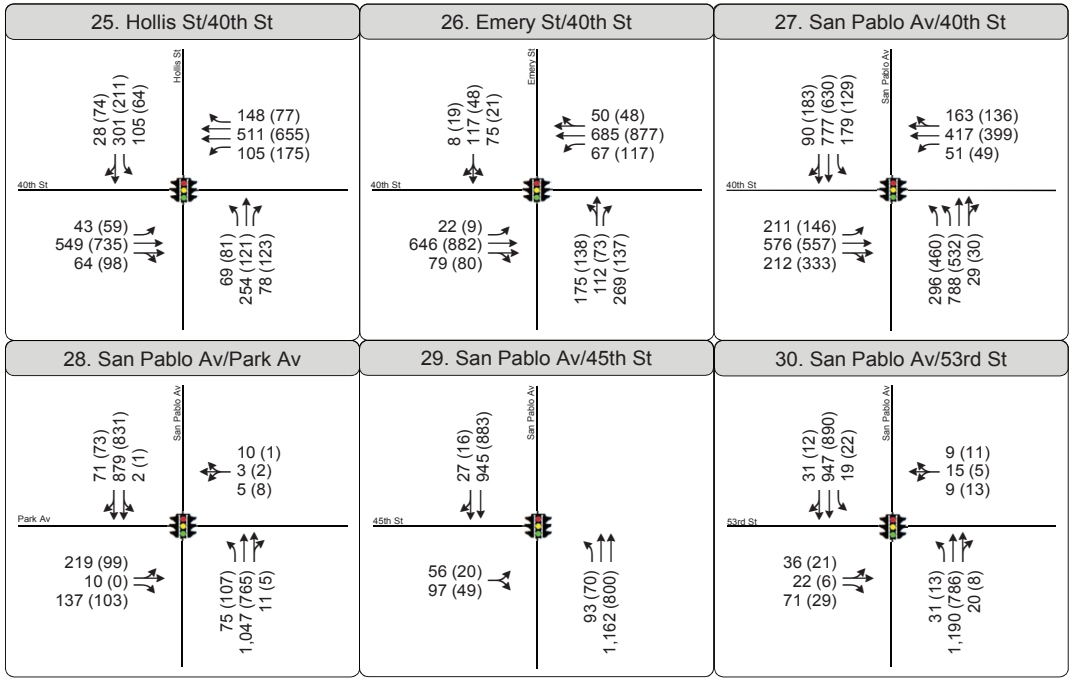


Figure 14B

Existing With Project Peak Hour Volumes – Option B





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 14C

Existing With Project Peak Hour Volumes – Option B

TABLE 16
EXISTING WITH PROJECT CONDITIONS INTERSECTION LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Existing		Existing With Option A		Existing With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
1	Powell Street/Frontage Road	Signal	PM SAT	41 45	D D	44 46	D D	44 46	D D
2	Powell Street/Eastbound I-80 Off-Ramp[4]	Signal	PM SAT	29 27	C C	30 27	C C	30 27	C C
3	Shellmound Way/Christie Avenue[4]	Signal	PM SAT	11 11	B B	11 11	B B	11 11	B B
4	Shellmound Street/Shellmound Way[4]	Signal	PM SAT	16 22	B C	16 21	B C	16 21	B C
5	Powell Street/Christie Avenue[4]	Signal	PM SAT	34 50	C D	36 51	D D	36 51	D D
6	Shellmound Street/Christie Avenue	Signal	PM SAT	29 27	C C	29 27	C C	29 27	C C
7	Shellmound Street/Ohlone Way	Signal	PM SAT	17 23	B C	17 23	B C	17 23	B C
8	Powell Street/Hollis Street	Signal	PM SAT	38 39	D D	40 39	D D	40 39	D D
9	Powell Street/Stanford Avenue	SSSC	PM SAT	1 (12) 1 (11)	A (B) A (B)	1 (12) 1 (10)	A (B) A (B)	1 (12) 1 (10)	A (B) A (B)
10	Horton Street/Stanford Avenue	AWSC	AM PM SAT	8 10 7	A A A	8 11 8	A B A	8 11 8	A B A
11	Hollis Street/Stanford Avenue	Signal	PM SAT	7 3	A A	7 4	A A	7 5	A A
12	Horton Street/53rd Street	AWSC	AM PM SAT	8 10 7	A A A	8 11 8	A B A	8 11 8	A B A
13	Hollis Street/53rd Street	Signal	PM SAT	8 4	A A	8 5	A A	8 5	A A
14	Horton Street/46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	3 (11) 3 (15) 3 (10)	A (B) A (B) A (A)	3 (11) 3 (16) 3 (11)	A (B) A (C) A (B)

TABLE 16
EXISTING WITH PROJECT CONDITIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Existing		Existing With Option A		Existing With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
15	Horton Street/45th Street	AWSC	AM PM SAT	8 10 7	A A A	8 10 8	A A A	8 10 8	A A A
16	Hollis Street/45th Street	AWSC	PM SAT	32 11	D B	37 11	E B	36 11	E B
17	Halleck Street/Sherwin Avenue	Free/ SSSC	AM PM SAT	No Conflicting Movements		4 (9) 4 (9) 4 (9)	A (A) A (A) A (A)	No Conflicting Movements	
18	Hubbard Street/Sherwin Avenue/Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	6 (10) 5 (10) 6 (10)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/Sherwin Avenue	SSSC	AM PM SAT	1 (11) 1 (13) 1 (9)	A (B) A (B) A (A)	2 (10) 2 (13) 3 (10)	A (A) A (B) A (A)	2 (10) 2 (13) 2 (10)	A (A) A (B) A (A)
20	Halleck Street/Park Avenue	SSSC	PM SAT	8 (11) 7 (10)	A (B) A (A)	8 (12) 7 (10)	A (B) A (A)	8 (11) 7 (10)	A (B) A (A)
21	Hubbard Street/Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)	3 (12) 3 (11)	A (B) A (B)	3 (11) 4 (11)	A (B) A (B)
22	Horton Street/Park Avenue	AWSC	AM PM SAT	9 11 8	A B A	9 12 8	A B A	9 12 8	A B A
23	Hollis Street/Park Avenue	Signal	PM SAT	15 12	B B	16 13	B B	16 13	B B
24	Horton Street/40th Street	Signal	AM PM SAT	28 47 46	C D D	30 49 47	C D D	30 49 47	C D D
25	Hollis Street/40th Street[4]	Signal	PM SAT	31 31	C C	31 31	C C	31 31	C C
26	Emery Street/40th Street[4]	Signal	PM SAT	35 31	C C	35 31	C C	35 31	C C
27	San Pablo Avenue/40th Street[4]	Signal	PM SAT	37 40	D D	39 42	D D	39 42	D D

TABLE 16
EXISTING WITH PROJECT CONDITIONS INTERSECTION LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Existing		Existing With Option A		Existing With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
28	San Pablo Avenue/Park Avenue	Signal	PM SAT	19 8	B A	19 8	B A	19 8	B A
29	San Pablo Avenue/45th Street	Signal	PM SAT	7 6	A A	7 6	A A	7 6	A A
30	San Pablo Avenue/53rd Street	Signal	PM SAT	13 8	B A	13 7	B A	13 7	B A

Notes:

1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized

2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour

3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2000 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).

4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.

Source: Fehr & Peers, 2015.

The amount of Project traffic that is expected to travel on Horton Street, 45th and 53rd Streets on a weekday when traffic volumes are the highest was estimated based on the project trip generation and trip distribution, with resulting volumes shown in **Table 17**. The project is expected to increase traffic volumes on Horton Street between 300 and 1,400 vehicles per day, further increasing bicycle/vehicle conflicts on a bicycle boulevard. On 53rd and 45th Streets west of Hollis Street and 45th Street, east of San Pablo Avenue, daily traffic volumes would remain within the desired range for a bicycle boulevard. On 53rd and 45th Streets east of Hollis Street (west of San Pablo Avenue), existing traffic volumes exceed the desired range, and the project would increase vehicle traffic by more than 2 percent.

TABLE 17
EXISTING WITH PROJECT DAILY TRAFFIC VOLUMES

Roadway	Existing Average Daily Traffic	Percent Daily Fluctuation	Project Daily Added Traffic[1]	Total Daily Traffic With Project	Percent Increase
A. Horton Street, north of 53rd Street	***3,480***	±1%	960	***4,440***	28%
B. Horton Street, between 45th and 53rd Street	***3,530***	±1%	1,370	***4,900***	39%
C. Horton Street, south of Sherwin Avenue	***3,460***	±1%	940	***4,400***	27%
D. 53rd Street, east of Horton Street	600	±2%	410	1,010	68%
E. 45th Street, east of Horton Street	1,080	±0%	280	1,360	26%
F. 45th Street, west of San Pablo Ave	***2,630***	±4%	140	***2,770***	5%
G. 45th Street, east of San Pablo Ave	1,490	±1%	10	1,500	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	--	100	***2,540***	4%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.

1. Based on weekday daily Project trip generation and distribution percentages.

Source: Fehr & Peers, 2015

CONSTRUCTION ASSESSMENT

The assessment of construction activity considered two aspects:

- If construction vehicles (including vehicles removing or delivering fill material, bulldozers, and other heavy machinery) associated with site construction would generate any additional Project impacts; and
- If workers required for the construction of the new facilities would generate additional traffic-related impacts.

A construction-related impact could occur if:

- The number of construction vehicles required to prepare the site would equal or exceed the number of automobile trips generated by the Project site during the existing scenario
- Construction activity substantially increases hazards or congestion due to a design feature (e.g., sharp curves) or incompatible uses (e.g., farm equipment or construction vehicles)
- The number of workers employed on-site would generate more peak hour trips than those associated with the Project.

Based on information received from the project applicant, project construction would occur in four phases, each with different transportation profile, as described below.

Demolition – This phase would occur at the start of the project and is expected to last approximately 15 days with an average of 10 workers per day. Types of equipment that would be present during this phase include approximately four excavators, two loaders and one other miscellaneous vehicle. The daily and peak hour trip generation during this phase is expected to be significantly less than at project buildout. Some of the equipment used in this phase would remain on-site for the next phase, but some would be removed at the end of the phase.

Grading – This phase would occur subsequent to the demolition phase and is expected to last approximately 30 days with an average of 15 workers per day. Approximately 16 large machines would be on site during this phase, with some remaining from the prior phase. It is expected that equipment would be brought to the site at the beginning of the phase and would remain on-site until no longer needed. During this phase, it is expected that approximately 7,000 cubic yards of fill would be imported to the site. This level of material export equates to between 350 and 440 roundtrip truck trips during the grading phase. Based on the current construction schedule, the grading phase is expected to occur over a four

week period, but with the import of material occurring over a portion of that time. If all import of fill was condensed to a 5-working day period, this would equate to between 70 to 90 inbound and 70 to 90 outbound truck trips. Considering the passenger car equivalency[12], this equates to 350 to 450 total truck trips a day for a week of the grading phase. This level of truck traffic in combination with potential worker traffic is less than the project at buildout.

Services Installation – This phase would occur subsequent to the grading phase and is expected to last approximately 40 days with an average of 14 workers per day. Four pieces of heavy equipment are expected during this phase. The daily and peak hour trip generation during this phase is expected to be significantly less than at project buildout.

Building – The building phase of the project is expected to last approximately 520 days with an average of 175 workers on-site on a typical day. Sixteen pieces of heavy equipment are expected during this phase, with most arriving at the beginning of the phase and remaining on-site until no longer needed. In addition to the trips made by workers on the site, there is expected activity related to material deliveries, inspections and other activities. The daily and peak hour trip generation during the building phase is expected to be less than at project buildout considering worker trips and other activities. However, as the project is builtout, there may be less on-site space available for the staging of construction activities and to accommodate worker parking.

Although the level of vehicle trip generation on a daily and peak hour basis, when considering truck trips in passenger-car-equivalents, during the construction phase is expected to be less than the project at buildout, slow moving construction vehicles could impede through traffic on roadways that connect to the site and construction workers could park on the street where there is limited parking availability.

IMPACTS AND MITIGATION MEASURES

Two levels of transportation deficiencies were considered – those that are potentially significant impacts based on the criteria outlined in Chapter 1 and those that are not, such as vehicle level of service. For locations where vehicle level of service degrades based on the criteria outlined in Chapter 1, potential improvements are discussed, but are not required to mitigate a significant impact.

The following discusses potentially significant impacts based on the criteria outlined in Chapter 1:

[12] Converting truck-trips to passenger-car-equivalents accounts for the slow moving nature of trucks, including the additional acceleration and deceleration time and additional physical space a large truck occupies as compared to a passenger car. For this analysis, each truck trip was assumed to be 2.5 passenger vehicle trips.

Impact TC-1: The City of Emeryville *Pedestrian and Bicycle Plan* designates Horton Street as a bicycle boulevard. Existing weekday daily traffic volumes on Horton Street are approximately 3,500 vehicles per day (VPD) from south of Sherwin Avenue to north of 53rd Street, exceeding the desired level for a bicycle boulevard west of Hollis Street. With either Project Option A or Option B, traffic volumes on Horton Street are expected to increase by approximately 300 to 1,400 VPD, increasing daily traffic volumes by more than 2 percent (analysis segments A, B and C). This is considered a ***significant impact***.

Improving the functionality of the Horton Street Bicycle Boulevard is identified in the City's *Pedestrian and Bicycle Plan* as well as the Transportation Impact Fee. Potential measures include the addition of Level 4 and Level 5 treatments as follows:

- Vertical speed control (such as speed humps) (Level 4);
- Horizontal speed control (such as curb extensions) (Level 4);
- Narrowings (such as chokers, center island) (Level 4);
- Intersection turn-restrictions (Level 5);
- Partial or full street closures (Level 5); and/or
- Diagonal diverters (Level 5).

The City is undertaking an experiment to evaluate the effectiveness of different Level 4 traffic calming devices along Horton Street between 45th and 53rd Streets and plans to install temporary measures for a period of at least one year. As these measures could be installed along the project frontage, the project applicant should work with the City so that the final Project design does not preclude the installation of desired traffic calming measures. Installation of traffic calming measures on Horton Street that reduces existing traffic volumes in combination with project volumes below the volume threshold would be required to reduce the impact to a less-than-significant level.

An assessment of the effect of restricting turn movements at several locations along the Horton Street corridor was conducted, and is detailed in Appendix E. As detailed in the assessment, restricting northbound travel at the intersection of 40th Street at Horton Street, and southbound travel at the intersection of 53rd Street at Horton Street, is projected to shift sufficient vehicle traffic from the Horton Street corridor such that the resulting volumes, considering the addition of project traffic, fall within the volume guidelines specified in the *Pedestrian and Bicycle Plan*. Secondary impacts of the turn restrictions are identified in Appendix E and include increased delay for vehicles at some intersections on the Hollis Street corridor and vehicle queues exceeding the available storage at the 40th Street at Hollis Street intersection.

As part of the project, a Class I bicycle facility would be constructed on the west side of the project site, connecting to other planned bicycle facilities and providing an alternative north-south bicycle route through this portion of Emeryville.

Mitigation Measure TC-1: The project applicant shall undertake the following measures:

- Pay the Transportation Impact Fee;
- Work with the City so that the final project design does not preclude the installation of desired traffic calming measures, as identified by the City; and
- Pay for the installation of permanent Level 4 traffic calming measures and or traffic restriction (diversion) measures on Horton Street (Level 5) per the Sherwin Williams – Horton Street Turn Restriction Assessment (Appendix E) that would result in the reduction of existing with project daily volumes to a level below 3,000 vehicles per day.

With implementation of the above measures, the impact would be reduced to a ***less-than-significant*** level.

Impact TC-2: The City of Emeryville *Pedestrian and Bicycle Plan* designates 45th Street, west of San Pablo Avenue as a bicycle boulevard. Existing weekday daily traffic volumes on this portion of 45th Street are approximately 2,600 vehicles per day (VPD), exceeding the desired level for a bicycle boulevard east of Hollis Street. With either Project Option A or Option B, traffic volumes on Horton Street are expected to increase by approximately 140 VPD, increasing daily traffic volumes by more than 2 percent (analysis segment F). This is considered a ***significant impact***.

Improving the functionality of the 45th Street Bicycle Boulevard is identified in the City's *Pedestrian and Bicycle Plan* as well as the Transportation Impact Fee. Potential measures include:

- Installation of signage and pavement markings (completed);
- Installation of vertical speed control;
- Construction of parallel and complementary bicycle facilities to provide alternative routes; and/or
- Installation of a traffic signal at 45th Street and Hollis Street to provide a protected crossing for bicycles and pedestrians.

The project would contribute to the implementation of projects identified in the City's *Pedestrian and Bicycle Plan* through the payment of the Transportation Impact Fee.

Although implementation of the above measures is not expected to reduce vehicle traffic on this segment of 45th Street to less than 1,500 vehicles per day, higher traffic volumes are permitted for short roadway segments provided additional treatments are provided.

Mitigation Measure TC-2: The project applicant shall undertake the following measures:

- Pay the Transportation Impact Fee;
- Work with City Staff to identify additional bicycle boulevard treatments that could be installed along the corridor, including horizontal speed control; and
- Pay for the installation of a traffic signal at the Hollis Street at 45th Street intersection, with necessary improvements for transit, bicycle and pedestrian infrastructure at the intersection, including directional curb ramps, bicycle detection, and transit priority.

Implementation of this measure would reduce the impact to a ***less-than-significant*** level.

Impact TC-3: The City of Emeryville *Pedestrian and Bicycle Plan* designates 53rd Street, west of San Pablo Avenue as a bicycle boulevard. Existing weekday daily traffic volumes on this portion of 53rd Street are approximately 2,400 vehicles per day (VPD), exceeding the desired level for a bicycle boulevard east of Hollis Street. With either Project Option A or Option B, traffic volumes on Horton Street are expected to increase by approximately 100 VPD, increasing daily traffic volumes by more than 2 percent (analysis segment H). This is considered a ***significant impact***.

Improving the functionality of the 53rd Street Bicycle Boulevard is identified in the City's *Pedestrian and Bicycle Plan* as well as the Transportation Impact Fee. Potential measures include:

- Installation of signage and pavement markings (partially completed);
- Installation green street treatments;
- Construction of parallel and complementary bicycle facilities to provide alternative routes; and/or
- Modifications to the San Pablo Avenue at 53rd Street intersection to better accommodate bicyclists.

The project would contribute to the implementation of projects identified in the City's *Pedestrian and Bicycle Plan* through the payment of the Transportation Impact Fee.

Additionally, this street borders the Emery Center of Community Life (ECCL) Campus which will construct improvements along this segment of 53rd Street to accommodate use of the street-frontage as a drop-off/pick-up zone. Proposed improvements include widening the sidewalk and installation of traffic calming along the corridor. Although implementation of the above measures is not expected to reduce

vehicle traffic on this segment of 53rd Street to less than 1,500 vehicles per day, higher traffic volumes are permitted for short roadway segments provided additional treatments are provided.

Mitigation Measure TC-3: The project applicant shall undertake the following measures:

- Pay the Transportation Impact Fee; and
- Work with City Staff to identify additional Level 4 bicycle boulevard treatments that could be installed along the corridor beyond those being installed as part of the ECCL project.

Implementation of this measure would reduce the impact to a ***less-than-significant*** level.

Impact TC-4: Potential transportation system impacts during the construction phase of the proposed project include the potential to disrupt traffic flows on area roadways. Additional impacts may result during the construction phase of the proposed project, when there are heavy-duty construction vehicles sharing the roadway with normal vehicle traffic, creating potential conflicts between incompatible uses. Construction impacts would be temporary in nature; however, this impact is considered ***potentially significant***.

Mitigation Measure TC-4: Although construction impacts are expected to be temporary, development of a construction management plan would reduce the potential for construction vehicle conflicts with other roadway users. The plan should include:

- Project staging plan to maximize on-site storage of materials and equipment;
- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak hours; lane closure proceedings; signs, cones, and other warning devices for drivers; and designation of construction access routes;
- Permitted construction hours;
- Location of construction staging;
- Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations and along the project frontage on Sherwin Avenue and Horton Street;
- Provisions for street sweeping to remove construction related debris on public streets; and
- Provisions for pavement maintenance where increased heavy vehicle traffic has the potential to degrade the pavement.

Implementation of the construction management plan would reduce the temporary construct impact to a ***less-than-significant*** level.

Although the addition of vehicle traffic to the roadway system would not appreciably change delay at intersections experienced by bicyclists, transit vehicles or passenger vehicles, it would contribute to the need to develop a multi-modal transportation system that serves all modes of travel. The Project Applicant would be required to pay the City's Transportation Impact Fee that would fund multi-modal improvements to the transportation system. Based on the level of service analysis for the Existing with Project condition, there are no project specific recommendations for intersection improvements.

CHAPTER 6. FUTURE CONDITIONS

This chapter presents the results of the level of service calculations under Near-term and Cumulative conditions without and with the project. Near-term without Project conditions are defined as conditions around the time the project is expected to be completed and occupied. Due to the uncertainty of the level and expected time of completion for the Novartis development, adjacent to the project site, a longer-term cumulative assessment was also conducted considering conditions with buildout of the Novartis campus, without and with the project.

FUTURE INTERSECTION FORECASTS

Near-term conditions represent existing traffic plus traffic volumes from approved, but not yet constructed and occupied developments in the immediate area that are expected to be operational within the next 5 to 10 years. **Table 18** includes a list of near-term projects included in the analysis, based on the City of Emeryville Community Development Department Status of Major Development Projects, April 2015, and their associated trip generation. The resulting traffic volumes for the Near-term scenario are presented on **Figure 15**. Net new project trips for Options A and B were added to the Near-term without Project conditions to develop traffic volumes for Near-term with Project conditions. The resulting volumes are shown on **Figure 16** and **Figure 17** for Near-term with Options A and Option B respectively.

Based on the Novartis Master Plan, approximately 788,000 square feet of net-new laboratory/research and development space could be constructed to the north of the project site, generating almost 5,000 daily vehicle trips, as presented in Table 18. As the timing of additional development on the Novartis campus to the north of the project site is unknown, the potential level of vehicle trips that could be generated was added to the near-term forecasts presented in Figure 15 to develop Cumulative without Project forecast as presented on **Figure 18**. Net new project trips for Options A and B were added to the Cumulative without Project conditions to develop traffic volumes for Cumulative with Project conditions, as shown on **Figure 19** and **Figure 20** for Options A and Option B, respectively.

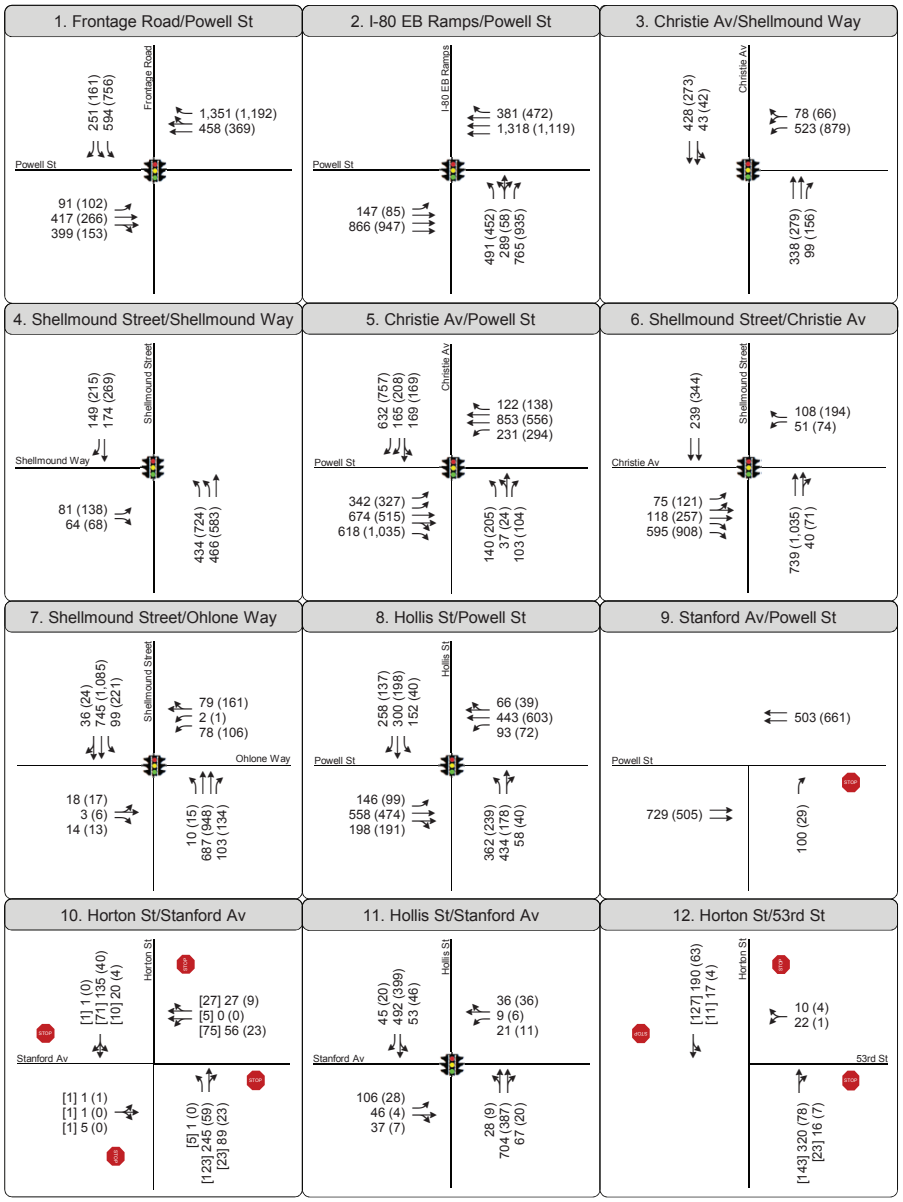
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TABLE 18
NEAR-TERM AND CUMULATIVE PROJECTS TRIPS GENERATION

Near-term Project	Weekday							Weekend			
	Daily	AM Peak Hour			PM Peak Hour			Daily	Peak Hour		
		Inbound	Outbound	Total	Inbound	Outbound	Total		Inbound	Outbound	Total
Marketplace	5,170	85	203	288	257	181	438	5,740	239	229	468
Site A	940	41	30	71	36	39	75	1,200	54	43	97
6701 Shellmound	1,050	15	56	71	55	30	85	1,080	37	35	72
3900 Adeline	500	7	32	39	31	17	48	480	20	19	39
3706 San Pablo	420	7	21	28	24	14	38	430	18	18	36
3800 San Pablo	1,230	19	35	54	53	37	90	1,430	51	47	98
Emeryville Station West	1,890	224	31	255	45	206	251	520	43	37	80
Parc on Powell	1,130	16	54	70	63	40	103	1,150	49	48	97
Pixar Warehouse	100	7	2	9	2	7	9	10	1	1	2
Emeryville Center of Community Life	3,440	398	288	686	126	168	294	2,910	107	142	249
Novartis	4,790	598	123	721	94	539	633	1,130	71	71	142
Total	***20,660***	***1,417***	***875***	***2,292***	***786***	***1,278***	***2,064***	***16,080***	***690***	***690***	***1,380***

Source: Fehr & Peers, 2015





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 15A

Near-Term Without Project Peak Hour Volumes

WC14-3200_15A_NTNoProjVol



WC14-3200_15B_NTNoProjVol

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

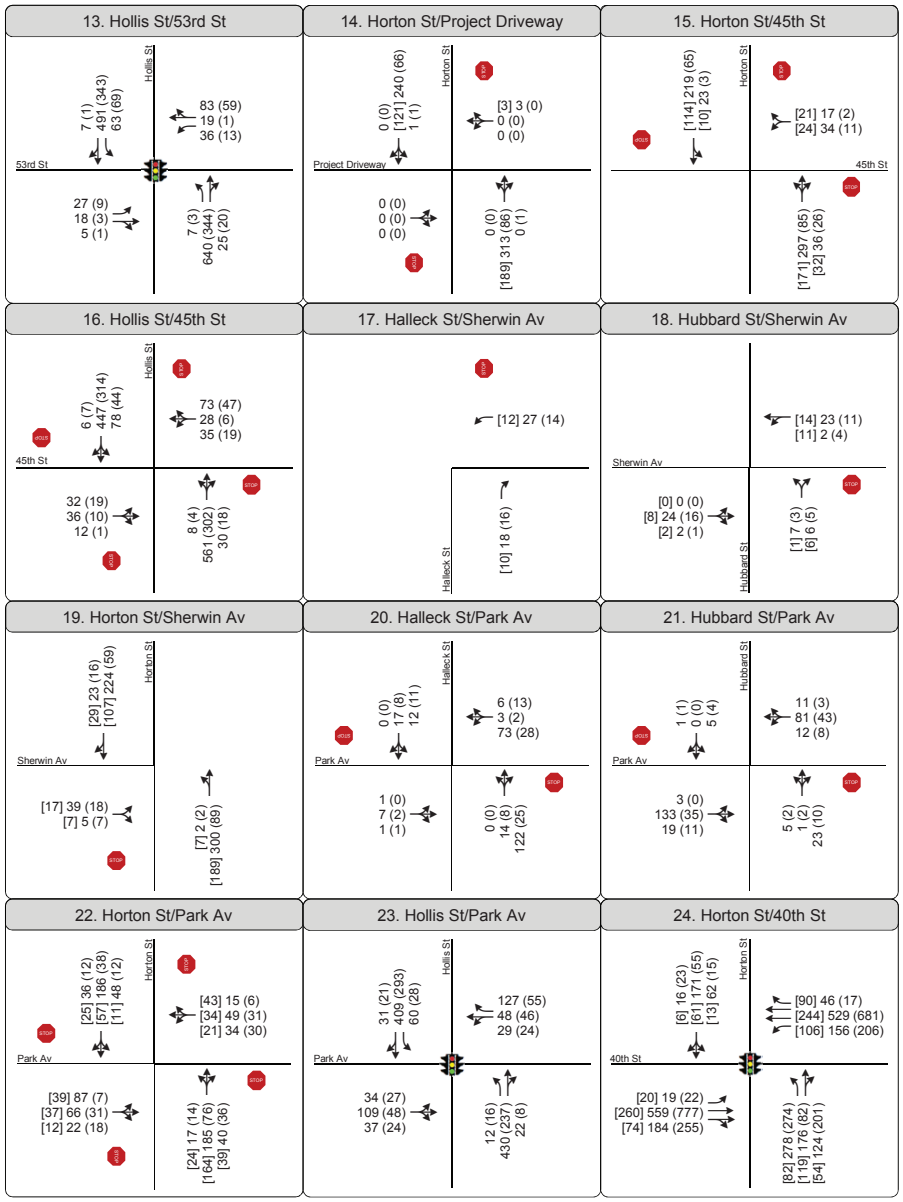
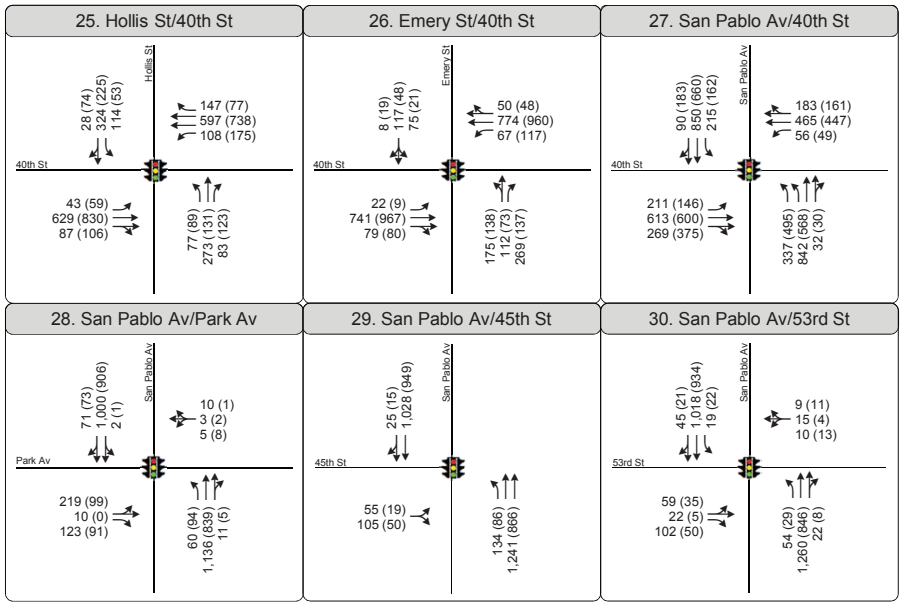


Figure 15B

Near-Term Without Project Peak Hour Volumes





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 15C

Near-Term Without Project Peak Hour Volumes

WC14-3200_15C_NTNoProjVol



LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

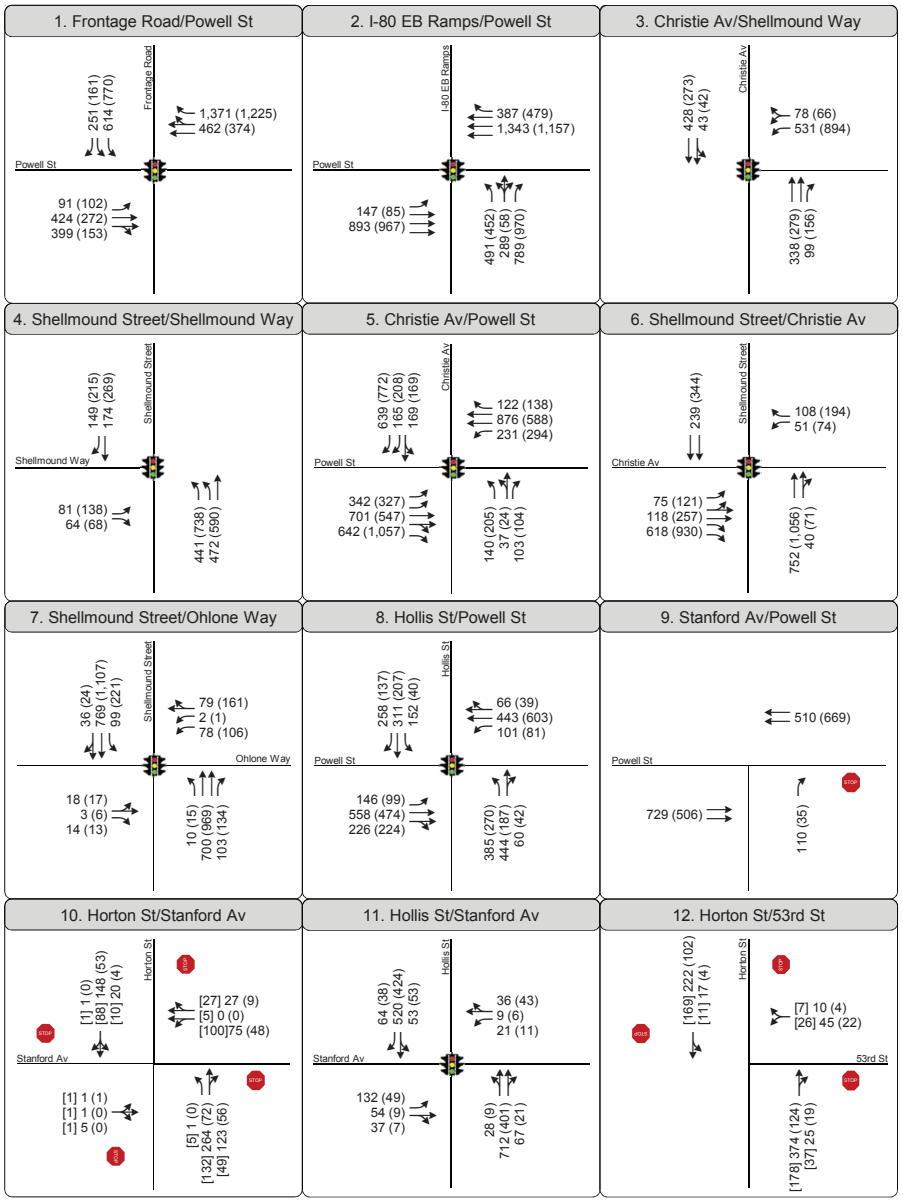


Figure 16A

Near-Term With Project Peak Hour Volumes – Option A

WC14-3200_16A_NT+ProjVolOptA



WC14-3200_16B_NT+ProjVolOptA

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

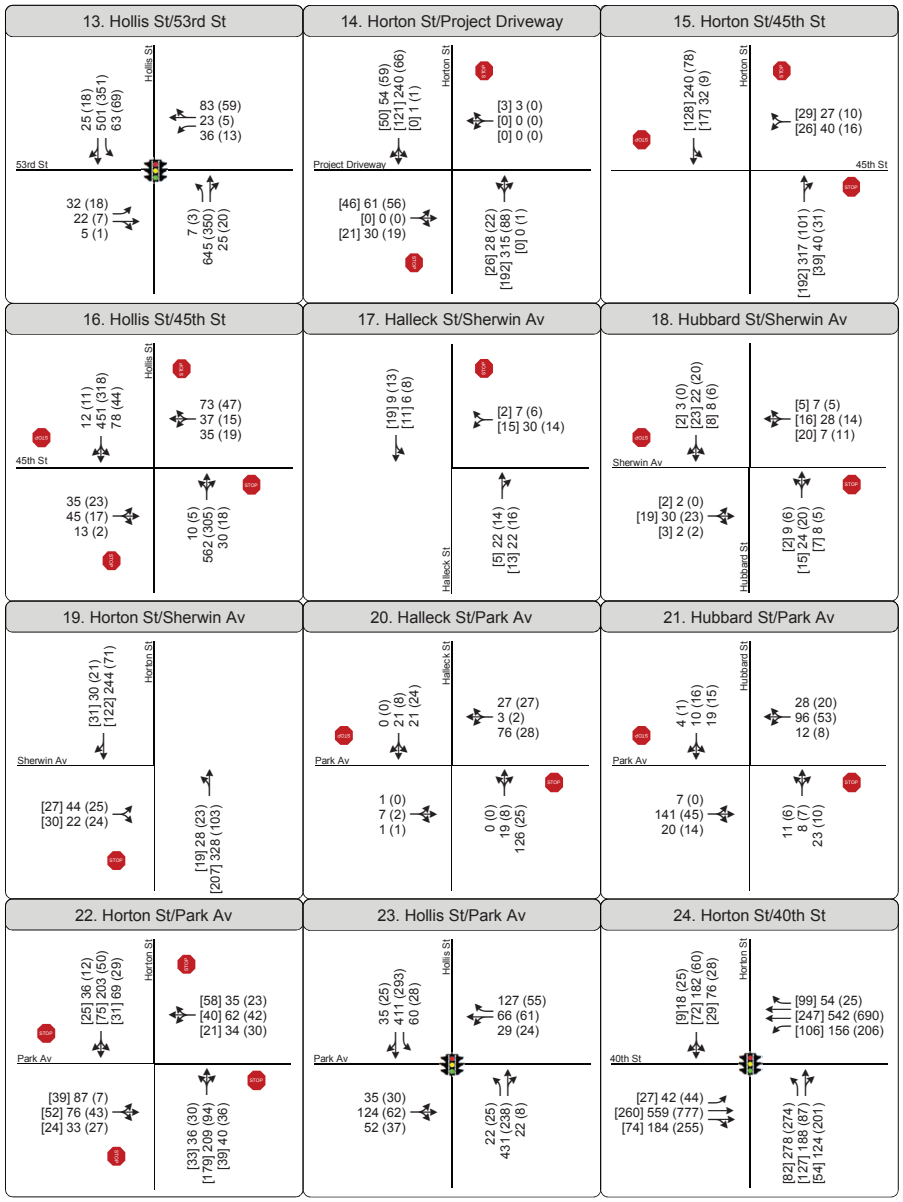
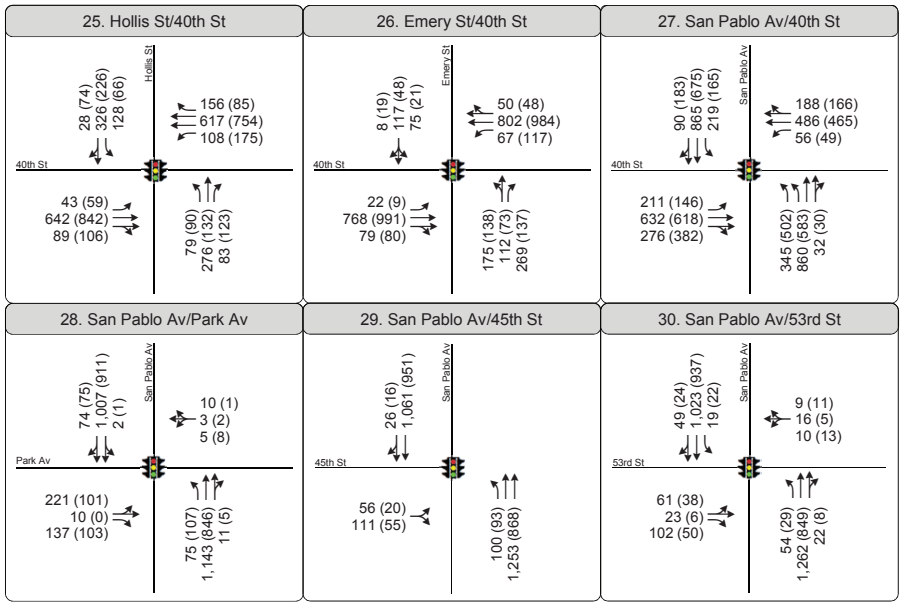


Figure 16B

Near-Term With Project Peak Hour Volumes – Option A





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

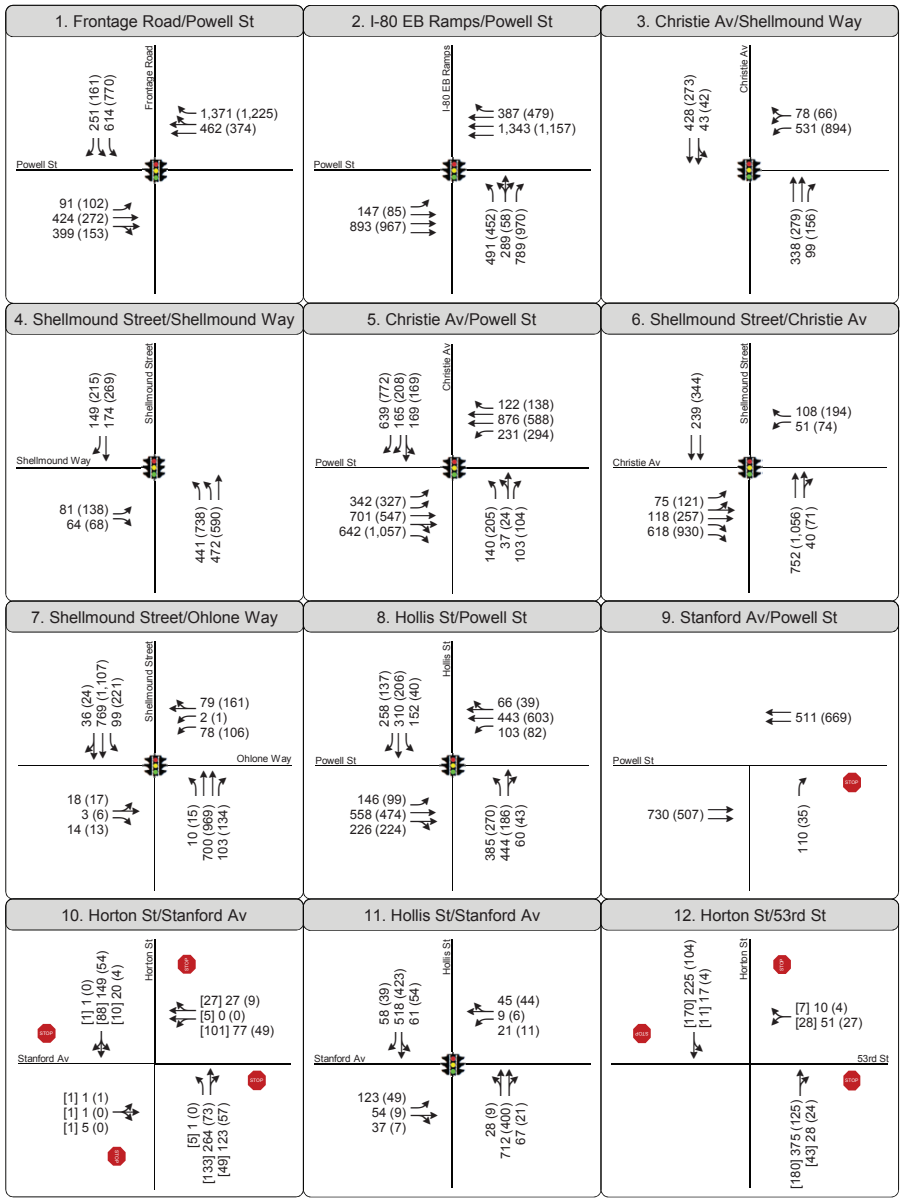
Figure 16C

Near-Term With Project Peak Hour Volumes – Option A

WC14-3200_16C_NT+ProjVolOptA



WC14-3200_17A_NT+ProjVolOptB



LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

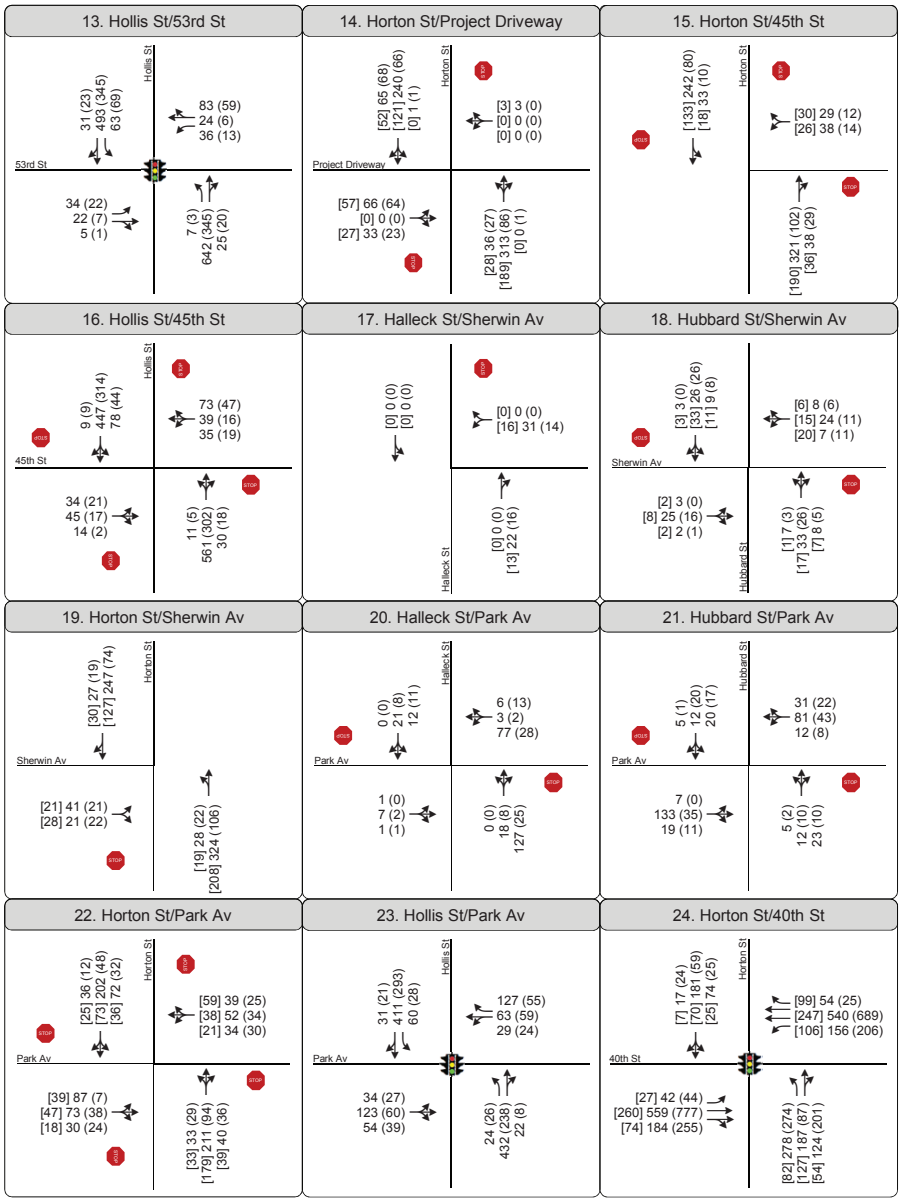
Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 17A

Near-Term With Project Peak Hour Volumes – Option B





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

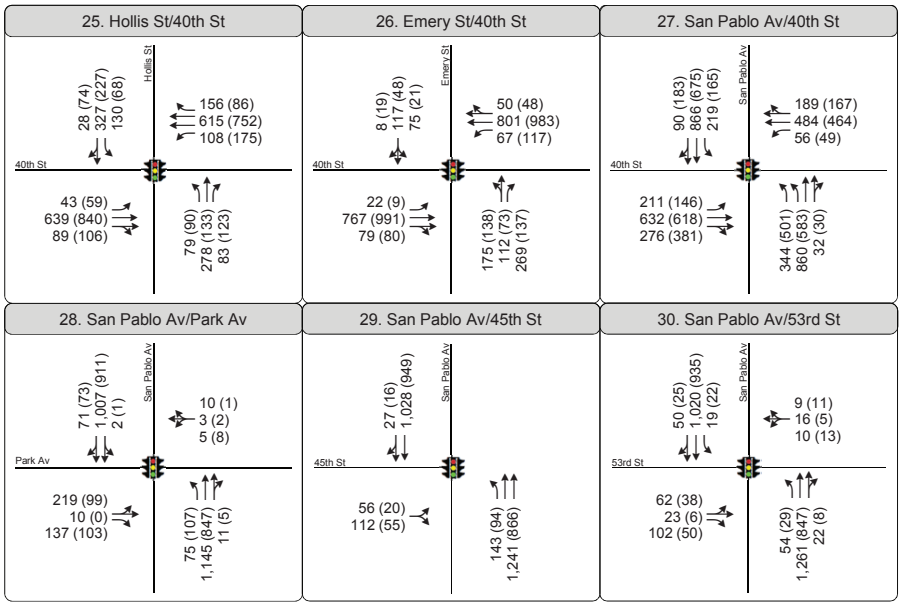
Project Site

Figure 17B

Near-Term With Project Peak Hour Volumes – Option B

WC14-3200_17B_NT+ProjVolOptB





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

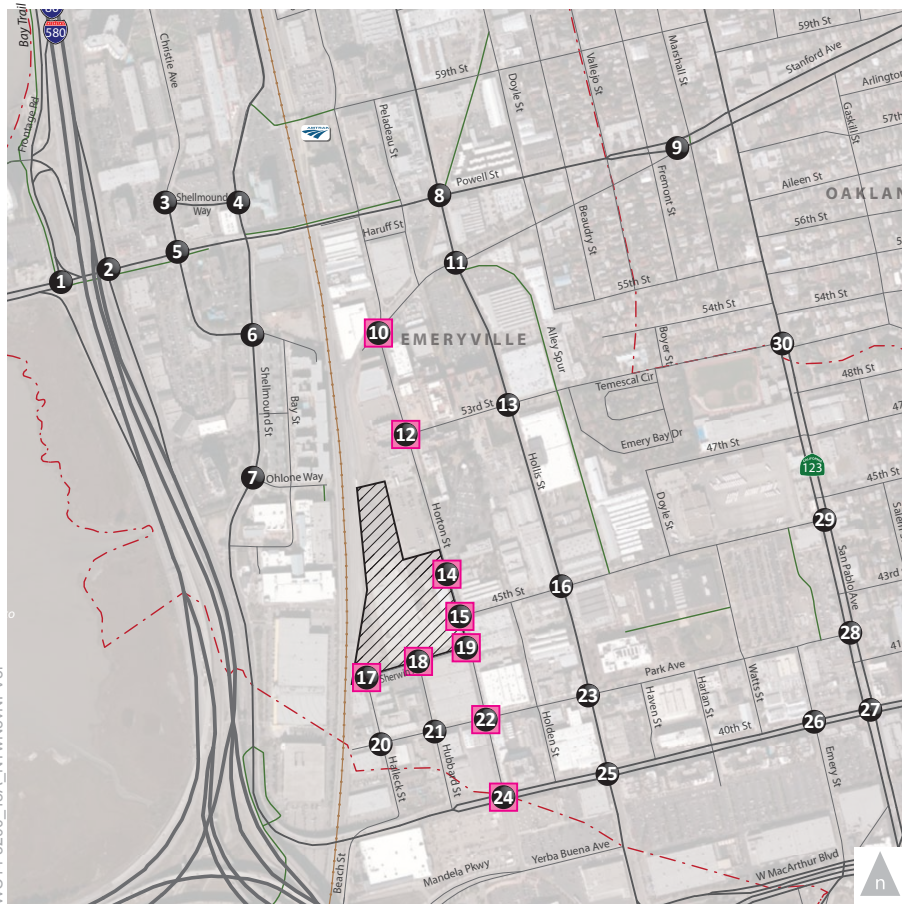
Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 17C

Near-Term With Project Peak Hour Volumes – Option B

WC14-3200_17C_NT+ProjVolOptB



WC14-3200_18A_NTwNovNPVol

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

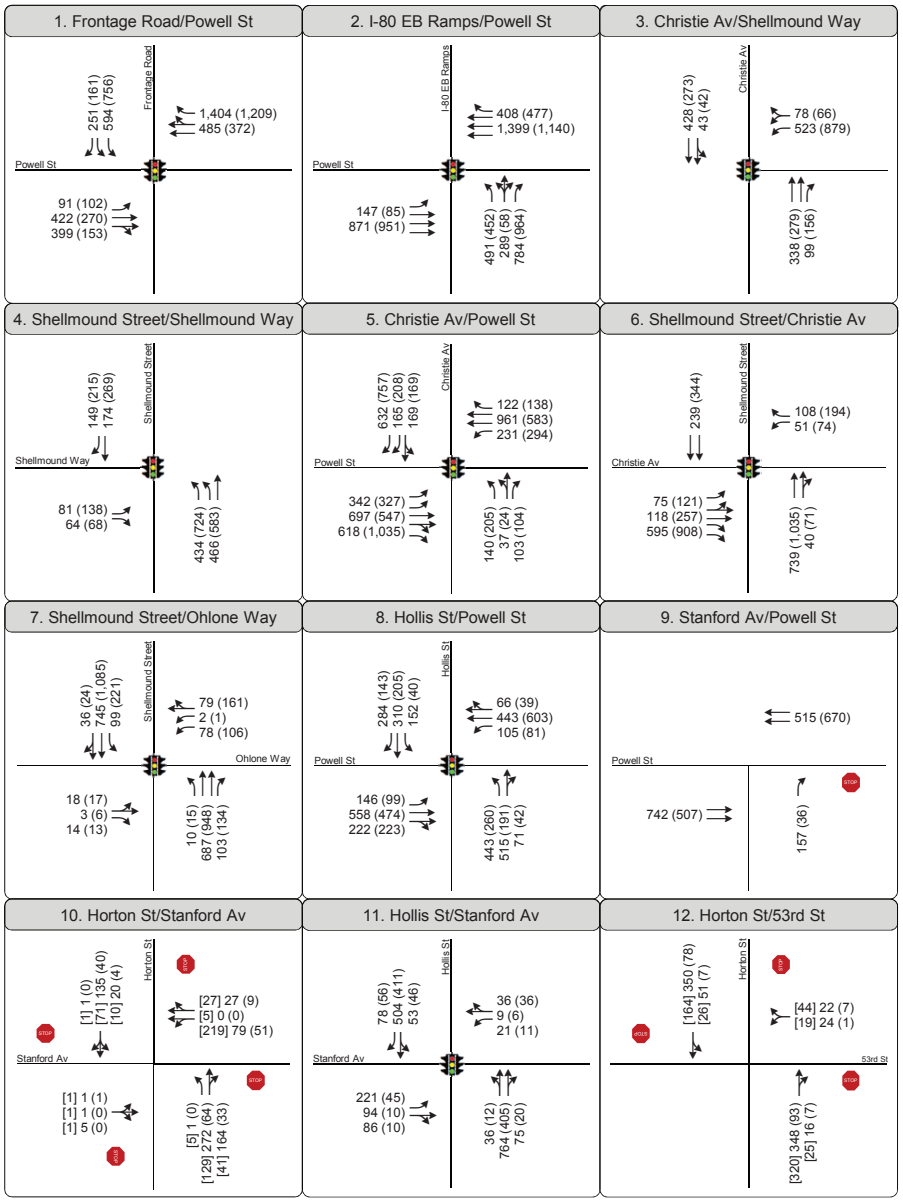
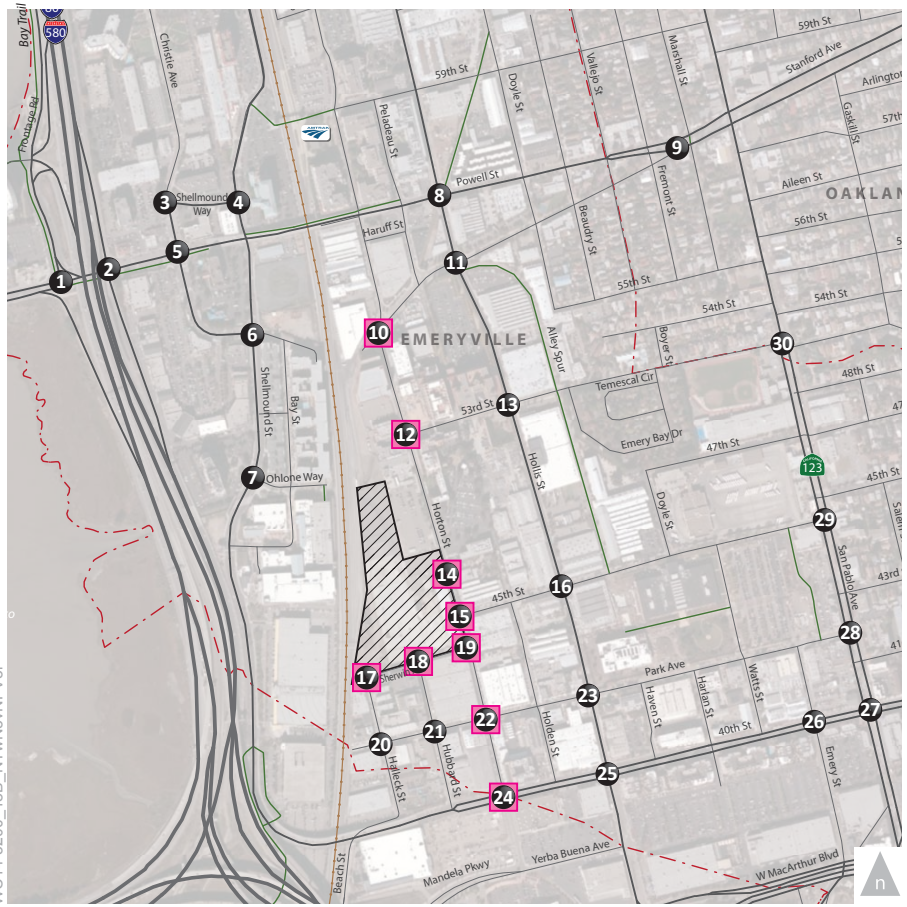


Figure 18A

Cumulative Without Project Peak Hour Volumes



WC14-3200_18B_NTwNovNPVol

LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

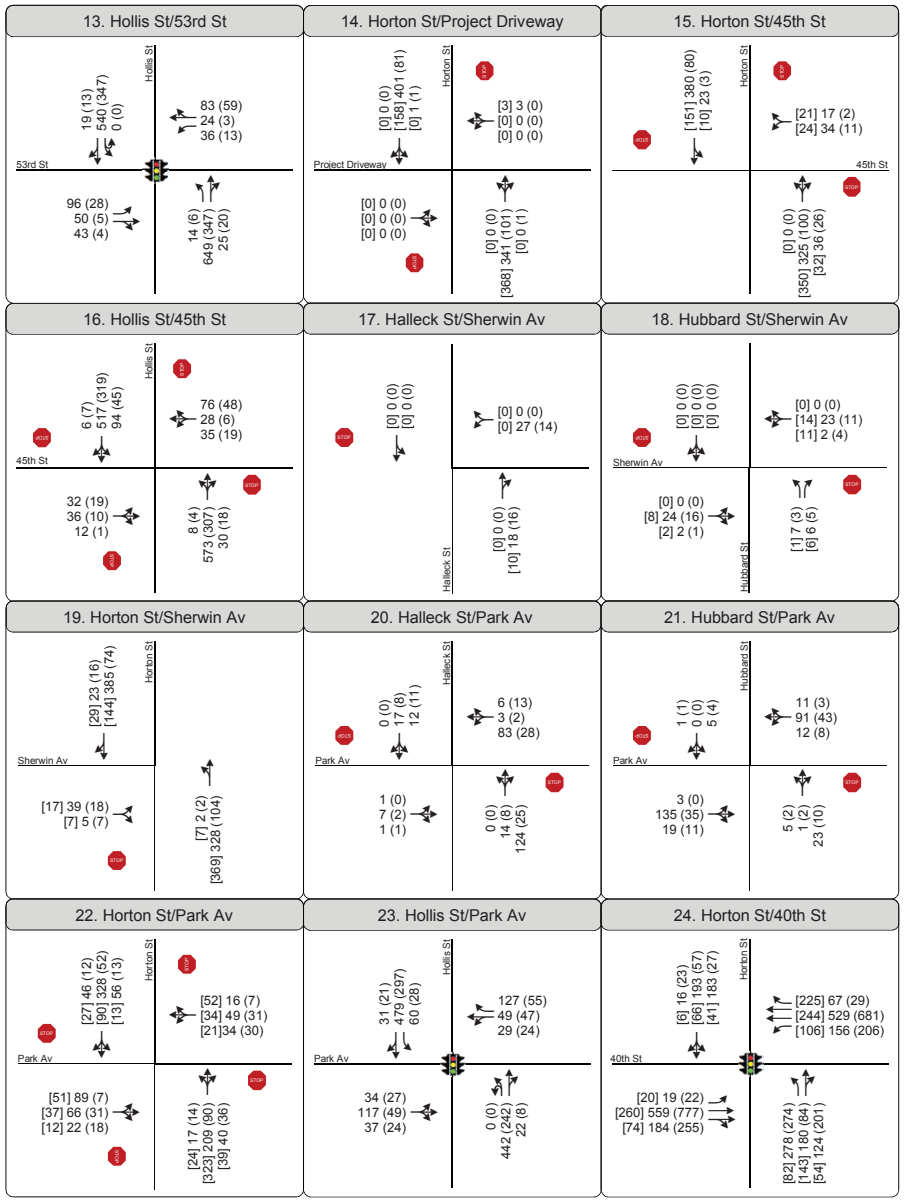
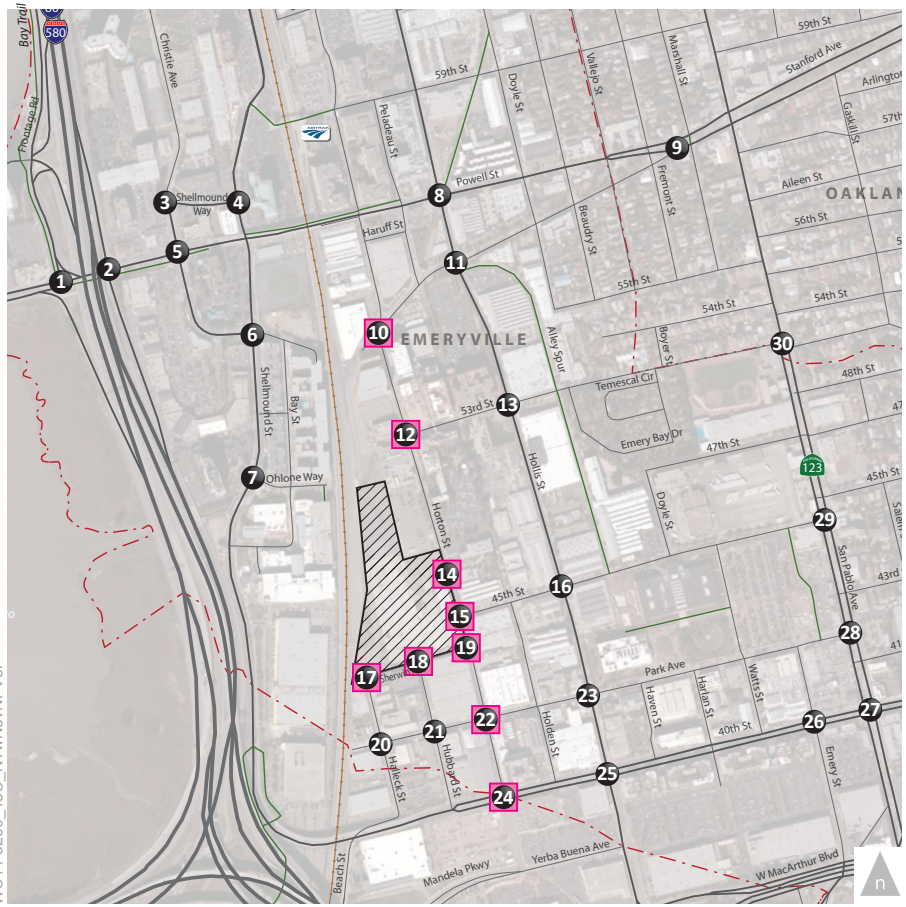
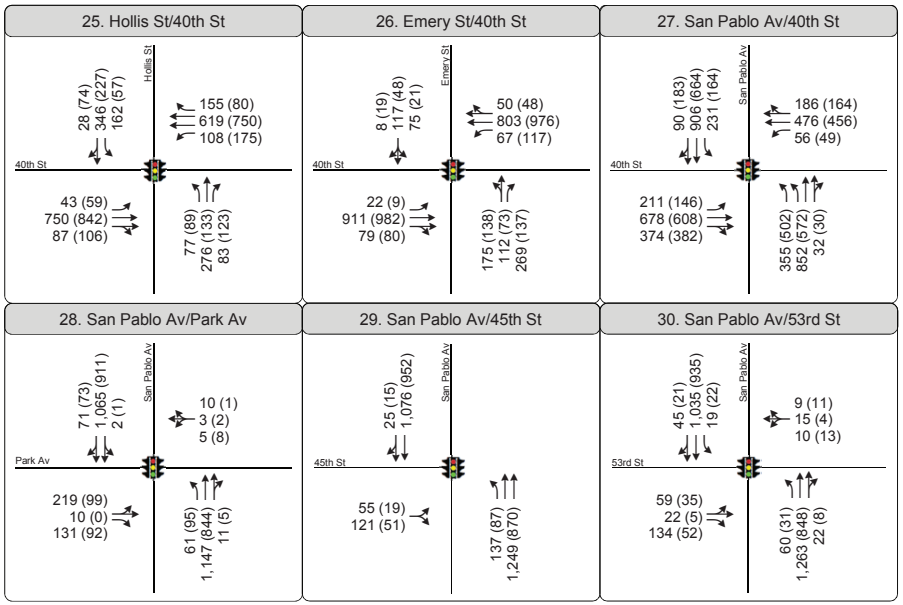


Figure 18B

Cumulative Without Project Peak Hour Volumes





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

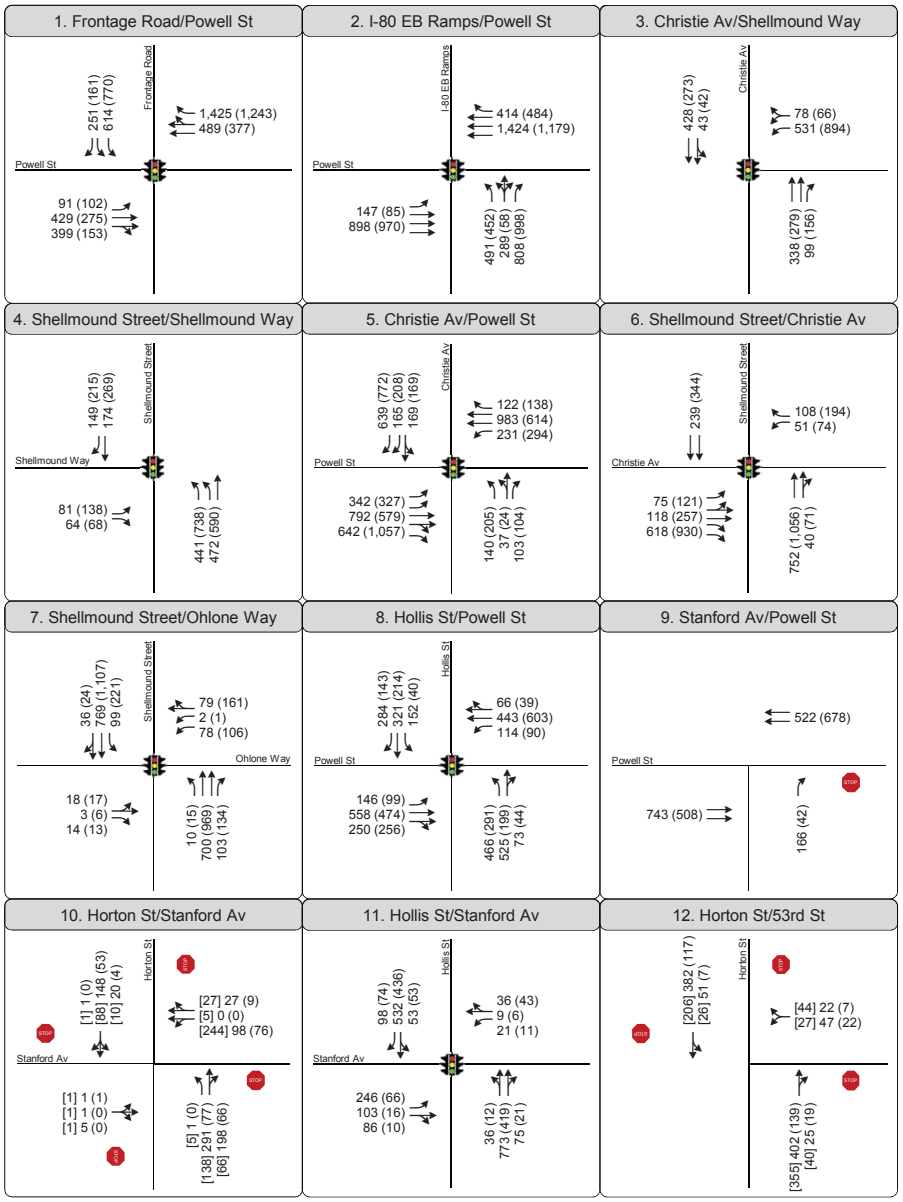
Project Site

Figure 18C

Cumulative Without Project Peak Hour Volumes

WC14-3200_18C_NTwNovNPVol





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

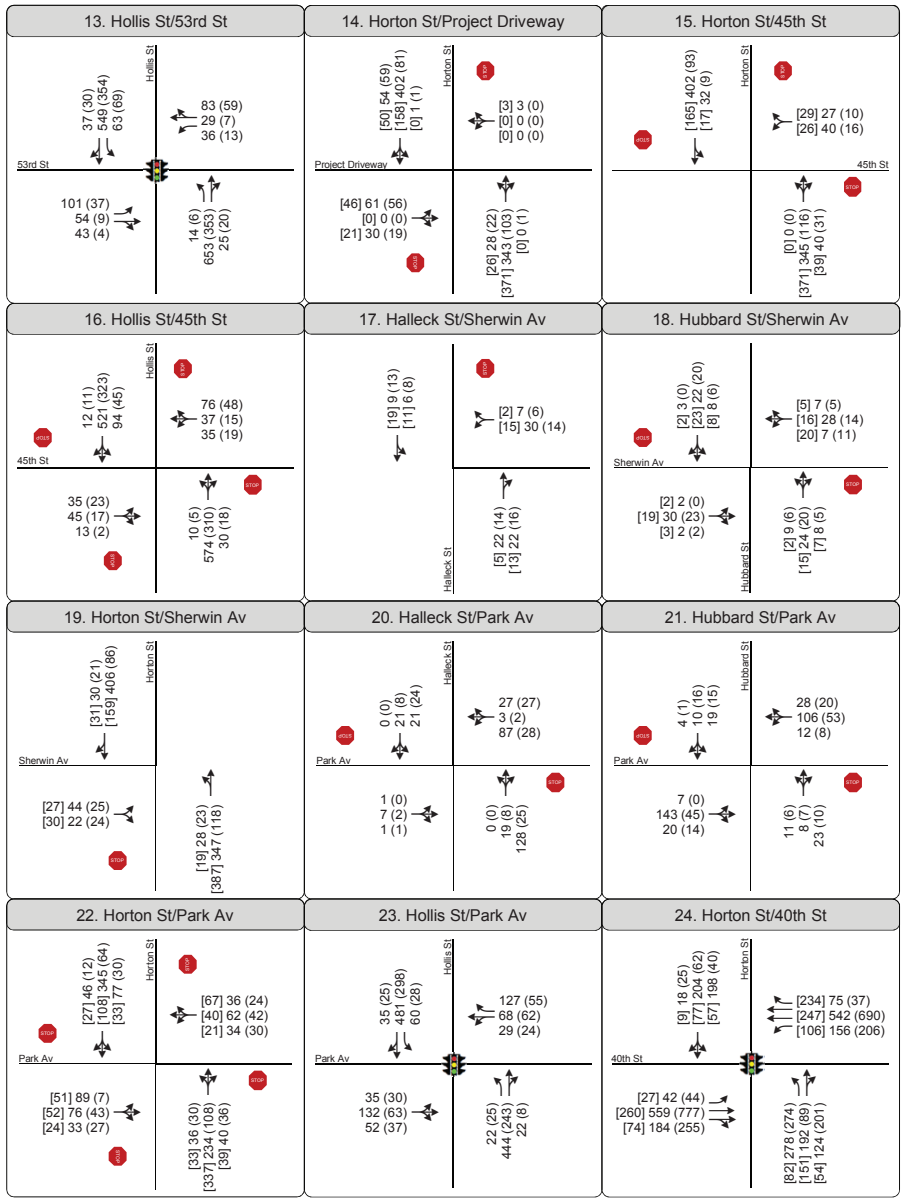
Project Site

Figure 19A

Cumulative With Project Peak Hour Volumes – Option A

WC14-3200_19A_NT+Nov+ProjVolOptA





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

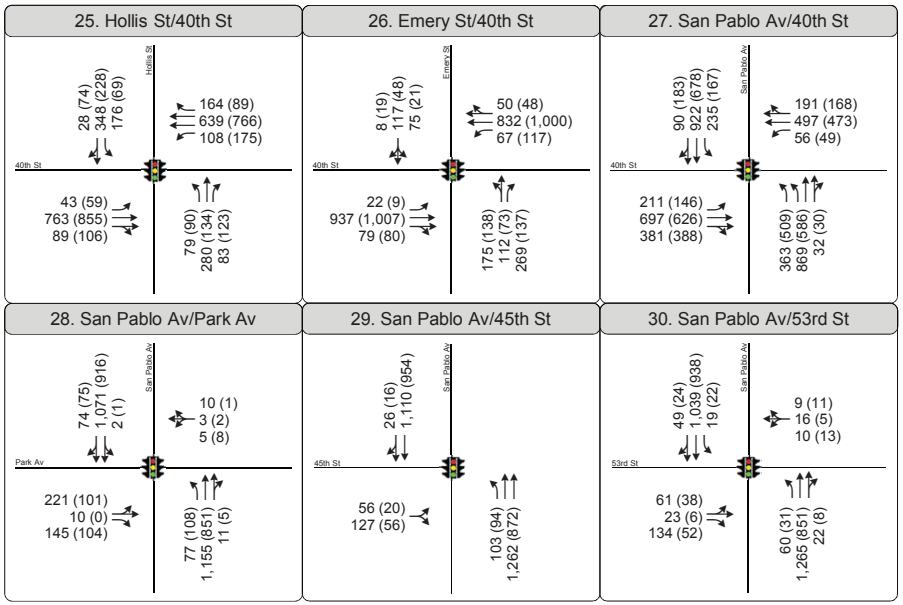
Project Site

Figure 19B

Cumulative With Project Peak Hour Volumes – Option A

WC14-3200_19B_NT+Nov+ProjVolOptA





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 19C

Cumulative With Project Peak Hour Volumes – Option A

WC14-3200_19C_NT+Nov+ProjVolOptA



LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

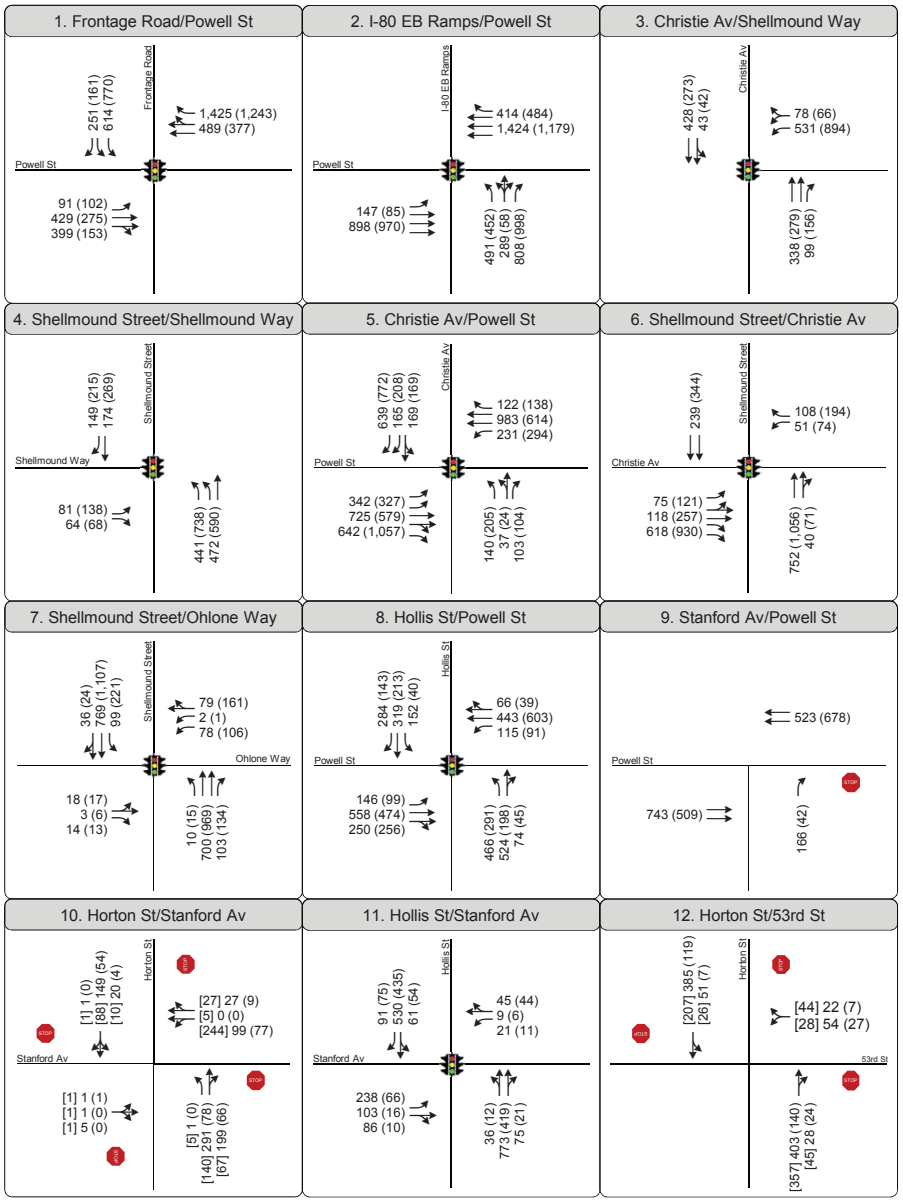
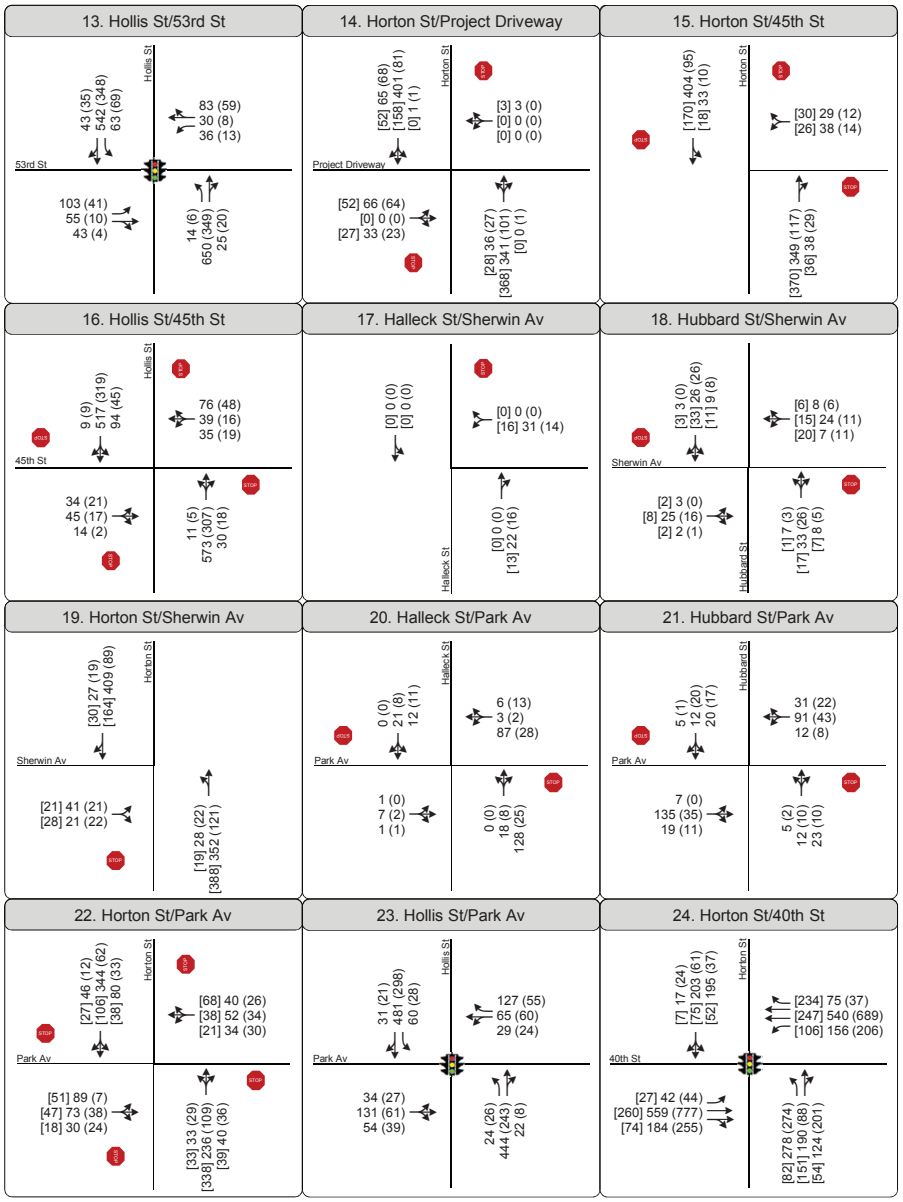


Figure 20A

Cumulative With Project Peak Hour Volumes – Option B

WC14-3200_20A_NT+Nov_ProjVolOptB





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

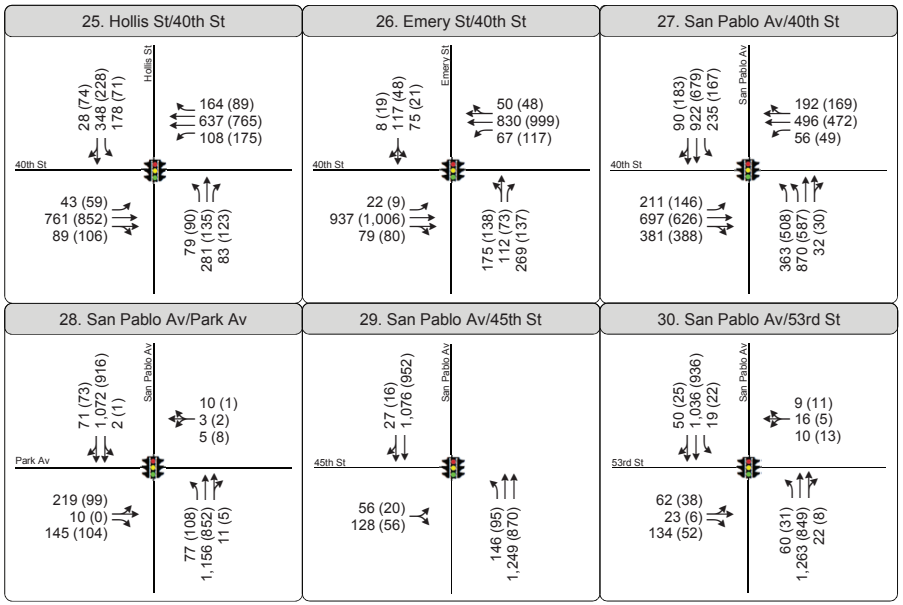
Project Site

Figure 20B

Cumulative With Project Peak Hour Volumes – Option B

WC14-3200_20B_NT+Nov_ProjVolOptB





LEGEND

[XX] YY (ZZ) [AM] PM (Saturday) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Weekday PM and Saturday Peak Hour Analysis Study Intersection

Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Project Site

Figure 20C

Cumulative With Project Peak Hour Volumes – Option B

WC14-3200_20C_NT+Nov_ProjVolOptB

ANALYSIS OF FUTURE CONDITIONS

Level of service calculations were conducted to evaluate intersection operations under Near-term and Cumulative conditions both without and with the project. The results of the LOS analysis are summarized in **Table 19** for Near-term condition and **Table 20** for the Cumulative condition. The corresponding LOS calculation sheets are included in **Appendix B.**

In the near-term condition, traffic growth from the construction and occupation of approved projects would increase delay experienced at some intersections for bicyclists, transit vehicles and passenger vehicles. Operations would approach (LOS D or E) or exceed (LOS F) capacity for vehicles at the following intersections, with the addition of project traffic worsening operations:

- Powell Street/Frontage Road (LOS D in PM and Saturday peak hour, worsening to LOS E during PM peak hour with either project option)
- Powell Street/Christie Avenue (LOS D in PM and Saturday peak hour, worsening to LOS E during Saturday peak hour with either project option)
- Powell Street/Hollis Street (LOS D in PM and Saturday peak hour; no LOS change with either project option)
- Hollis Street/45th Street (LOS F in PM peak hour; worsening delay with either project option)
- Horton Street/40th Street (LOS D in PM and LOS E in Saturday peak hour; no LOS change with either project option)
- San Pablo Avenue/40th Street (LOS D in PM and Saturday peak hour; no LOS change with either project option)

In the Cumulative condition, delay for vehicles at intersections would further degrade.

- Powell Street/Frontage Road (LOS E in PM and LOS D Saturday peak hour; no LOS change with either project option)
- Powell Street/Christie Avenue (LOS D in PM and Saturday peak hour, worsening to LOS E during Saturday peak hour with either project option)
- Powell Street/Hollis Street (LOS D in PM and Saturday peak hour, worsening to LOS E during PM peak hour with either project option)
- Hollis Street/45th Street (LOS F in PM peak hour; worsening delay with either project option)
- Horton Street/40th Street (LOS E in PM and Saturday peak hour; no LOS change with either project option)

- Emery Street/40th Street (LOS D in PM peak hour; no LOS change with either project option)
- San Pablo Avenue/40th Street (LOS E in PM and Saturday peak hour; no LOS change with either project option)

Peak hour volume and delay warrants were reviewed for the unsignalized study intersections in the near-term and cumulative, without and with project traffic. Signal warrants would be satisfied at the Hollis Street at 45th Street study intersection in the Near-term condition prior to the addition of project traffic; the addition of project traffic would exacerbate the need for signalization.

The change in 95th percentile vehicle queues was reviewed for the signalized study intersections (detailed table provided in Appendix C). In the near-term condition, there are numerous locations where the 95th percentile vehicle queue is expected to extend beyond the available storage periodically during the peak hour and the addition of project traffic would further exacerbate vehicle queue spillback, but would not increase vehicle queues by more than 50 feet. Project traffic is expected to increase the 95th percentile vehicle queue by more than 50 feet at the following intersection:

- San Pablo Avenue at 40th Street – southbound left-turn movement

FUTURE ROADWAY SEGMENT OPERATIONS

Daily roadway segment volumes were forecasts for the near-term and cumulative conditions, as presented in **Table 21** and **Table 22**. In near-term and cumulative conditions, the addition of traffic from approved and pending projects would increase vehicle traffic on streets in the study area and would result in traffic volumes on 45th Street, east of San Pablo Avenue exceeding the desired level of traffic for a bicycle boulevard. However, the project would increase vehicle traffic on this roadway segment by less than 2 percent on a daily basis. The project would further exacerbate already deficient conditions for a bicycle boulevard on Horton Street, and portions of 45th and 53rd streets, west of San Pablo Avenue, by increasing daily traffic by more than 2 percent.

TABLE 19
NEAR-TERM CONDITIONS INTERSECTION LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Near-term		Near-term With Option A		Near-term With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
1	Powell Street/Frontage Road	Signal	PM SAT	52 50	D D	56 51	E D	56 51	E D
2	Powell Street/Eastbound I-80 Off-Ramp[4]	Signal	PM SAT	33 28	C C	33 30	C C	33 30	C C
3	Shellmound Way/Christie Avenue[4]	Signal	PM SAT	11 10	B A	11 10	B A	11 10	B A
4	Shellmound Street/Shellmound Way[4]	Signal	PM SAT	18 23	B C	18 23	B C	18 23	B C
5	Powell Street/Christie Avenue[4]	Signal	PM SAT	39 53	D D	42 56	D E	42 56	D E
6	Shellmound Street/Christie Avenue	Signal	PM SAT	29 27	C C	29 27	C C	29 27	C C
7	Shellmound Street/Ohlone Way	Signal	PM SAT	17 24	B C	17 24	B C	17 24	B C
8	Powell Street/Hollis Street	Signal	PM SAT	42 39	D D	44 40	D D	44 40	D D
9	Powell Street/Stanford Avenue	SSSC	PM SAT	1 (12) 1 (10)	A (B) A (B)	2 (12) 1 (10)	A (B) A (B)	1 (12) 1 (10)	A (B) A (B)
10	Horton Street/Stanford Avenue	AWSC	AM PM SAT	8 10 7	A B A	9 12 8	A B A	9 12 8	A B A
11	Hollis Street/Stanford Avenue	Signal	PM SAT	7 4	A A	8 5	A A	8 5	A A
12	Horton Street/53rd Street	AWSC	AM PM SAT	8 10 7	A A A	9 11 8	A B A	9 11 8	A B A
13	Hollis Street/53rd Street	Signal	PM SAT	8 5	A A	8 6	A A	8 6	A A
14	Horton Street/46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	2 (12) 3 (16) 3 (10)	A (B) A (C) A (B)	3 (12) 3 (17) 3 (11)	A (B) A (C) A (B)

TABLE 19
NEAR-TERM CONDITIONS INTERSECTION LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Near-term		Near-term With Option A		Near-term With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
15	Horton Street/45th Street	AWSC	AM PM SAT	8 10 8	A B A	9 11 8	A B A	9 11 8	A B A
16	Hollis Street/45th Street	AWSC	PM SAT	54 12	F B	63 12	F B	62 12	F B
17	Halleck Street/Sherwin Avenue	Free	AM PM SAT	No conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No conflicting Movements	
18	Hubbard Street/Sherwin Avenue/Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	6 (10) 5 (10) 6 (10)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/Sherwin Avenue	SSSC	AM PM SAT	1 (11) 1 (13) 1 (9)	A (B) A (B) A (A)	2 (11) 2 (14) 3 (10)	A (B) A (B) A (A)	2 (11) 2 (14) 2 (10)	A (B) A (B) A (A)
20	Halleck Street/Park Avenue	SSSC	PM SAT	8 (12) 7 (10)	A (B) A (A)	8 (12) 7 (10)	A (B) A (A)	9 (12) 7 (10)	A (B) A (A)
21	Hubbard Street/Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)	3 (12) 3 (10)	A (B) A (B)	3 (12) 4 (10)	A (B) A (A)
22	Horton Street/Park Avenue	AWSC	AM PM SAT	9 11 8	A B A	10 13 8	A B A	10 13 8	A B A
23	Hollis Street/Park Avenue	Signal	PM SAT	15 12	B B	17 13	B B	17 13	B B
24	Horton Street/40th Street	Signal	AM PM SAT	27 47 59	C D E	28 50 61	C D E	28 50 60	C D E
25	Hollis Street/40th Street[4]	Signal	PM SAT	32 31	C C	32 31	C C	32 31	C C
26	Emery Street/40th Street[4]	Signal	PM SAT	34 31	C C	34 31	C C	34 31	C C
27	San Pablo Avenue/40th Street[4]	Signal	PM SAT	46 48	D D	49 50	D D	49 50	D D
28	San Pablo Avenue/Park Avenue	Signal	PM SAT	18 7	B A	19 8	B A	18 7	B A

TABLE 19
NEAR-TERM CONDITIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Near-term		Near-term With Option A		Near-term With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
29	San Pablo Avenue/45th Street	Signal	PM SAT	7 7	A A	7 7	A A	7 7	A A
30	San Pablo Avenue/53rd Street	Signal	PM SAT	14 9	B A	15 9	B A	15 9	B A

Notes:

1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized

2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour

3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2000 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).

4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.

Source: Fehr & Peers, 2015.

TABLE 20
CUMULATIVE CONDITIONS INTERSECTION LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Cumulative		Cumulative With Option A		Cumulative With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
1	Powell Street/Frontage Road	Signal	PM SAT	59 50	E D	63 51	E D	63 51	E D
2	Powell Street/Eastbound I-80 Off-Ramp[4]	Signal	PM SAT	33 30	C C	34 32	C C	34 32	C C
3	Shellmound Way/Christie Avenue[4]	Signal	PM SAT	11 10	B A	12 10	B A	12 10	B A
4	Shellmound Street/Shellmound Way[4]	Signal	PM SAT	18 23	B C	18 23	B C	18 23	B C
5	Powell Street/Christie Avenue[4]	Signal	PM SAT	42 54	D D	45 56	D E	45 56	D E
6	Shellmound Street/Christie Avenue	Signal	PM SAT	29 27	C C	29 27	C C	29 27	C C
7	Shellmound Street/Ohlone Way	Signal	PM SAT	17 24	B C	17 24	B C	17 24	B C
8	Powell Street/Hollis Street	Signal	PM SAT	51 39	D D	56 42	E D	56 42	E D
9	Powell Street/Stanford Avenue	SSSC	PM SAT	2 (13) 1 (11)	A (B) A (B)	2 (14) 1 (11)	A (B) A (B)	2 (14) 1 (11)	A (B) A (B)
10	Horton Street/Stanford Avenue	AWSC	AM PM SAT	10 13 7	A B A	11 16 8	B C A	11 16 8	B C A
11	Hollis Street/Stanford Avenue	Signal	PM SAT	11 5	B A	12 5	B A	12 5	B A
12	Horton Street/53rd Street	AWSC	AM PM SAT	10 12 8	A B A	11 15 8	B B A	11 15 8	B B A
13	Hollis Street/53rd Street	Signal	PM SAT	11 6	B A	11 6	B A	11 6	B A
14	Horton Street/46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	2 (15) 3 (22) 3 (11)	A (B) A (C) A (B)	2 (15) 3 (24) 3 (11)	A (C) A (C) A (B)

TABLE 20
CUMULATIVE CONDITIONS INTERSECTION LEVEL OF SERVICE

	Intersection	Control[1]	Peak Hour[2]	Cumulative		Cumulative With Option A		Cumulative With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
15	Horton Street/45th Street	AWSC	AM PM SAT	11 12 8	B B A	11 14 8	B B A	11 14 8	B B A
16	Hollis Street/45th Street	AWSC	PM SAT	75 12	F B	85 12	F B	84 12	F B
17	Halleck Street/Sherwin Avenue	Free	AM PM SAT	No conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No conflicting Movements	
18	Hubbard Street/Sherwin Avenue/Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	6 (9) 5 (10) 6 (9)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/Sherwin Avenue	SSSC	AM PM SAT	1 (12) 1 (16) 1 (10)	A (B) A (C) A (A)	1 (12) 2 (18) 2 (10)	A (B) A (C) A (A)	1 (12) 2 (18) 2 (10)	A (B) A (C) A (A)
20	Halleck Street/Park Avenue	SSSC	PM SAT	8 (12) 7 (10)	A (B) A (A)	8 (12) 7 (10)	A (B) A (A)	9 (12) 7 (10)	A (B) A (A)
21	Hubbard Street/Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)	3 (12) 3 (10)	A (B) A (B)	3 (12) 4 (10)	A (B) A (A)
22	Horton Street/Park Avenue	AWSC	AM PM SAT	11 16 8	B C A	13 22 9	B C A	13 21 8	B C A
23	Hollis Street/Park Avenue	Signal	PM SAT	15 12	B B	17 13	B B	17 13	B B
24	Horton Street/40th Street	Signal	AM PM SAT	28 61 60	C E E	29 66 61	C E E	29 65 61	C E E
25	Hollis Street/40th Street[4]	Signal	PM SAT	34 31	C C	34 32	C C	34 32	C C
26	Emery Street/40th Street[4]	Signal	PM SAT	36 31	D C	36 31	D C	36 31	D C
27	San Pablo Avenue/40th Street[4]	Signal	PM SAT	56 49	E D	61 52	E D	61 52	E D
28	San Pablo Avenue/Park Avenue	Signal	PM SAT	19 7	B A	19 8	B A	19 7	B A

TABLE 20
CUMULATIVE CONDITIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Cumulative		Cumulative With Option A		Cumulative With Option B	
				Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
29	San Pablo Avenue/45th Street	Signal	PM SAT	8 7	A A	8 7	A A	8 7	A A
30	San Pablo Avenue/53rd Street	Signal	PM SAT	15 9	B A	15 10	B A	15 10	B A

Notes:

1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized

2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour

3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2000 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).

4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.

Source: Fehr & Peers, 2015.

TABLE 21
NEAR-TERM WITH PROJECT DAILY TRAFFIC VOLUMES

Roadway	Existing Average Daily Traffic	Added Traffic From Near-Term Projects	Near-term Without Project Volume	Project Daily Added Traffic	Total Daily Near-Term Traffic With Project	Percent Increase With Project
A. Horton Street, north of 53rd Street	***3,480***	510	***3,990***	960	***4,950***	24%
B. Horton Street, between 45th and 53rd Street	***3,530***	560	***4,090***	1,370	***5,460***	33%
C. Horton Street, south of Sherwin Avenue	***3,460***	610	***4,070***	940	***5,010***	23%
D. 53rd Street, east of Horton Street	600	50	650	410	1,060	63%
E. 45th Street, east of Horton Street	1,080	50	1,130	280	1,410	25%
F. 45th Street, west of San Pablo Ave	***2,630***	230	***2,860***	140	***3,000***	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,300	***3,740***	100	***3,840***	3%

Note: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.

1. Based on weekday daily Project trip generation and distribution percentages.

Source: Fehr & Peers, 2015

TABLE 22
CUMULATIVE WITH PROJECT DAILY TRAFFIC VOLUMES

Roadway	Existing Average Daily Traffic	Added Traffic From Cumulative Projects	Cumulative Without Project Volume	Project Daily Added Traffic	Total Daily Cumulative Traffic With Project	Percent Increase With Project
A. Horton Street, north of 53rd Street	***3,480***	2,850	***6,330***	960	***7,290***	15%
B. Horton Street, between 45th and 53rd Street	***3,530***	2,450	***5,980***	1,370	***7,350***	23%
C. Horton Street, south of Sherwin Avenue	***3,460***	2,500	***5,960***	940	***6,900***	16%
D. 53rd Street, east of Horton Street	600	1680	2,280	410	2,690	18%
E. 45th Street, east of Horton Street	1,080	50	1,130	280	1,410	25%
F. 45th Street, west of San Pablo Ave	***2,630***	420	***3,050***	140	***3,190***	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,750	***4,190***	100	***4,290***	2%

Note: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.

1. Based on weekday daily Project trip generation and distribution percentages.

Source: Fehr & Peers, 2015

IMPACTS AND MITIGATION MEASURES

In the near-term and cumulative conditions, two levels of transportation deficiencies were considered – those that are potentially significant impacts based on the criteria outlined in Chapter 1 and those that are not, such as vehicle level of service. For locations where vehicle level of service degrades based on the criteria outlined in Chapter 1, potential improvements are discussed, but are not required to mitigate a significant impact.

The following discusses potentially significant impacts based on the criteria outlined in Chapter 1:

Impact TC-5: The City of Emeryville *Pedestrian and Bicycle Plan* designates Horton Street as a bicycle boulevard (analysis segments A, B and C). Existing weekday daily traffic volumes on Horton Street are

approximately 3,500 vehicles per day (VPD) from south of Sherwin Avenue to north of 53rd Street. In the near-term and cumulative conditions, traffic volumes would increase as compared to the existing condition, with the project increasing daily vehicle traffic by more than 2 percent, resulting in a ***significant impact***.

> ***Mitigation Measure TC-5:*** Implement mitigation measure TC-1. Implementation of this measure would reduce the project impact to a ***less-than-significant*** level in the near-term condition.
>
> In the cumulative condition, traffic volumes on Horton Street north of 53rd Street would exceed 3,000 vehicles per day, even with turn restrictions along the corridor, primarily due to the potential traffic that could be generated with buildout of the Novartis campus. As it is uncertain if the Novartis project would move forward as previously contemplated, there are potentially opportunities through the design of the Novartis site to orient traffic to 53rd Street and Hollis Street, reducing the level of traffic on Horton Street north of 53rd Street. Additionally, there are dedicated bicycle lanes on Horton Street, north of 53rd Street providing bicyclists with dedicated right-of way. Redesignating this portion of Horton Street from a bicycle boulevard to a Class II bicycle facility could be considered. As part of the project, a Class I bicycle facility would be constructed on the west side of the project site, connecting to other planned bicycle facilities and providing an alternative north-south bicycle route through this portion of Emeryville. However, based on guidelines provided in the City of Emeryville *Pedestrian and Bicycle Plan*, the Bicycle Boulevard impact to Horton Street between 53rd Street and Stanford Avenue (analysis segment A) in the cumulative condition could remain ***significant and unavoidable***. The impact south of 53rd Street would be reduced to a less-than-significant level (analysis segments B and C).

Impact TC-6: The City of Emeryville *Pedestrian and Bicycle Plan* designates 45th Street, west of San Pablo Avenue, as a bicycle boulevard (analysis segment F). Traffic volumes on 45th Street, west of San Pablo Avenue, currently exceed the desired level for a bicycle boulevard based on guidance provided in the City's *Pedestrian and Bicycle Plan*. Near-term and cumulative development is projected to further increase traffic, with the project further increasing daily vehicle volumes by more than 2 percent. This is considered a ***significant impact***.

> ***Mitigation Measure TC-6:*** Implement Mitigation Measure TC-2. Implementation of this measure would reduce the project impact to a ***less-than significant*** level.

Impact TC-7: The City of Emeryville *Pedestrian and Bicycle Plan* designates 45th Street, east of San Pablo Avenue as a bicycle boulevard (analysis segment G). Traffic volumes on 45th Street, east of San Pablo Avenue, are projected to exceed the desired level for a bicycle boulevard based on guidance provided in

the City's *Pedestrian and Bicycle Plan* with the addition of traffic from approved and pending projects in the near-term and cumulative condition. The project is expected to increase daily traffic on this roadway by less than 2 percent. Therefore, this impact is considered ***less-than-significant***.

Mitigation Measure TC-7: Impact ***less-than-significant***. No mitigation required.

Impact TC-8: The City of Emeryville *Pedestrian and Bicycle Plan* designates 53rd Street, west of San Pablo Avenue, as a bicycle boulevard (analysis segment H). Traffic volumes on 53rd Street, west of San Pablo Avenue, exceed the desired level for a bicycle boulevard based on guidance provided in the City's *Pedestrian and Bicycle Plan*. Near-term and cumulative development is projected to further increase traffic; the project would increase daily vehicle traffic on this segment by more than 2 percent. This is considered a ***significant impact***.

Mitigation Measure TC-8: Implement Mitigation Measure TC-3. Implementation of this measure would reduce the project impact to a ***less-than significant*** level.

With implementation of TC-1 (install traffic calming and traffic diversion measures), the level of project traffic projected to travel on 53rd Street, west of San Pablo Avenue would increase traffic by less than 2 percent in the near-term and cumulative condition, resulting in a less-than-significant impact.

Impact TC-9: The Hollis Street/45th Street intersection is projected to operate at LOS F during the weekday PM peak hour in the near-term and cumulative condition and peak hour signal warrants would be satisfied. The addition of project traffic would exacerbate this deficiency, resulting in a ***significant impact*** in the near-term and cumulative condition. Additionally, the potential for diverted traffic from implementation of TC-1 could increase delay and vehicle queue spillback at the intersection. The diverted traffic and project traffic could also increase conflicts for bicyclists and pedestrians on the 45th Street bicycle boulevard.

Mitigation Measure TC-9: Implement Mitigation Measure TC-2, which calls for the project applicant to fund the installation of a traffic signal at the Hollis Street/ 45th Street intersection, with necessary improvements for transit, bicycle and pedestrian infrastructure at the intersection, including directional curb ramps, bicycle detection, and transit priority. Installation of a traffic signal would reduce this impact to a ***less-than-significant*** level and with incorporation of pedestrian, bicycle and transit elements, would not result in secondary impacts to other travel modes.

Impact TC-10: At the San Pablo Avenue/40th Street intersection, vehicle queues for some movements are projected to exceed the available storage in the cumulative condition. For the southbound left-turn movement, the addition of project traffic to multiple movements at the intersection results in an increase of the southbound left-turn vehicle queue by more than 50 feet. As this queue is projected to exceed the available capacity prior to the addition of project traffic, this is considered ***significant***.

> ***Mitigation Measure TC-10:*** The City of Emeryville does not have plans to increase the vehicular capacity of the San Pablo Avenue/40th Street intersection. Extending the southbound left-turn pocket vehicle storage was reviewed, but an extension of the southbound left-turn pocket would require the removal or relocation of an existing mid-block pedestrian crossing, which is not recommended. However, there are transit, pedestrian, and bicycle improvements planned in the area that would provide increased travel options through the area. The project would contribute their fair share to these improvements through the payment of the transportation impact fee. Additionally, the City undergoes a regular process of updating traffic signal timings to accommodate changing travel patterns and minimize vehicle queue spillback. Therefore, this impact is considered ***less-than-significant***.

In the near-term and cumulative condition, the addition of project-generated vehicle traffic would further degrade operations of some intersections. Although there is no set level of service policy for vehicles, the City strives to maintain mobility. The Project Applicant would be required to pay the City's Transportation Impact Fee that would fund multi-modal improvements to the transportation system. However, the fee program does not fully cover the cost of improvements identified in the program and additional improvements may be necessary to maintain mobility within Emeryville.

LOS Deficiency 1: The addition of project traffic in the near-term condition would worsen LOS D to LOS E operations at the Powell Street/Frontage Road intersection during the PM peak hour and would worsen projected LOS E conditions in the cumulative condition.

The City of Emeryville does not have plans to increase the vehicular capacity of the Powell Street/Frontage Road intersection. However, there are transit, pedestrian, and bicycle improvements planned in the area that would provide increased travel options through the corridor. The project would contribute their fair share to these improvements through the payment of the transportation impact fee. No improvements are recommended.

LOS Deficiency 2: The addition of project traffic in the near-term and cumulative condition would worsen LOS D to LOS E operations at the Powell Street/Christie Avenue intersection during the Saturday peak hour.

The City of Emeryville plans to improve this intersection by widening the south side of the Powell Street Bridge and the west side of Christie Avenue to provide a second westbound left-turn lane. Additionally, there are transit, pedestrian and bicycle improvements planned in the area that would provide increased travel options through the corridor. The project would contribute their fair share to these improvements through the payment of the transportation impact fee. No additional improvements are recommended.

LOS Deficiency 3: The addition of project traffic in the cumulative condition would worsen LOS D to LOS E operations at the Powell Street/Hollis Street intersection during the weekday PM peak hour.

The City of Emeryville does not have plans to increase the vehicular capacity of this intersection beyond the current configuration. However, there are transit, pedestrian, and bicycle improvements planned in the area that would provide increased travel options through the corridor. The project would contribute their fair share to these improvements through the payment of the transportation impact fee. No improvements are recommended.

LOS Deficiency 4: The Horton Street/40th Street intersection is projected to operate at LOS E in the near-term condition during the Saturday peak hour and the addition of project traffic would further increase delay. In the cumulative condition, intersection operations would degrade to LOS E during both the weekday PM and Saturday peak hour, and the addition of project traffic would further increase delay.

The City of Emeryville has identified a project to restripe the southbound approach to provide left-turn lane, which would require the removal of on-street parking, and install video detection for bicyclists. The project would contribute their fair share to these improvements through the payment of the transportation impact fee. No additional improvements are recommended.

LOS Deficiency 5: The San Pablo Avenue/40th Street intersection is projected to operate at LOS E during the cumulative condition weekday PM peak hour and the addition of project traffic would further increase delay.

The City of Emeryville does not have plans to increase the vehicular capacity of the San Pablo Avenue/ 40th Street intersection. However, there are transit, pedestrian, and bicycle improvements planned in the area that would provide increased travel options through the area. The project would contribute their fair share to these improvements through the payment of the transportation impact fee. No improvements are recommended.

CHAPTER 7. ALAMEDA COUNTY TRANSPORTATION COMMISSION ROADWAY ANALYSIS

A separate analysis of regional roadways is required to comply with requirements of the Alameda County Transportation Commission (Alameda CTC). The Alameda CTC requires the analysis of project impacts to Metropolitan Transportation System (MTS) roadways identified in the congestion management plan (CMP) for development projects that would generate more than 100 PM peak hour trips. As shown in Table 7, the proposed Project would generate more than 100 PM peak hour trips.

This chapter outlines the roadway analysis, which considers the impact of the Project on freeways, major arterials, and other major roadways as designated by Alameda CTC. Main items of discussion include the geographic scope of the Alameda CTC roadway analysis, the analysis method, and the results for 2025 and 2040.

ALAMEDA CTC ROADWAY ANALYSIS STUDY AREA

Freeway and surface street segments in Emeryville that were analyzed include:

- Interstate 80 (2 segments)
- 40th Street (4 segments)
- San Pablo Avenue (4 segments)
- Stanford Avenue/Powell Street (5 segments)

TRAFFIC FORECASTS

Fehr & Peers used the Alameda Countywide Travel Demand Model to forecast 2025 and 2040 traffic volumes on the MTS roadway system. The forecasts for the MTS system differ from the intersection forecasts previously discussed in the following aspects:

- Regional model may not include some minor streets through Emeryville, potentially overstating traffic volumes on the roadways included in the model.
- The MTS roadway analysis reports the outputs of the Alameda CTC model directly on a roadway segment level.

The results of the Alameda CTC model were used to forecast the No Project condition for 2025 and 2040. To identify potential impacts associated with the project, project trips were distributed to the MTS roadway segments (including both freeways and surface streets) identified above using the project trip distribution presented in Chapter 3. The distribution of project trips onto the MTS segments results in the with Project volumes for 2025 and 2040.

ANALYSIS METHOD

Operations of the MTS freeway and surface street segments were assessed based on volume-to-capacity (V/C) ratios. For freeway segments, a per-lane capacity of 2,000 vehicles per hour was used. For surface streets, a per-lane capacity of 800 vehicles per hour was used. These capacities do not reflect additional capacity provided at intersections through turn pockets. Roadway segments with a V/C ratio greater than 1.0 are assigned LOS F.

ANALYSIS RESULTS

The MTS PM Peak Hour roadway segment analyses are provided in **Table 23** for the 2025 condition and **Table 24** for the 2040 condition. Results of the analysis indicate that the proposed project would not result in or worsen deficient operations on the MTS roadway segments included in this assessment. Therefore, the impact to the MTS roadway system is less-than-significant.

TABLE 23
2025 PM PEAK HOUR CMP ROADWAY SEGMENT ANALYSIS

Link Location at Segment Limits		# Lanes	No Project Volume	With Project Volume	Percent Increase	V/C Ratio– No Project	V/C Ratio – with Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C
Freeway Segments											
I-80 Northbound											
I-580	Powell Street	5	5,413	5,437	0%	0.54	0.54	B	B	-	No
Powell Street	Ashby Street	4	8,861	8,881	0%	1.11	1.11	F	F	-	No
I-80 Southbound											
Ashby Street	Powell Street	4	7,462	7,467	0%	0.93	0.93	E	E	-	No
Powell Street	I-580	3	3,235	3,256	1%	0.54	0.54	B	B	-	No
Arterials											
40th Street Eastbound											
Ohlone Way	Shellmound Street	2	114	137	20%	0.07	0.09	A	A	No	-
Shellmound Street	Horton Street	2	278	301	8%	0.17	0.19	A	A	No	-
Horton Street	Hollis Street	2	227	250	10%	0.14	0.16	A	A	No	-
Hollis Street	San Pablo Avenue	2	1,095	1,122	2%	0.68	0.70	C	C	No	-
40th Street Westbound											
San Pablo Avenue	Hollis Street	2	454	483	6%	0.28	0.30	A	A	No	-

TABLE 23
2025 PM PEAK HOUR CMP ROADWAY SEGMENT ANALYSIS

Link Location at Segment Limits		# Lanes	No Project Volume	With Project Volume	Percent Increase	V/C Ratio– No Project	V/C Ratio – with Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C
Hollis Street	Horton Street	2	371	386	4%	0.23	0.24	A	A	No	-
Horton Street	Shellmound Street	2	114	127	11%	0.07	0.08	A	A	No	-
Shellmound Street	Ohlone Way	2	278	291	5%	0.17	0.18	A	A	No	-
San Pablo Avenue Northbound											
37th Street	40th Street	3	1,061	1,086	2%	0.44	0.45	B	B	No	-
40th Street	53rd Street	2	1,215	1,238	2%	0.76	0.77	D	D	No	-
53rd Street	Powell/Stanford Avenue	2	1,089	1,093	0%	0.68	0.68	C	C	No	-
Powell/Stanford Avenue	59th Street	2	471	479	2%	0.29	0.30	A	A	No	-
San Pablo Avenue Southbound											
59th Street	Powell/Stanford Avenue	2	987	996	1%	0.62	0.62	C	C	No	-
Powell/Stanford Avenue	53rd Street	2	612	620	1%	0.38	0.39	B	B	No	-
53rd Street	40th Street	2	680	700	3%	0.42	0.44	B	B	No	-
40th Street	37th Street	3	1,489	1,512	2%	0.62	0.63	C	C	No	-

TABLE 23
2025 PM PEAK HOUR CMP ROADWAY SEGMENT ANALYSIS

Link Location at Segment Limits		# Lanes	No Project Volume	With Project Volume	Percent Increase	V/C Ratio– No Project	V/C Ratio – with Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C
Stanford Avenue/Powell Street Eastbound											
Frontage Road	I-80 NB Ramps	3	854	881	3%	0.36	0.37	B	B	No	-
I-80 NB Ramps	Christie Avenue	5	1,751	1,802	3%	0.44	0.45	B	B	No	-
Christie Avenue	Hollis Street	2	820	848	3%	0.51	0.53	B	B	No	-
Hollis Street	Powell/Stanford Avenue	2	1,147	1,148	0%	0.72	0.72	C	C	No	-
Powell/Stanford Avenue	San Pablo Avenue	2	610	621	2%	0.38	0.39	B	B	No	-
Stanford Avenue/Powell Street Westbound											
San Pablo Avenue	Powell/Stanford Avenue	2	1,262	1,271	1%	0.79	0.79	D	D	No	-
Powell/Stanford Avenue	Hollis Street	2	522	531	2%	0.33	0.33	A	A	No	-
Hollis Street	Christie Avenue	2	1,610	1,633	1%	1.01	1.02	F	F	-	No
Christie Avenue	I-80 NB Ramps	4	1,194	1,224	3%	0.37	0.38	B	B	No	-
I-80 NB Ramps	Frontage Road	3	1,859	1,884	1%	0.77	0.79	D	D	No	-

Source: Fehr & Peers, March 2015.

TABLE 24
2040 PM PEAK HOUR CMP ROADWAY SEGMENT ANALYSIS

Link Location at Segment Limits		# Lanes	No Project Volume	With Project Volume	Percent Increase	V/C Ratio– No Project	V/C Ratio – with Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C
Freeway Segments											
I-80 Northbound											
I-580	Powell Street	5	5,425	5,449	0%	0.54	0.54	B	B	-	No
Powell Street	Ashby Street	4	8,966	8,986	0%	1.12	1.12	F	F	-	No
I-80 Southbound											
Ashby Street	Powell Street	4	8,104	8,109	0%	1.01	1.01	F	F	-	No
Powell Street	I-580	3	3,693	3,714	1%	0.62	0.62	C	C	-	No
Arterials											
40th Street Eastbound											
Ohlone Way	Shellmound Street	2	188	211	12%	0.12	0.13	A	A	No	-
Shellmound Street	Horton Street	2	403	426	6%	0.25	0.27	A	A	No	-
Horton Street	Hollis Street	2	358	381	6%	0.22	0.24	A	A	No	-
Hollis Street	San Pablo Avenue	2	1,258	1,285	2%	0.79	0.80	D	D	No	-

TABLE 24
2040 PM PEAK HOUR CMP ROADWAY SEGMENT ANALYSIS

Link Location at Segment Limits		# Lanes	No Project Volume	With Project Volume	Percent Increase	V/C Ratio– No Project	V/C Ratio – with Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C
40th Street Westbound											
San Pablo Avenue	Hollis Street	2	660	689	4%	0.41	0.43	B	B	No	-
Hollis Street	Horton Street	2	484	499	3%	0.30	0.31	A	A	No	-
Horton Street	Shellmound Street	2	188	201	7%	0.12	0.13	A	A	No	-
Shellmound Street	Ohlone Way	2	403	416	3%	0.25	0.26	A	A	No	-
San Pablo Avenue Northbound											
37th Street	40th Street	3	1,271	1,296	2%	0.53	0.54	B	B	No	-
40th Street	53rd Street	2	1,374	1,397	2%	0.86	0.87	D	D	No	-
53rd Street	Powell/Stanford Avenue	2	1,262	1,266	0%	0.79	0.79	D	D	No	-
Powell/Stanford Avenue	59th Street	2	1,079	1,087	1%	0.67	0.68	C	C	No	-
San Pablo Avenue Southbound											
59th Street	Powell/Stanford Avenue	2	1,151	1,160	1%	0.72	0.73	C	C	No	-
Powell/Stanford Avenue	53rd Street	2	1,226	1,234	1%	0.77	0.77	D	D	No	-
53rd Street	40th Street	2	1,295	1,315	2%	0.81	0.82	D	D	No	-
40th Street	37th Street	3	2,171	2,194	1%	0.90	0.91	D	E	No	-
Stanford Avenue/Powell Street Eastbound											
Frontage Road	I-80 NB Ramps	3	725	752	4%	0.30	0.31	A	A	No	-

TABLE 24
2040 PM PEAK HOUR CMP ROADWAY SEGMENT ANALYSIS

Link Location at Segment Limits		# Lanes	No Project Volume	With Project Volume	Percent Increase	V/C Ratio– No Project	V/C Ratio – with Project	No Project LOS	With Project LOS	Change from LOS E or better to LOS F	LOS F and Change in V/C
I-80 NB Ramps	Christie Avenue	5	1,949	2,000	3%	0.49	0.50	B	B	No	-
Christie Avenue	Hollis Street	2	1,002	1,030	3%	0.63	0.64	C	C	No	-
Hollis Street	Powell/Stanford Avenue	2	1,226	1,227	0%	0.77	0.77	D	D	No	-
Powell/Stanford Avenue	San Pablo Avenue	2	826	837	1%	0.52	0.52	B	B	No	-
Stanford Avenue/Powell Street Westbound											
San Pablo Avenue	Powell/Stanford Avenue	2	1,381	1,390	1%	0.86	0.87	D	D	No	-
Powell/Stanford Avenue	Hollis Street	2	709	718	1%	0.44	0.45	B	B	No	-
Hollis Street	Christie Avenue	2	1,757	1,780	1%	1.10	1.11	F	F	-	No
Christie Avenue	I-80 NB Ramps	4	1,345	1,375	2%	0.42	0.43	B	B	No	-
I-80 NB Ramps	Frontage Road	3	1,954	1,979	1%	0.81	0.82	D	D	No	-

Source: Fehr & Peers, March 2015.

CHAPTER 8. SITE ACCESS, CIRCULATION, AND PARKING

This section reviews the site design elements for vehicles, pedestrians, bicycles, and emergency vehicles based on the site plans presented previously on Figure 2 and Figure 3. There are many similarities in design elements between Site Option A and Option B. Unless otherwise specified, the discussion applies to both options. Recommendations are shown on **Figure 21**.

Project elements were compared to design guidance provided in the *Park Avenue District Plan (August 2006), Citywide Design Guidelines (December 2010), and the Pedestrian and Bicycle Plan (May 2012)*.

SITE ACCESS AND CIRCULATION

Vehicle Access

Primary vehicular access to the site would be provided from a new east-west oriented street constructed between 45th Street and 53rd Street along the 46th Street alignment, and an extension of Hubbard Street north into the site. A driveway serving the Parcel B-1 garage would be provided from Sherwin Avenue between Horton Street and Hubbard Street. Under Option A, a driveway serving the Parcel C-1 garage would also be provided on Sherwin Avenue at Halleck Street. Option B would provide vehicle access to Parcel C-1 from Hubbard Circle. An additional driveway to the Parcel B-1 parking garage and a driveway to the B-2 parking garage would be provided from 46th Street. The proposed B-1 and B-2 driveways would be aligned, east of Hubbard Circle. Access to the Parcel C-2 garage would be provided from 46th Street where it intersects with Hubbard Circle. Access to the Parcel D garage would be provided from Hubbard Circle, north of 46th Street.

> ***Recommendation 1:*** Provide design details of the internal garage circulation and interface with the street system for review.

Operations analysis of the intersections providing site access, as presented in prior report sections, generally concludes that side-street stop-control is the appropriate traffic control for intersections along the project frontage. At the intersection of Sherwin Avenue and Horton Street, vehicles traveling to or from Sherwin Avenue yield to through traffic on Horton Street. At the Hubbard Circle intersection with Sherwin Avenue, vehicles on Hubbard Street yield to traffic on Sherwin Avenue. At the 46th Street intersection with Horton Street, vehicles turning from 46th Street should yield to travel on Horton Street. Exclusive turn pockets are not recommended at any of the site access locations.

Recommendation 2: Recommended traffic control at the site access intersections is shown on Figure 21.

Pedestrian Facilities

Reconstructed sidewalks would be provided along the Sherwin Avenue and Horton Street frontage. Sidewalks would also be constructed on new streets within the project site. Internal pedestrian paths would also be constructed throughout the site to provide connections between the various buildings and open space areas. Although not included as part of this project, the internal sidewalk system would connect to the planned South Bayfront pedestrian bridge, ultimately providing a direct pedestrian connection over the railroad tracks to the South Bayfront area.

General design guidance in the *Park Avenue District Plan* calls for establishing or maintaining a minimum sidewalk width of 12 feet, with planting areas. Sidewalk encroachments, such as street furniture and landscaping are permitted, but a 6-foot throughway zone on the sidewalk must be provided. These guidelines apply to Horton Street and Sherwin Avenue along the project frontage, as well as new streets in the district.

Proposed sidewalk cross sections are shown in the Preliminary Development Plan Submittal dated January 2015. The following summarizes the key elements shown in the plans and compares them to guidance in the Park Avenue District Plan as well as other City Plans.

Sherwin Avenue along the project frontage would be reconstructed to provide a 15-foot wide sidewalk area, including a 5-foot landscape zone between the curb edge and the pedestrian realm, 8-foot throughway zone, and a 2-foot frontage zone for landscaping between the pedestrian realm and the building frontage.

Horton Street along the project frontage would maintain its existing configuration with 12-foot wide sidewalk area, including a 5-foot landscape zone, 7-foot throughway zone.

New streets would be constructed within the project site, including the extension of 46th Street and Hubbard Circle. 46th Street would provide a 12-foot wide sidewalk area, including a 5-foot landscape zone, and a 7-foot throughway zone. On Hubbard Circle, a 15-foot wide sidewalk area, including a 5-foot landscape zone, 8-foot throughway zone, and 2-foot frontage zone would be constructed.

A pedestrian pathway would be constructed between Parcel A and Parcel B-1 within a 35-foot right-of-way. It would provide a 12-foot pedestrian throughway zone, 12-feet of landscaping, with the remaining area for bio-retention. Along the greenway corridor through the site, a 25-foot area would be provided with a 5-foot landscape buffer, 10-foot two-way bicycle path, 4-foot buffer, and 6-foot pedestrian path.

Sidewalk design through the site generally meets or exceeds the standards shown in the in the *Park Avenue District Plan.*

The City's *Pedestrian and Bicycle Plan* identifies pedestrian improvements at the Sherwin Avenue at Halleck and Hubbard Streets intersections to be implemented in conjunction with development on the Sherwin-Williams site. These improvements are not shown on the Preliminary Development Plan Submittal.

> ***Recommendation 3*:** As part of the project, install crosswalks on all legs of the Halleck and Hubbard Streets at Sherwin Avenue, consistent with the City's *Pedestrian and Bicycle Plan*.

Bicycle Facilities

The project would provide a Class I bicycle path along the western boundary connecting to planned bicycle facilities in the area. As part of the project, the portion of the Horton Landing Park Paths within the project site would be constructed, ultimately connecting to other planned segments of the local and regional trail system, including the Bay Trail. As discussed above, the bicycle path through the site would provide a 10-foot throughway zone with buffers on either side. On-site bicycle facilities provide connections identified in the City's *Pedestrian and Bicycle Plan*.

Sherwin Avenue is designated as a Class III bicycle facility in the City's *Pedestrian and Bicycle Plan*. Class III route markings are not shown on the conceptual roadway cross-section for Sherwin Avenue along the project frontage.

> ***Recommendation 4:*** As part of the project, provide Class III roadway markings and signage on Sherwin Avenue.

The City's *Pedestrian and Bicycle Plan* identifies a potential bike share station within the project boundaries. This element is not shown on the site plans.

> ***Recommendation 5:*** Identify a location within the site where a bike share station could be located if the City undertakes a bicycle share program.

Other Street Design Elements

With the project, a new east-west oriented street would be constructed along the 46th Street alignment. Hubbard Street would be extended north into the site to create a grid system and provide access to individual parcels. Roadways within the site should have a clear width of 20 feet with no parking on either side of the roadway. If parking is provided, the roadway should be a minimum of 28 feet (parking on one

side) or 36 feet (parking on both sides). The proposed roadways shown in the Preliminary Development Plan Submittal meet or exceed these requirements.

Curb extensions are proposed at the 46th Street intersection with Horton Street. Curb extensions reduce the pedestrian crossing distance and can also result in large vehicles entering the opposing travel way to complete the turn. As 46th Street is expected to be a low volume roadway, conflicts are expected to be minimal.

The proposed lighting plan was also reviewed. New lighting along Horton Street and Sherwin Avenue is proposed, along with lighting on the interior roadways and pathways. No lighting is shown along the pedestrian pathway between Parcel A and Parcel B-1. No lighting is shown on the north sides of Parcel C-2 or the north side of Parcel D by the proposed sports courts. The proposed spacing of lighting is not consistent along Sherwin Avenue and Horton Street, which can detract from the pedestrian experience. It also appears that there are pedestrian access points to Parcel B-2 on the north side of the parcel, located off of a potential pedestrian path connecting Horton Street to Hubbard Circle, with no lighting shown on this side of the building.

> ***Recommendation 6:*** If feasible, provide lighting at equal spacing along Sherwin Avenue and Horton Street, and provide pedestrian scale lighting along the pedestrian pathway, north of Parcel C-2 and north of Parcel D. If the area on the north side of Parcel B-2 is intended to provide pedestrian circulation, additional lighting shall be provided in this area.

Modal Conflicts

Pedestrian access to and around the site would be provided by sidewalks, paths and pedestrian crossings of Hubbard Circle and 46th Street. The project would provide sidewalks throughout the development that meet the Park Avenue District design guidelines. There are a number of locations throughout the site where there would be pedestrian crossings of roadways, or potential conflicts between pedestrians and driveways. High visibility crosswalks, such as those with ladder or diagonal striping, should be provided within the site and at driveways to reinforce the desired pedestrian travel routes through the site and to alert drivers to the presence of pedestrians. A mid-block crosswalk should be provided across Hubbard Circle West and East along the pedestrian desire line.

It is not clear from the conceptual site plans where entry doors are proposed for the various parcels. The door swing should be outside of the pedestrian realm.

> ***Recommendation 7:*** The final site design should show the entry door swing into the public right-of-way to ensure that the 6-foot pedestrian clear zone is maintained along the corridor when doors are open. The building design should orient pedestrians away from the door zone.

Transit Access

Bus transit service within in the site vicinity is provided by AC Transit and Emery-Go-Round, with the closest bus stops on 40th Street and Hollis Street. To access bus stops on 40th Street, pedestrians can walk along Horton Street. Sidewalks are provided on both sides of Horton Street, connecting the project site to transit stops on 40th Street. Sidewalks on the west side of Horton Street between Park Avenue and Sherwin Avenue have not yet been improved to the Park Avenue District Standards. This could result in higher levels of pedestrian activity on the sidewalk on the east side of Horton Street, crossing at the Sherwin Avenue at Horton Street intersection.

> ***Recommendation 8*:** Install curb extensions and a high visibility crosswalk on the north leg of Horton Street at Sherwin Avenue such that pedestrians and transit riders accessing the site from 40th Street do not have to cross two streets to access the site. Implementation of this recommendation may result in the loss of on-street parking.

To access transit stops on Hollis Street, pedestrian can walk along 45th Street. No crosswalks are provided at the 45th Street at Horton Street intersection.

> ***Recommendation 9*:** Install a high visibility crosswalk and ADA compliant curb ramps on the north leg of Horton Street at 45th Street to improve pedestrian access to transit. Implementation of this recommendation may result in the loss of on-street parking.

The project would be subject to annual assessment to fund the operations of the Emery-Go-Round service, which is required of all commercial entities including for-rent residential projects of more than three units. Although the project is expected to increase transit ridership in the area, annual contributions will also be made to fund transit service in the area.

Delivery Vehicle Access

The City of Emeryville Code also outlines off-street loading zone requirements for a variety of uses, as detailed in Table 9-4.409 of the Emeryville Planning Regulations (Ordinance No 13-001) Adopted February 5, 2013, as updated in October 2015. For multi-family projects with between 50 and 149 units, one small loading zone is required. For multi-family projects with between 150 and 300 units, two small loading zones are required. Each additional 300 units or fraction of one-half or more thereof requires a medium loading zone. Office uses between 25,000 and 100,000 square feet should provide 1 medium loading zone. For commercial uses between 10,000 square feet and 20,000 square feet, one medium loading zone is required. This results in a potential loading zone requirement of 3 medium zones and 2 small loading zones. However, it is expected that loading zones could be shared between the various site uses.

Four loading zones are shown on the site plan on Hubbard Circle East between Parcels B-2 and D. It is not clear if these loading areas are intended to be shared between all parcels, as it does not provide convenient delivery access to Parcels C-1, C-2, B-1 or A. It is also expected that many deliveries to future retail or office establishments would occur through smaller delivery trucks, such as Federal Express or UPS trucks, and these trucks might prefer to use an on-street loading area to minimize delivery time.

Recommendation 10: Provide small loading areas within each of the residential garages to facilitate move-in/move-out operations.

Recommendation 11: Designate an on-street loading zone on Hubbard Circle to facilitate small deliveries within the site.

PARKING

Parking Area Design

Insufficient details are provided to evaluate the parking design elements within the proposed parking garages. As the final plans are developed for these areas, the parking design should conform to design guidelines provided in Section 9-4.406 of the City's Planning Regulations. Generally, parking aisle widths should be 24 feet wide for perpendicular parking and parking stall lengths should be a minimum of 18 feet. City of Emeryville Planning Regulations requires parking stalls adjacent to a wall be one foot wider than a standard stall.

Vehicle Parking Requirements

The Project proposes to provide approximately 982 garage parking spaces under Option A and 929 garage parking spaces under Option B. A credit of 1 vehicle space for every 4 motorcycle spaces is available. On-street parking is currently permitted on Sherwin Avenue and Horton Street and is proposed on new roadways within the site. Although on-street parking is permitted in the area, available parking supplies are limited around the site during a typical weekday afternoon and may not be available for site residents or patrons.

The City's off-street parking requirements, as contained in Section 9-4.404 of the Planning Regulations, reflect the expected peak parking demands for various uses. Both commercial and residential projects are allowed the flexibility to provide 33 percent less parking than the peak demand and up to 10 percent

more than the peak demand. Additionally, locally serving uses[13] of less than 5,000 square feet are not required to provide off-street parking and the first 1,500 square feet of each commercial uses is exempt. For residential uses, parking requirements are based on the number of units. Results of the parking assessment, presented in **Table 25**, indicates that the project could be required to provide between 598 and 983 parking spaces, which would be provided under both Options.

Recommendation 12: Prepare and implement transportation demand management and parking demand management plans for the project, potentially including the following strategies:

- Provide time limits on the commercial parking supplies not used by employees to encourage parking turnover for commercial patrons.
- Provide information to new residents about the availability of transit and bicycle facilities in the area.
- Monitor building parking demand as the commercial spaces become occupied and implement additional transportation demand management strategies to manage area parking supplies, if needed.
- Designate car share pod(s) within the site.
- Designate an on-site transportation coordinator.

The project is required to equip at least three percent of the residential parking supplies with electric vehicle charging infrastructure.

Recommendation 13: The parking garage designs should support the provision of EV charging infrastructure.

[13] "Local-serving" is defined as "having a market area generally not exceeding one mile in radius" (Section 9-8.212(g) of the Emeryville Municipal Code.

TABLE 25
CITY CODE AUTOMOBILE PARKING REQUIREMENTS

Land Use	Size	Base Requirement	Reductions Per Code	Base Off Street Parking Requirement
Retail	10,000 square feet (sf)	3 spaces per 1,000 sf	First 1,500 sq. ft. exempted (Section 9-4.404)	26
Restaurant	5,000 sf	8 spaces per 1,000 sf	First 1,500 sq. ft. exempted (Section 9-4.404)	28
Office	79,600	2.4 spaces per 1,000 sf		191
			Total	245
			33% Less than Demand	**164**
			10% More than Demand	**270**
Residential				
Resident	540	1 per unit		540
Guest	540	0.20 per unit		108
			Total	648
			33% Less than Demand	**434**
			10% More than Demand	**713**
			Site Total	**598 to 983**

Source: City of Emeryville Zoning Ordinance, Fehr & Peers, 2015.

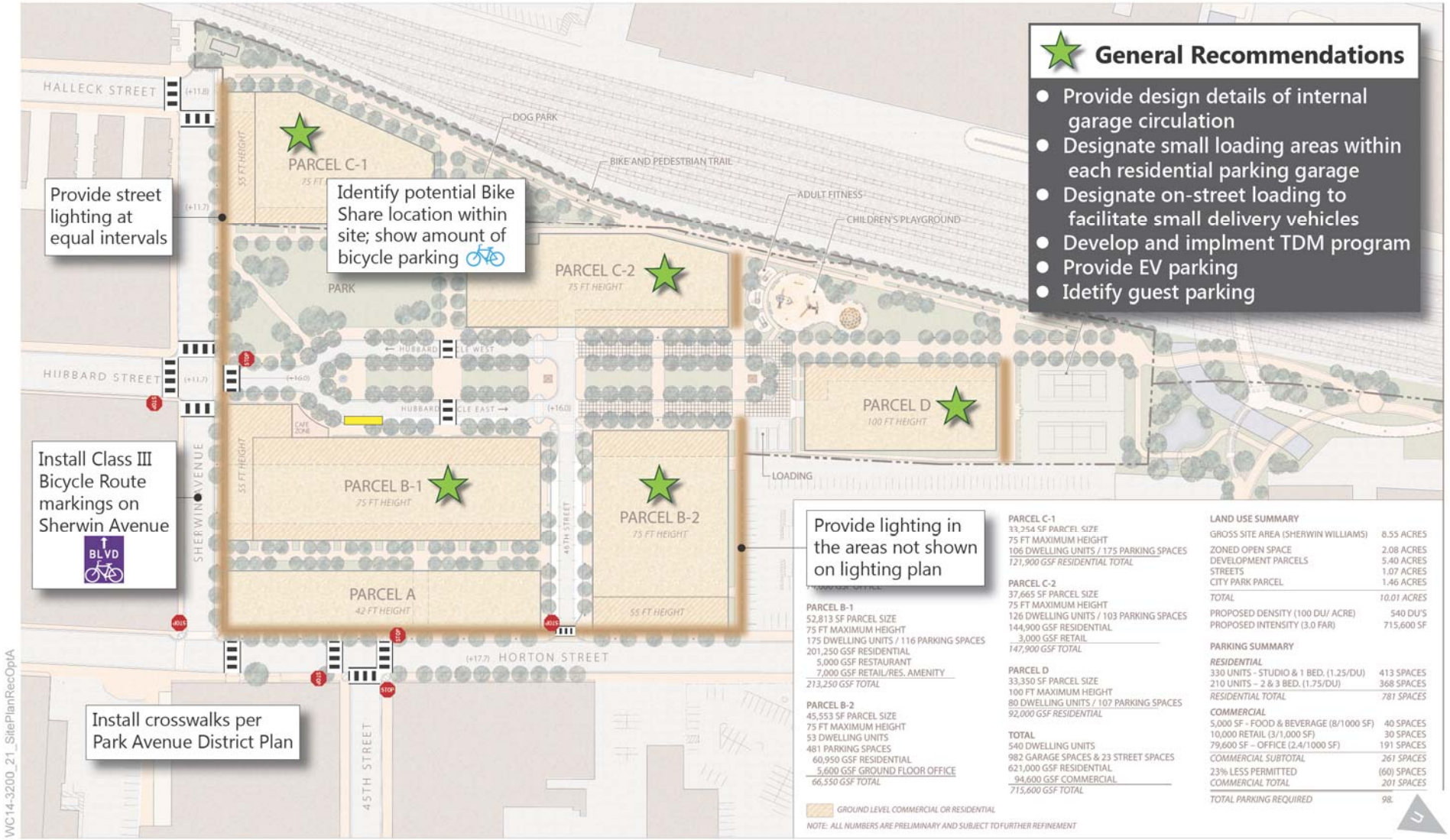
Bicycle Parking Requirements

Short term and long term bicycle parking is required for the project. Based on current City Code, one short-term bike parking space is required per every 10 required vehicle parking spaces, with a minimum of at least two bicycle parking spaces for the commercial portion of the project. Long-term bicycle spaces are required at the same rate. This results in a requirement of 25 short-term and 25 long-term bicycle parking spaces for the commercial portion of the project. Residential uses are required to provide one short-term space for every four visitor vehicle spaces and one long-term space for each unit.

> ***Recommendation 14:*** The final site plan should identify the amount and location where bicycle parking would be provided throughout the site. Similar projects in the Berkeley/Emeryville area have experienced bicycle parking demand greater than the available supply as some residents have multiple bicycles in each unit. Overflow bicycle parking areas should also be identified.

The proposed dog park within the site has the potential to attract dog owners from the surrounding community. Although many dog park visitors will walk to the site, some may drive.

Recommendation 15: Identify guest and patron parking supplies within the final site plans.



Site Plan Source: ROMA DESIGN GROUP

KEY Crosswalk Stop Sign Loading Zone

Figure 21

Site Plan Recommendations – Option A

APPENDIX A INTERSECTION COUNT DATA SHEETS

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-001 Frontage Road-Powell Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Frontage Road Southbound					Powell Street Westbound					I-80 WB On-Ramp Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	201	0	42	0	243	0	82	247	0	329	0	0	0	0	0	23	62	40	2	127	699	2
15:15	153	0	33	0	186	0	95	284	0	379	0	0	0	0	0	29	62	34	2	127	692	2
15:30	196	0	46	0	242	0	93	289	0	382	0	0	0	0	0	27	59	43	1	130	754	1
15:45	175	0	40	0	215	0	84	278	0	362	0	0	0	0	0	23	70	36	1	130	707	1
Total	725	0	161	0	886	0	354	1098	0	1452	0	0	0	0	0	102	253	153	6	514	2852	6
16:00	143	0	34	0	177	0	90	297	0	387	0	0	0	0	0	33	60	47	1	141	705	1
16:15	164	0	34	0	198	0	89	283	0	372	0	0	0	0	0	27	46	32	3	108	678	3
16:30	152	0	43	0	195	0	78	287	0	365	0	0	0	0	0	33	58	38	4	133	693	4
16:45	170	0	52	0	222	0	92	274	0	366	0	0	0	0	0	17	58	44	0	119	707	0
Total	629	0	163	0	792	0	349	1141	0	1490	0	0	0	0	0	110	222	161	8	501	2783	8
Grand Total	1354	0	324	0	1678	0	703	2239	0	2942	0	0	0	0	0	212	475	314	14	1015	5635	14
Apprch %	80.7%	0.0%	19.3%	0.0%		0.0%	23.9%	76.1%	0.0%		0.0%	0.0%	0.0%	0.0%		20.9%	46.8%	30.9%	1.4%			
Total %	24.0%	0.0%	5.7%	0.0%	29.8%	0.0%	12.5%	39.7%	0.0%	52.2%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	8.4%	5.6%	0.2%	18.0%	100.0%	

PM PEAK HOUR	Frontage Road Southbound					Powell Street Westbound					I-80 WB On-Ramp Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	153	0	33	0	186	0	95	284	0	379	0	0	0	0	0	29	62	34	2	127	692
15:30	196	0	46	0	242	0	93	289	0	382	0	0	0	0	0	27	59	43	1	130	754
15:45	175	0	40	0	215	0	84	278	0	362	0	0	0	0	0	23	70	36	1	130	707
16:00	143	0	34	0	177	0	90	297	0	387	0	0	0	0	0	33	60	47	1	141	705
Total Volume	667	0	153	0	820	0	362	1148	0	1510	0	0	0	0	0	112	251	160	5	528	2858
% App Total	81.3%	0.0%	18.7%	0.0%		0.0%	24.0%	76.0%	0.0%		0.0%	0.0%	0.0%	0.0%		21.2%	47.5%	30.3%	0.9%		
PHF	.851	.000	.832	.000	.847	.000	.953	.966	.000	.975	.000	.000	.000	.000	.000	.848	.896	.851	.625	.936	.948

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-001 Frontage Road-Powell Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Frontage Road Southbound					Powell Street Westbound					I-80 WB On-Ramp Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	131	0	56	0	187	0	87	384	0	471	0	0	0	0	0	28	80	98	2	208	866	2
16:15	135	0	50	0	185	0	106	344	0	450	0	0	0	0	0	28	68	86	0	182	817	0
16:30	117	0	48	0	165	0	107	340	0	447	0	0	0	0	0	29	77	109	3	218	830	3
16:45	137	0	55	0	192	0	91	299	0	390	0	0	0	0	0	30	87	85	4	206	788	4
Total	520	0	209	0	729	0	391	1367	0	1758	0	0	0	0	0	115	312	378	9	814	3301	9
17:00	129	0	71	0	200	0	107	336	0	443	0	0	0	0	0	18	124	114	0	256	899	0
17:15	155	0	63	0	218	0	129	340	0	469	0	0	0	0	0	24	96	114	3	237	924	3
17:30	161	0	60	0	221	0	98	294	0	392	0	0	0	0	0	31	91	103	0	225	838	0
17:45	137	0	57	0	194	0	107	284	0	391	0	0	0	0	0	18	96	68	0	182	767	0
Total	582	0	251	0	833	0	441	1254	0	1695	0	0	0	0	0	91	407	399	3	900	3428	3
Grand Total	1102	0	460	0	1562	0	832	2621	0	3453	0	0	0	0	0	206	719	777	12	1714	6729	12
Apprch %	70.6%	0.0%	29.4%	0.0%		0.0%	24.1%	75.9%	0.0%		0.0%	0.0%	0.0%	0.0%		12.0%	41.9%	45.3%	0.7%			
Total %	16.4%	0.0%	6.8%	0.0%	23.2%	0.0%	12.4%	39.0%	0.0%	51.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	10.7%	11.5%	0.2%	25.5%	100.0%	

PM PEAK HOUR	Frontage Road Southbound					Powell Street Westbound					I-80 WB On-Ramp Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	137	0	55	0	192	0	91	299	0	390	0	0	0	0	0	30	87	85	4	206	788
17:00	129	0	71	0	200	0	107	336	0	443	0	0	0	0	0	18	124	114	0	256	899
17:15	155	0	63	0	218	0	129	340	0	469	0	0	0	0	0	24	96	114	3	237	924
17:30	161	0	60	0	221	0	98	294	0	392	0	0	0	0	0	31	91	103	0	225	838
Total Volume	582	0	249	0	831	0	425	1269	0	1694	0	0	0	0	0	103	398	416	7	924	3449
% App Total	70.0%	0.0%	30.0%	0.0%		0.0%	25.1%	74.9%	0.0%		0.0%	0.0%	0.0%	0.0%		11.1%	43.1%	45.0%	0.8%		
PHF	.904	.000	.877	.000	.940	.000	.824	.933	.000	.903	.000	.000	.000	.000	.000	.831	.802	.912	.438	.902	.933

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-002 I-80 EB Ramps-Powell Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	I-80 EB On-Ramp Southbound					Powell Street Westbound					I-80 EB Off-Ramp Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	0	0	0	0	0	249	94	0	343	84	6	197	0	287	24	243	0	0	267	897	0
15:15	0	0	0	0	0	0	259	99	0	358	130	11	202	0	343	21	198	0	0	219	920	0
15:30	0	0	0	0	0	0	252	110	0	362	126	19	205	0	350	19	240	0	0	259	971	0
15:45	0	0	0	0	0	0	251	97	0	348	112	22	203	0	337	21	222	0	1	244	929	1
Total	0	0	0	0	0	0	1011	400	0	1411	452	58	807	0	1317	85	903	0	1	989	3717	1
16:00	0	0	0	0	0	0	261	90	0	351	128	31	209	0	368	16	188	0	1	205	924	1
16:15	0	0	0	0	0	0	222	84	0	306	136	31	208	0	375	23	184	0	0	207	888	0
16:30	0	0	0	0	0	0	256	105	0	361	116	27	214	0	357	24	190	0	0	214	932	0
16:45	0	0	0	0	0	0	273	97	0	370	101	19	211	0	331	24	206	0	1	231	932	1
Total	0	0	0	0	0	0	1012	376	0	1388	481	108	842	0	1431	87	768	0	2	857	3676	2
Grand Total	0	0	0	0	0	0	2023	776	0	2799	933	166	1649	0	2748	172	1671	0	3	1846	7393	3
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	72.3%	27.7%	0.0%		34.0%	6.0%	60.0%	0.0%		9.3%	90.5%	0.0%	0.2%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.4%	10.5%	0.0%	37.9%	12.6%	2.2%	22.3%	0.0%	37.2%	2.3%	22.6%	0.0%	0.0%	25.0%	100.0%	

PM PEAK HOUR	I-80 EB On-Ramp Southbound					Powell Street Westbound					I-80 EB Off-Ramp Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	0	0	0	0	0	0	259	99	0	358	130	11	202	0	343	21	198	0	0	219	920
15:30	0	0	0	0	0	0	252	110	0	362	126	19	205	0	350	19	240	0	0	259	971
15:45	0	0	0	0	0	0	251	97	0	348	112	22	203	0	337	21	222	0	1	244	929
16:00	0	0	0	0	0	0	261	90	0	351	128	31	209	0	368	16	188	0	1	205	924
Total Volume	0	0	0	0	0	0	1023	396	0	1419	496	83	819	0	1398	77	848	0	2	927	3744
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	72.1%	27.9%	0.0%		35.5%	5.9%	58.6%	0.0%		8.3%	91.5%	0.0%	0.2%		
PHF	.000	.000	.000	.000	.000	.000	.980	.900	.000	.980	.954	.669	.980	.000	.950	.917	.883	.000	.500	.895	.964

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-002 I-80 EB Ramps-Powell Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	I-80 EB On-Ramp Southbound					Powell Street Westbound					I-80 EB Off-Ramp Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	0	0	0	0	0	0	342	76	0	418	130	72	194	0	396	34	182	0	0	216	1030	0
16:15	0	0	0	0	0	0	329	81	0	410	115	80	163	0	358	33	169	0	0	202	970	0
16:30	0	0	0	0	0	0	352	94	0	446	106	62	162	0	330	25	168	0	0	193	969	0
16:45	0	0	0	0	0	0	274	81	0	355	126	84	147	0	357	31	197	0	1	229	941	1
Total	0	0	0	0	0	0	1297	332	0	1629	477	298	666	0	1441	123	716	0	1	840	3910	1
17:00	0	0	0	0	0	0	310	97	0	407	124	85	170	0	379	42	207	0	0	249	1035	0
17:15	0	0	0	0	0	0	342	94	0	436	131	75	161	0	367	37	217	0	0	254	1057	0
17:30	0	0	0	0	0	0	284	78	0	362	117	78	169	0	364	41	209	0	0	250	976	0
17:45	0	0	0	0	0	0	269	68	0	337	119	51	163	0	333	27	211	0	1	239	909	1
Total	0	0	0	0	0	0	1205	337	0	1542	491	289	663	0	1443	147	844	0	1	992	3977	1
Grand Total	0	0	0	0	0	0	2502	669	0	3171	968	587	1329	0	2884	270	1560	0	2	1832	7887	2
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	78.9%	21.1%	0.0%		33.6%	20.4%	46.1%	0.0%		14.7%	85.2%	0.0%	0.1%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.7%	8.5%	0.0%	40.2%	12.3%	7.4%	16.9%	0.0%	36.6%	3.4%	19.8%	0.0%	0.0%	23.2%	100.0%	

PM PEAK HOUR	I-80 EB On-Ramp Southbound					Powell Street Westbound					I-80 EB Off-Ramp Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	274	81	0	355	126	84	147	0	357	31	197	0	1	229	941
17:00	0	0	0	0	0	0	310	97	0	407	124	85	170	0	379	42	207	0	0	249	1035
17:15	0	0	0	0	0	0	342	94	0	436	131	75	161	0	367	37	217	0	0	254	1057
17:30	0	0	0	0	0	0	284	78	0	362	117	78	169	0	364	41	209	0	0	250	976
Total Volume	0	0	0	0	0	0	1210	350	0	1560	498	322	647	0	1467	151	830	0	1	982	4009
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	77.6%	22.4%	0.0%		33.9%	21.9%	44.1%	0.0%		15.4%	84.5%	0.0%	0.1%		
PHF	.000	.000	.000	.000	.000	.000	.885	.902	.000	.894	.950	.947	.951	.000	.968	.899	.956	.000	.250	.967	.948

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-003 Christie Avenue-Shellmound Way.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Christie Avenue Southbound					Shellmound Way Westbound					Christie Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	2	62	0	0	64	200	0	5	0	205	0	59	35	0	94	0	0	0	0	0	363	0
15:15	4	53	0	0	57	207	0	13	0	220	0	47	31	0	78	0	0	0	0	0	355	0
15:30	3	54	0	0	57	207	0	9	0	216	0	58	28	0	86	0	0	0	0	0	359	0
15:45	1	45	0	0	46	226	0	9	0	235	0	65	36	1	102	0	0	0	0	0	383	1
Total	10	214	0	0	224	840	0	36	0	876	0	229	130	1	360	0	0	0	0	0	1460	1
16:00	2	52	0	0	54	182	0	14	0	196	0	54	26	0	80	0	0	0	0	0	330	0
16:15	2	61	0	0	63	191	0	13	0	204	0	51	29	0	80	0	0	0	0	0	347	0
16:30	4	41	0	0	45	206	0	14	0	220	0	64	23	0	87	0	0	0	0	0	352	0
16:45	1	53	0	0	54	209	0	7	0	216	0	65	22	0	87	0	0	0	0	0	357	0
Total	9	207	0	0	216	788	0	48	0	836	0	234	100	0	334	0	0	0	0	0	1386	0
Grand Total	19	421	0	0	440	1628	0	84	0	1712	0	463	230	1	694	0	0	0	0	0	2846	1
Apprch %	4.3%	95.7%	0.0%	0.0%		95.1%	0.0%	4.9%	0.0%		0.0%	66.7%	33.1%	0.1%		0.0%	0.0%	0.0%	0.0%			
Total %	0.7%	14.8%	0.0%	0.0%	15.5%	57.2%	0.0%	3.0%	0.0%	60.2%	0.0%	16.3%	8.1%	0.0%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Christie Avenue Southbound					Shellmound Way Westbound					Christie Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	2	62	0	0	64	200	0	5	0	205	0	59	35	0	94	0	0	0	0	0	363
15:15	4	53	0	0	57	207	0	13	0	220	0	47	31	0	78	0	0	0	0	0	355
15:30	3	54	0	0	57	207	0	9	0	216	0	58	28	0	86	0	0	0	0	0	359
15:45	1	45	0	0	46	226	0	9	0	235	0	65	36	1	102	0	0	0	0	0	383
Total Volume	10	214	0	0	224	840	0	36	0	876	0	229	130	1	360	0	0	0	0	0	1460
% App Total	4.5%	95.5%	0.0%	0.0%		95.9%	0.0%	4.1%	0.0%		0.0%	63.6%	36.1%	0.3%		0.0%	0.0%	0.0%	0.0%		
PHF	.625	.863	.000	.000	.875	.929	.000	.692	.000	.932	.000	.881	.903	.250	.882	.000	.000	.000	.000	.000	.953

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-003 Christie Avenue-Shellmound Way.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Christie Avenue Southbound					Shellmound Way Westbound					Christie Avenue Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	6	112	0	0	118	148	0	10	0	158	0	75	24	0	99	0	0	0	0	0	375	0
16:15	3	97	0	0	100	124	0	8	0	132	0	95	22	0	117	0	0	0	0	0	349	0
16:30	4	118	0	0	122	141	0	11	0	152	0	68	17	0	85	0	0	0	0	0	359	0
16:45	1	109	0	0	110	121	0	10	0	131	0	64	27	0	91	0	0	0	0	0	332	0
Total	14	436	0	0	450	534	0	39	0	573	0	302	90	0	392	0	0	0	0	0	1415	0
17:00	8	119	0	0	127	121	0	14	0	135	0	51	14	0	65	0	0	0	0	0	327	0
17:15	3	98	0	0	101	137	0	14	0	151	0	79	16	0	95	0	0	0	0	0	347	0
17:30	3	81	0	0	84	118	0	10	0	128	0	72	18	1	91	0	0	0	0	0	303	1
17:45	4	82	0	0	86	115	0	8	0	123	0	80	25	0	105	0	0	0	0	0	314	0
Total	18	380	0	0	398	491	0	46	0	537	0	282	73	1	356	0	0	0	0	0	1291	1
Grand Total	32	816	0	0	848	1025	0	85	0	1110	0	584	163	1	748	0	0	0	0	0	2706	1
Apprch %	3.8%	96.2%	0.0%	0.0%		92.3%	0.0%	7.7%	0.0%		0.0%	78.1%	21.8%	0.1%		0.0%	0.0%	0.0%	0.0%			
Total %	1.2%	30.2%	0.0%	0.0%	31.3%	37.9%	0.0%	3.1%	0.0%	41.0%	0.0%	21.6%	6.0%	0.0%	27.6%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Christie Avenue Southbound					Shellmound Way Westbound					Christie Avenue Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	6	112	0	0	118	148	0	10	0	158	0	75	24	0	99	0	0	0	0	0	375
16:15	3	97	0	0	100	124	0	8	0	132	0	95	22	0	117	0	0	0	0	0	349
16:30	4	118	0	0	122	141	0	11	0	152	0	68	17	0	85	0	0	0	0	0	359
16:45	1	109	0	0	110	121	0	10	0	131	0	64	27	0	91	0	0	0	0	0	332
Total Volume	14	436	0	0	450	534	0	39	0	573	0	302	90	0	392	0	0	0	0	0	1415
% App Total	3.1%	96.9%	0.0%	0.0%		93.2%	0.0%	6.8%	0.0%		0.0%	77.0%	23.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.583	.924	.000	.000	.922	.902	.000	.886	.000	.907	.000	.795	.833	.000	.838	.000	.000	.000	.000	.000	.943

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-004 Shellmound Street-Shellmound Way.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Shellmound Street Southbound					Westbound					Shellmound Street Northbound					Shellmound Way Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	60	44	0	104	0	0	0	0	0	163	114	0	0	277	29	0	13	0	42	423	0
15:15	0	57	47	0	104	0	0	0	0	0	176	127	0	0	303	28	0	8	0	36	443	0
15:30	0	49	42	0	91	0	0	0	0	0	159	134	0	0	293	27	0	6	0	33	417	0
15:45	0	38	58	0	96	0	0	0	0	0	180	129	0	0	309	29	0	8	0	37	442	0
Total	0	204	191	0	395	0	0	0	0	0	678	504	0	0	1182	113	0	35	0	148	1725	0
16:00	0	41	31	0	72	0	0	0	0	0	160	143	0	0	303	17	0	8	0	25	400	0
16:15	0	49	38	0	87	0	0	0	0	0	173	132	0	0	305	19	0	11	0	30	422	0
16:30	0	42	44	0	86	0	0	0	0	0	179	119	0	0	298	16	0	12	0	28	412	0
16:45	0	40	42	0	82	0	0	0	0	0	181	116	0	0	297	19	0	5	0	24	403	0
Total	0	172	155	0	327	0	0	0	0	0	693	510	0	0	1203	71	0	36	0	107	1637	0
Grand Total	0	376	346	0	722	0	0	0	0	0	1371	1014	0	0	2385	184	0	71	0	255	3362	0
Apprch %	0.0%	52.1%	47.9%	0.0%		0.0%	0.0%	0.0%	0.0%		57.5%	42.5%	0.0%	0.0%		72.2%	0.0%	27.8%	0.0%			
Total %	0.0%	11.2%	10.3%	0.0%	21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	40.8%	30.2%	0.0%	0.0%	70.9%	5.5%	0.0%	2.1%	0.0%	7.6%	100.0%	

PM PEAK HOUR	Shellmound Street Southbound					Westbound					Shellmound Street Northbound					Shellmound Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	60	44	0	104	0	0	0	0	0	163	114	0	0	277	29	0	13	0	42	423
15:15	0	57	47	0	104	0	0	0	0	0	176	127	0	0	303	28	0	8	0	36	443
15:30	0	49	42	0	91	0	0	0	0	0	159	134	0	0	293	27	0	6	0	33	417
15:45	0	38	58	0	96	0	0	0	0	0	180	129	0	0	309	29	0	8	0	37	442
Total Volume	0	204	191	0	395	0	0	0	0	0	678	504	0	0	1182	113	0	35	0	148	1725
% App Total	0.0%	51.6%	48.4%	0.0%		0.0%	0.0%	0.0%	0.0%		57.4%	42.6%	0.0%	0.0%		76.4%	0.0%	23.6%	0.0%		
PHF	.000	.850	.823	.000	.950	.000	.000	.000	.000	.000	.942	.940	.000	.000	.956	.974	.000	.673	.000	.881	.973

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-004 Shellmound Street-Shellmound Way.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Shellmound Street Southbound					Westbound					Shellmound Street Northbound					Shellmound Way Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	0	27	41	0	68	0	0	0	0	0	110	88	0	0	198	20	0	10	0	30	296	0
16:15	0	25	23	0	48	0	0	0	0	0	112	93	0	0	205	23	0	4	0	27	280	0
16:30	0	35	44	0	79	0	0	0	0	0	107	97	0	0	204	12	0	8	0	20	303	0
16:45	0	32	30	0	62	0	0	0	0	0	102	97	0	0	199	22	0	8	0	30	291	0
Total	0	119	138	0	257	0	0	0	0	0	431	375	0	0	806	77	0	30	0	107	1170	0
17:00	0	37	31	0	68	0	0	0	0	0	96	81	0	0	177	12	0	11	0	23	268	0
17:15	0	34	34	0	68	0	0	0	0	0	107	104	0	0	211	12	0	8	1	21	300	1
17:30	0	31	33	0	64	0	0	0	0	0	97	101	0	0	198	10	0	9	0	19	281	0
17:45	0	20	33	0	53	0	0	0	0	0	88	95	0	0	183	22	0	10	0	32	268	0
Total	0	122	131	0	253	0	0	0	0	0	388	381	0	0	769	56	0	38	1	95	1117	1
Grand Total	0	241	269	0	510	0	0	0	0	0	819	756	0	0	1575	133	0	68	1	202	2287	1
Apprch %	0.0%	47.3%	52.7%	0.0%		0.0%	0.0%	0.0%	0.0%		52.0%	48.0%	0.0%	0.0%		65.8%	0.0%	33.7%	0.5%			
Total %	0.0%	10.5%	11.8%	0.0%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	35.8%	33.1%	0.0%	0.0%	68.9%	5.8%	0.0%	3.0%	0.0%	8.8%	100.0%	

PM PEAK HOUR	Shellmound Street Southbound					Westbound					Shellmound Street Northbound					Shellmound Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	27	41	0	68	0	0	0	0	0	110	88	0	0	198	20	0	10	0	30	296
16:15	0	25	23	0	48	0	0	0	0	0	112	93	0	0	205	23	0	4	0	27	280
16:30	0	35	44	0	79	0	0	0	0	0	107	97	0	0	204	12	0	8	0	20	303
16:45	0	32	30	0	62	0	0	0	0	0	102	97	0	0	199	22	0	8	0	30	291
Total Volume	0	119	138	0	257	0	0	0	0	0	431	375	0	0	806	77	0	30	0	107	1170
% App Total	0.0%	46.3%	53.7%	0.0%		0.0%	0.0%	0.0%	0.0%		53.5%	46.5%	0.0%	0.0%		72.0%	0.0%	28.0%	0.0%		
PHF	.000	.850	.784	.000	.813	.000	.000	.000	.000	.000	.962	.966	.000	.000	.983	.837	.000	.750	.000	.892	.965

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-005 Christie Avenue-Powell Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Christie Avenue Southbound					Powell Street Westbound					Christie Avenue Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	31	61	167	0	259	72	117	28	0	217	35	7	12	0	54	71	129	253	0	453	983	0
15:15	32	48	177	0	257	70	113	25	0	208	53	9	33	0	95	52	102	238	0	392	952	0
15:30	44	37	181	0	262	74	108	26	0	208	53	4	20	0	77	80	95	255	0	430	977	0
15:45	34	55	168	0	257	73	103	36	0	212	64	4	39	0	107	72	99	259	0	430	1006	0
Total	141	201	693	0	1035	289	441	115	0	845	205	24	104	0	333	275	425	1005	0	1705	3918	0
16:00	27	52	145	0	224	73	123	30	0	226	46	5	38	0	89	51	134	217	0	402	941	0
16:15	37	45	170	0	252	56	92	24	0	172	49	5	27	0	81	56	120	215	0	391	896	0
16:30	35	42	173	0	250	68	104	27	0	199	49	6	23	0	78	64	129	234	0	427	954	0
16:45	26	44	190	0	260	56	105	20	0	181	50	12	34	0	96	64	121	230	0	415	952	0
Total	125	183	678	0	986	253	424	101	0	778	194	28	122	0	344	235	504	896	0	1635	3743	0
Grand Total	266	384	1371	0	2021	542	865	216	0	1623	399	52	226	0	677	510	929	1901	0	3340	7661	0
Apprch %	13.2%	19.0%	67.8%	0.0%		33.4%	53.3%	13.3%	0.0%		58.9%	7.7%	33.4%	0.0%		15.3%	27.8%	56.9%	0.0%			
Total %	3.5%	5.0%	17.9%	0.0%	26.4%	7.1%	11.3%	2.8%	0.0%	21.2%	5.2%	0.7%	3.0%	0.0%	8.8%	6.7%	12.1%	24.8%	0.0%	43.6%	100.0%	

PM PEAK HOUR	Christie Avenue Southbound					Powell Street Westbound					Christie Avenue Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	31	61	167	0	259	72	117	28	0	217	35	7	12	0	54	71	129	253	0	453	983
15:15	32	48	177	0	257	70	113	25	0	208	53	9	33	0	95	52	102	238	0	392	952
15:30	44	37	181	0	262	74	108	26	0	208	53	4	20	0	77	80	95	255	0	430	977
15:45	34	55	168	0	257	73	103	36	0	212	64	4	39	0	107	72	99	259	0	430	1006
Total Volume	141	201	693	0	1035	289	441	115	0	845	205	24	104	0	333	275	425	1005	0	1705	3918
% App Total	13.6%	19.4%	67.0%	0.0%		34.2%	52.2%	13.6%	0.0%		61.6%	7.2%	31.2%	0.0%		16.1%	24.9%	58.9%	0.0%		
PHF	.801	.824	.957	.000	.988	.976	.942	.799	.000	.974	.801	.667	.667	.000	.778	.859	.824	.970	.000	.941	.974

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-005 Christie Avenue-Powell Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Christie Avenue Southbound					Powell Street Westbound					Christie Avenue Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	38	37	182	0	257	45	171	19	0	235	31	12	20	0	63	95	142	147	0	384	939	0
16:15	28	31	157	0	216	50	213	24	0	287	27	8	19	0	54	87	125	131	0	343	900	0
16:30	34	43	186	0	263	45	206	27	0	278	41	6	29	0	76	74	131	132	0	337	954	0
16:45	40	50	133	0	223	52	168	23	0	243	31	9	25	0	65	78	125	136	0	339	870	0
Total	140	161	658	0	959	192	758	93	0	1043	130	35	93	0	258	334	523	546	0	1403	3663	0
17:00	34	39	170	0	243	55	184	15	0	254	35	6	29	0	70	60	183	147	0	390	957	0
17:15	46	31	151	0	228	57	228	34	0	319	39	10	22	0	71	72	142	151	0	365	983	0
17:30	30	45	139	0	214	58	176	21	0	255	29	14	27	0	70	73	150	149	0	372	911	0
17:45	37	44	120	0	201	57	159	28	0	244	37	7	25	0	69	80	155	147	0	382	896	0
Total	147	159	580	0	886	227	747	98	0	1072	140	37	103	0	280	285	630	594	0	1509	3747	0
Grand Total	287	320	1238	0	1845	419	1505	191	0	2115	270	72	196	0	538	619	1153	1140	0	2912	7410	0
Apprch %	15.6%	17.3%	67.1%	0.0%		19.8%	71.2%	9.0%	0.0%		50.2%	13.4%	36.4%	0.0%		21.3%	39.6%	39.1%	0.0%			
Total %	3.9%	4.3%	16.7%	0.0%	24.9%	5.7%	20.3%	2.6%	0.0%	28.5%	3.6%	1.0%	2.6%	0.0%	7.3%	8.4%	15.6%	15.4%	0.0%	39.3%	100.0%	

PM PEAK HOUR	Christie Avenue Southbound					Powell Street Westbound					Christie Avenue Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	34	43	186	0	263	45	206	27	0	278	41	6	29	0	76	74	131	132	0	337	954
16:45	40	50	133	0	223	52	168	23	0	243	31	9	25	0	65	78	125	136	0	339	870
17:00	34	39	170	0	243	55	184	15	0	254	35	6	29	0	70	60	183	147	0	390	957
17:15	46	31	151	0	228	57	228	34	0	319	39	10	22	0	71	72	142	151	0	365	983
Total Volume	154	163	640	0	957	209	786	99	0	1094	146	31	105	0	282	284	581	566	0	1431	3764
% App Total	16.1%	17.0%	66.9%	0.0%		19.1%	71.8%	9.0%	0.0%		51.8%	11.0%	37.2%	0.0%		19.8%	40.6%	39.6%	0.0%		
PHF	.837	.815	.860	.000	.910	.917	.862	.728	.000	.857	.890	.775	.905	.000	.928	.910	.794	.937	.000	.917	.957

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-006 Shellmound Street-Christie Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Shellmound Street Southbound					Christie Avenue Westbound					Shellmound Street Northbound					Christie Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	1	70	0	0	71	20	0	34	0	54	0	223	15	0	238	29	48	241	0	318	681	0
15:15	2	65	0	0	67	17	0	40	0	57	0	253	16	0	269	33	64	223	0	320	713	0
15:30	1	60	0	0	61	12	0	55	0	67	0	220	7	0	227	27	54	208	0	289	644	0
15:45	1	51	0	0	52	11	0	39	0	50	0	241	15	0	256	32	66	219	0	317	675	0
Total	5	246	0	0	251	60	0	168	0	228	0	937	53	0	990	121	232	891	0	1244	2713	0
16:00	0	52	0	0	52	11	0	51	0	62	0	227	25	0	252	36	45	231	0	312	678	0
16:15	1	60	0	0	61	22	0	44	0	66	0	227	17	0	244	34	36	184	0	254	625	0
16:30	0	58	0	0	58	11	0	37	0	48	0	233	11	0	244	37	54	198	0	289	639	0
16:45	0	54	0	0	54	18	0	40	0	58	0	239	30	0	269	23	50	215	0	288	669	0
Total	1	224	0	0	225	62	0	172	0	234	0	926	83	0	1009	130	185	828	0	1143	2611	0
Grand Total	6	470	0	0	476	122	0	340	0	462	0	1863	136	0	1999	251	417	1719	0	2387	5324	0
Apprch %	1.3%	98.7%	0.0%	0.0%		26.4%	0.0%	73.6%	0.0%		0.0%	93.2%	6.8%	0.0%		10.5%	17.5%	72.0%	0.0%			
Total %	0.1%	8.8%	0.0%	0.0%	8.9%	2.3%	0.0%	6.4%	0.0%	8.7%	0.0%	35.0%	2.6%	0.0%	37.5%	4.7%	7.8%	32.3%	0.0%	44.8%	100.0%	

PM PEAK HOUR	Shellmound Street Southbound					Christie Avenue Westbound					Shellmound Street Northbound					Christie Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	70	0	0	71	20	0	34	0	54	0	223	15	0	238	29	48	241	0	318	681
15:15	2	65	0	0	67	17	0	40	0	57	0	253	16	0	269	33	64	223	0	320	713
15:30	1	60	0	0	61	12	0	55	0	67	0	220	7	0	227	27	54	208	0	289	644
15:45	1	51	0	0	52	11	0	39	0	50	0	241	15	0	256	32	66	219	0	317	675
Total Volume	5	246	0	0	251	60	0	168	0	228	0	937	53	0	990	121	232	891	0	1244	2713
% App Total	2.0%	98.0%	0.0%	0.0%		26.3%	0.0%	73.7%	0.0%		0.0%	94.6%	5.4%	0.0%		9.7%	18.6%	71.6%	0.0%		
PHF	.625	.879	.000	.000	.884	.750	.000	.764	.000	.851	.000	.926	.828	.000	.920	.917	.879	.924	.000	.972	.951

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-006 Shellmound Street-Christie Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Shellmound Street Southbound					Christie Avenue Westbound					Shellmound Street Northbound					Christie Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	3	35	0	0	38	13	0	29	0	42	0	157	5	0	162	18	29	139	0	186	428	0
16:15	1	29	0	0	30	7	0	23	0	30	0	165	6	0	171	21	19	132	0	172	403	0
16:30	0	48	0	0	48	11	0	24	0	35	0	176	7	0	183	13	31	108	0	152	418	0
16:45	1	37	0	0	38	12	0	21	0	33	0	169	11	0	180	17	29	122	0	168	419	0
Total	5	149	0	0	154	43	0	97	0	140	0	667	29	0	696	69	108	501	0	678	1668	0
17:00	1	49	0	0	50	12	0	18	0	30	0	153	5	0	158	16	24	149	0	189	427	0
17:15	0	41	0	0	41	12	0	22	0	34	0	173	10	0	183	20	25	136	0	181	439	0
17:30	2	40	0	0	42	7	0	21	0	28	0	157	4	0	161	19	25	138	0	182	413	0
17:45	1	31	0	0	32	8	0	23	0	31	0	149	9	0	158	20	29	153	0	202	423	0
Total	4	161	0	0	165	39	0	84	0	123	0	632	28	0	660	75	103	576	0	754	1702	0
Grand Total	9	310	0	0	319	82	0	181	0	263	0	1299	57	0	1356	144	211	1077	0	1432	3370	0
Apprch %	2.8%	97.2%	0.0%	0.0%		31.2%	0.0%	68.8%	0.0%		0.0%	95.8%	4.2%	0.0%		10.1%	14.7%	75.2%	0.0%			
Total %	0.3%	9.2%	0.0%	0.0%	9.5%	2.4%	0.0%	5.4%	0.0%	7.8%	0.0%	38.5%	1.7%	0.0%	40.2%	4.3%	6.3%	32.0%	0.0%	42.5%	100.0%	

PM PEAK HOUR	Shellmound Street Southbound					Christie Avenue Westbound					Shellmound Street Northbound					Christie Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	48	0	0	48	11	0	24	0	35	0	176	7	0	183	13	31	108	0	152	418
16:45	1	37	0	0	38	12	0	21	0	33	0	169	11	0	180	17	29	122	0	168	419
17:00	1	49	0	0	50	12	0	18	0	30	0	153	5	0	158	16	24	149	0	189	427
17:15	0	41	0	0	41	12	0	22	0	34	0	173	10	0	183	20	25	136	0	181	439
Total Volume	2	175	0	0	177	47	0	85	0	132	0	671	33	0	704	66	109	515	0	690	1703
% App Total	1.1%	98.9%	0.0%	0.0%		35.6%	0.0%	64.4%	0.0%		0.0%	95.3%	4.7%	0.0%		9.6%	15.8%	74.6%	0.0%		
PHF	.500	.893	.000	.000	.885	.979	.000	.885	.000	.943	.000	.953	.750	.000	.962	.825	.879	.864	.000	.913	.970

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-007 Shellmound Street-Ohlone Way.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Shellmound Street Southbound					Ohlone Way Westbound					Shellmound Street Northbound					Driveway Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	59	249	8	0	316	22	0	35	0	57	2	210	35	0	247	5	2	2	0	9	629	0
15:15	60	261	6	0	327	24	0	46	0	70	2	206	29	0	237	6	1	2	0	9	643	0
15:30	51	228	6	0	285	29	1	33	0	63	7	202	30	0	239	5	2	4	0	11	598	0
15:45	43	225	4	0	272	28	0	47	0	75	4	214	36	0	254	1	1	5	0	7	608	0
Total	213	963	24	0	1200	103	1	161	0	265	15	832	130	0	977	17	6	13	0	36	2478	0
16:00	47	231	11	0	289	31	0	31	0	62	3	207	26	0	236	3	2	4	0	9	596	0
16:15	49	206	6	0	261	31	0	36	0	67	8	200	27	0	235	2	2	7	0	11	574	0
16:30	42	206	10	0	258	38	1	31	0	70	4	206	22	0	232	4	1	4	0	9	569	0
16:45	52	220	4	0	276	12	0	60	0	72	4	222	26	0	252	3	2	2	0	7	607	0
Total	190	863	31	0	1084	112	1	158	0	271	19	835	101	0	955	12	7	17	0	36	2346	0
Grand Total	403	1826	55	0	2284	215	2	319	0	536	34	1667	231	0	1932	29	13	30	0	72	4824	0
Apprch %	17.6%	79.9%	2.4%	0.0%		40.1%	0.4%	59.5%	0.0%		1.8%	86.3%	12.0%	0.0%		40.3%	18.1%	41.7%	0.0%			
Total %	8.4%	37.9%	1.1%	0.0%	47.3%	4.5%	0.0%	6.6%	0.0%	11.1%	0.7%	34.6%	4.8%	0.0%	40.0%	0.6%	0.3%	0.6%	0.0%	1.5%	100.0%	

PM PEAK HOUR	Shellmound Street Southbound					Ohlone Way Westbound					Shellmound Street Northbound					Driveway Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	59	249	8	0	316	22	0	35	0	57	2	210	35	0	247	5	2	2	0	9	629
15:15	60	261	6	0	327	24	0	46	0	70	2	206	29	0	237	6	1	2	0	9	643
15:30	51	228	6	0	285	29	1	33	0	63	7	202	30	0	239	5	2	4	0	11	598
15:45	43	225	4	0	272	28	0	47	0	75	4	214	36	0	254	1	1	5	0	7	608
Total Volume	213	963	24	0	1200	103	1	161	0	265	15	832	130	0	977	17	6	13	0	36	2478
% App Total	17.8%	80.3%	2.0%	0.0%		38.9%	0.4%	60.8%	0.0%		1.5%	85.2%	13.3%	0.0%		47.2%	16.7%	36.1%	0.0%		
PHF	.888	.922	.750	.000	.917	.888	.250	.856	.000	.883	.536	.972	.903	.000	.962	.708	.750	.650	.000	.818	.963

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-007 Shellmound Street-Ohlone Way.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Shellmound Street Southbound					Ohlone Way Westbound					Shellmound Street Northbound					Driveway Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	26	149	9	0	184	14	0	21	0	35	3	125	17	0	145	5	1	6	0	12	376	0
16:15	20	143	13	0	176	10	0	18	0	28	5	158	16	0	179	6	2	2	0	10	393	0
16:30	19	125	12	0	156	17	0	17	0	34	1	151	13	0	165	11	1	5	0	17	372	0
16:45	25	130	8	0	163	16	1	11	0	28	4	151	19	0	174	2	0	3	0	5	370	0
Total	90	547	42	0	679	57	1	67	0	125	13	585	65	0	663	24	4	16	0	44	1511	0
17:00	21	184	5	0	210	18	0	18	0	36	4	150	20	0	174	3	1	2	0	6	426	0
17:15	22	151	8	0	181	16	2	17	0	35	1	162	26	0	189	4	1	4	0	9	414	0
17:30	24	165	7	0	196	14	0	19	0	33	5	138	28	0	171	5	0	5	0	10	410	0
17:45	25	144	16	0	185	27	0	25	0	52	0	118	27	0	145	6	1	3	0	10	392	0
Total	92	644	36	0	772	75	2	79	0	156	10	568	101	0	679	18	3	14	0	35	1642	0
Grand Total	182	1191	78	0	1451	132	3	146	0	281	23	1153	166	0	1342	42	7	30	0	79	3153	0
Apprch %	12.5%	82.1%	5.4%	0.0%		47.0%	1.1%	52.0%	0.0%		1.7%	85.9%	12.4%	0.0%		53.2%	8.9%	38.0%	0.0%			
Total %	5.8%	37.8%	2.5%	0.0%	46.0%	4.2%	0.1%	4.6%	0.0%	8.9%	0.7%	36.6%	5.3%	0.0%	42.6%	1.3%	0.2%	1.0%	0.0%	2.5%	100.0%	

PM PEAK HOUR	Shellmound Street Southbound					Ohlone Way Westbound					Shellmound Street Northbound					Driveway Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	21	184	5	0	210	18	0	18	0	36	4	150	20	0	174	3	1	2	0	6	426
17:15	22	151	8	0	181	16	2	17	0	35	1	162	26	0	189	4	1	4	0	9	414
17:30	24	165	7	0	196	14	0	19	0	33	5	138	28	0	171	5	0	5	0	10	410
17:45	25	144	16	0	185	27	0	25	0	52	0	118	27	0	145	6	1	3	0	10	392
Total Volume	92	644	36	0	772	75	2	79	0	156	10	568	101	0	679	18	3	14	0	35	1642
% App Total	11.9%	83.4%	4.7%	0.0%		48.1%	1.3%	50.6%	0.0%		1.5%	83.7%	14.9%	0.0%		51.4%	8.6%	40.0%	0.0%		
PHF	.920	.875	.563	.000	.919	.694	.250	.790	.000	.750	.500	.877	.902	.000	.898	.750	.750	.700	.000	.875	.964

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-008 Hollis Street-Powell Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					Powell Street Westbound					Hollis Street Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	12	49	31	0	92	16	141	10	0	167	48	40	8	0	96	22	93	46	0	161	516	0
15:15	7	39	31	0	77	24	145	2	0	171	44	39	10	0	93	21	107	32	0	160	501	0
15:30	7	45	30	0	82	8	126	7	0	141	40	36	11	0	87	14	109	34	0	157	467	0
15:45	2	41	26	0	69	9	132	8	0	149	42	31	11	0	84	23	120	27	0	170	472	0
Total	28	174	118	0	320	57	544	27	0	628	174	146	40	0	360	80	429	139	0	648	1956	0
16:00	6	42	32	0	80	15	132	3	0	150	36	38	9	0	83	28	133	32	0	193	506	0
16:15	4	36	25	0	65	12	101	7	0	120	30	33	11	0	74	21	124	26	0	171	430	0
16:30	8	31	19	0	58	14	131	12	0	157	41	39	8	0	88	23	123	38	0	184	487	0
16:45	6	38	22	0	66	21	119	8	0	148	38	30	12	0	80	24	120	28	0	172	466	0
Total	24	147	98	0	269	62	483	30	0	575	145	140	40	0	325	96	500	124	0	720	1889	0
Grand Total	52	321	216	0	589	119	1027	57	0	1203	319	286	80	0	685	176	929	263	0	1368	3845	0
Apprch %	8.8%	54.5%	36.7%	0.0%		9.9%	85.4%	4.7%	0.0%		46.6%	41.8%	11.7%	0.0%		12.9%	67.9%	19.2%	0.0%			
Total %	1.4%	8.3%	5.6%	0.0%	15.3%	3.1%	26.7%	1.5%	0.0%	31.3%	8.3%	7.4%	2.1%	0.0%	17.8%	4.6%	24.2%	6.8%	0.0%	35.6%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					Powell Street Westbound					Hollis Street Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	12	49	31	0	92	16	141	10	0	167	48	40	8	0	96	22	93	46	0	161	516
15:15	7	39	31	0	77	24	145	2	0	171	44	39	10	0	93	21	107	32	0	160	501
15:30	7	45	30	0	82	8	126	7	0	141	40	36	11	0	87	14	109	34	0	157	467
15:45	2	41	26	0	69	9	132	8	0	149	42	31	11	0	84	23	120	27	0	170	472
Total Volume	28	174	118	0	320	57	544	27	0	628	174	146	40	0	360	80	429	139	0	648	1956
% App Total	8.8%	54.4%	36.9%	0.0%		9.1%	86.6%	4.3%	0.0%		48.3%	40.6%	11.1%	0.0%		12.3%	66.2%	21.5%	0.0%		
PHF	.583	.888	.952	.000	.870	.594	.938	.675	.000	.918	.906	.913	.909	.000	.938	.870	.894	.755	.000	.953	.948

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-008 Hollis Street-Powell Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					Powell Street Westbound					Hollis Street Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	23	57	38	0	118	12	100	8	0	120	68	74	9	0	151	34	131	42	0	207	596	0
16:15	18	60	47	0	125	11	110	6	0	127	98	76	7	0	181	31	96	33	0	160	593	0
16:30	26	58	53	0	137	14	110	11	0	135	73	82	13	0	168	34	122	26	0	182	622	0
16:45	20	62	40	0	122	11	101	9	0	121	78	89	9	0	176	29	122	30	0	181	600	0
Total	87	237	178	0	502	48	421	34	0	503	317	321	38	0	676	128	471	131	0	730	2411	0
17:00	31	61	50	0	142	18	92	8	0	118	93	95	23	0	211	29	133	47	0	209	680	0
17:15	34	69	53	0	156	17	109	10	0	136	100	99	13	0	212	34	145	44	0	223	727	0
17:30	29	71	36	0	136	20	106	17	0	143	69	108	11	0	188	33	134	39	0	206	673	0
17:45	28	48	44	0	120	18	98	15	0	131	79	90	11	0	180	34	120	45	0	199	630	0
Total	122	249	183	0	554	73	405	50	0	528	341	392	58	0	791	130	532	175	0	837	2710	0
Grand Total	209	486	361	0	1056	121	826	84	0	1031	658	713	96	0	1467	258	1003	306	0	1567	5121	0
Apprch %	19.8%	46.0%	34.2%	0.0%		11.7%	80.1%	8.1%	0.0%		44.9%	48.6%	6.5%	0.0%		16.5%	64.0%	19.5%	0.0%			
Total %	4.1%	9.5%	7.0%	0.0%	20.6%	2.4%	16.1%	1.6%	0.0%	20.1%	12.8%	13.9%	1.9%	0.0%	28.6%	5.0%	19.6%	6.0%	0.0%	30.6%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					Powell Street Westbound					Hollis Street Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	31	61	50	0	142	18	92	8	0	118	93	95	23	0	211	29	133	47	0	209	680
17:15	34	69	53	0	156	17	109	10	0	136	100	99	13	0	212	34	145	44	0	223	727
17:30	29	71	36	0	136	20	106	17	0	143	69	108	11	0	188	33	134	39	0	206	673
17:45	28	48	44	0	120	18	98	15	0	131	79	90	11	0	180	34	120	45	0	199	630
Total Volume	122	249	183	0	554	73	405	50	0	528	341	392	58	0	791	130	532	175	0	837	2710
% App Total	22.0%	44.9%	33.0%	0.0%		13.8%	76.7%	9.5%	0.0%		43.1%	49.6%	7.3%	0.0%		15.5%	63.6%	20.9%	0.0%		
PHF	.897	.877	.863	.000	.888	.913	.929	.735	.000	.923	.853	.907	.630	.000	.933	.956	.917	.931	.000	.938	.932

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-009 Stanford Avenue-Powell Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Southbound					Stanford Avenue Westbound					Stanford Avenue Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	0	0	0	0	0	170	0	0	170	0	0	6	0	6	0	104	0	0	104	280	0
15:15	0	0	0	0	0	0	156	0	0	156	0	0	8	0	8	0	115	0	0	115	279	0
15:30	0	0	0	0	0	0	126	0	0	126	0	0	4	0	4	0	122	0	0	122	252	0
15:45	0	0	0	0	0	0	155	0	0	155	0	0	6	0	6	0	134	0	0	134	295	0
Total	0	0	0	0	0	0	607	0	0	607	0	0	24	0	24	0	475	0	0	475	1106	0
16:00	0	0	0	0	0	0	130	0	0	130	0	0	4	0	4	0	130	0	0	130	264	0
16:15	0	0	0	0	0	0	126	0	0	126	0	0	8	0	8	0	130	0	0	130	264	0
16:30	0	0	0	0	0	0	145	0	0	145	0	0	10	0	10	0	121	0	0	121	276	0
16:45	0	0	0	0	0	0	145	0	0	145	0	0	5	0	5	0	126	0	0	126	276	0
Total	0	0	0	0	0	0	546	0	0	546	0	0	27	0	27	0	507	0	0	507	1080	0
Grand Total	0	0	0	0	0	0	1153	0	0	1153	0	0	51	0	51	0	982	0	0	982	2186	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	52.7%	0.0%	0.0%	52.7%	0.0%	0.0%	2.3%	0.0%	2.3%	0.0%	44.9%	0.0%	0.0%	44.9%	100.0%	

PM PEAK HOUR	Southbound					Stanford Avenue Westbound					Stanford Avenue Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	0	0	0	170	0	0	170	0	0	6	0	6	0	104	0	0	104	280
15:15	0	0	0	0	0	0	156	0	0	156	0	0	8	0	8	0	115	0	0	115	279
15:30	0	0	0	0	0	0	126	0	0	126	0	0	4	0	4	0	122	0	0	122	252
15:45	0	0	0	0	0	0	155	0	0	155	0	0	6	0	6	0	134	0	0	134	295
Total Volume	0	0	0	0	0	0	607	0	0	607	0	0	24	0	24	0	475	0	0	475	1106
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.893	.000	.000	.893	.000	.000	.750	.000	.750	.000	.886	.000	.000	.886	.937

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-009 Stanford Avenue-Powell Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Southbound					Stanford Avenue Westbound					Stanford Avenue Northbound					Powell Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	0	0	0	0	0	0	103	0	0	103	0	0	18	0	18	0	149	0	0	149	270	0
16:15	0	0	0	0	0	0	115	0	0	115	0	0	18	0	18	0	114	0	0	114	247	0
16:30	0	0	0	0	0	0	124	0	0	124	0	0	20	0	20	0	167	0	0	167	311	0
16:45	0	0	0	0	0	0	107	0	0	107	0	0	18	0	18	0	148	0	0	148	273	0
Total	0	0	0	0	0	0	449	0	0	449	0	0	74	0	74	0	578	0	0	578	1101	0
17:00	0	0	0	0	0	0	100	0	0	100	0	0	30	0	30	0	193	0	0	193	323	0
17:15	0	0	0	0	0	0	124	0	0	124	0	0	24	0	24	0	186	0	0	186	334	0
17:30	0	0	0	0	0	0	125	0	0	125	0	0	26	0	26	0	179	0	0	179	330	0
17:45	0	0	0	0	0	0	117	0	0	117	0	0	16	0	16	0	157	0	0	157	290	0
Total	0	0	0	0	0	0	466	0	0	466	0	0	96	0	96	0	715	0	0	715	1277	0
Grand Total	0	0	0	0	0	0	915	0	0	915	0	0	170	0	170	0	1293	0	0	1293	2378	0
Apprch %	0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.5%	0.0%	0.0%	38.5%	0.0%	0.0%	7.1%	0.0%	7.1%	0.0%	54.4%	0.0%	0.0%	54.4%	100.0%	

PM PEAK HOUR	Southbound					Stanford Avenue Westbound					Stanford Avenue Northbound					Powell Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	100	0	0	100	0	0	30	0	30	0	193	0	0	193	323
17:15	0	0	0	0	0	0	124	0	0	124	0	0	24	0	24	0	186	0	0	186	334
17:30	0	0	0	0	0	0	125	0	0	125	0	0	26	0	26	0	179	0	0	179	330
17:45	0	0	0	0	0	0	117	0	0	117	0	0	16	0	16	0	157	0	0	157	290
Total Volume	0	0	0	0	0	0	466	0	0	466	0	0	96	0	96	0	715	0	0	715	1277
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.932	.000	.000	.932	.000	.000	.800	.000	.800	.000	.926	.000	.000	.926	.956

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-010 Horton Street-Stanford Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Stanford Avenue Westbound					Horton Street Northbound					Stanford Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	3	9	0	0	12	4	0	3	0	7	0	13	10	0	23	0	0	0	0	0	42	0
15:15	1	4	0	0	5	8	0	5	0	13	0	17	7	0	24	0	0	0	0	0	42	0
15:30	0	14	0	0	14	6	0	1	0	7	0	14	4	0	18	0	0	0	0	0	39	0
15:45	0	9	0	0	9	5	0	0	0	5	0	11	2	0	13	1	0	0	0	1	28	0
Total	4	36	0	0	40	23	0	9	0	32	0	55	23	0	78	1	0	0	0	1	151	0
16:00	0	6	0	0	6	7	0	1	0	8	0	11	1	0	12	0	0	0	0	0	26	0
16:15	1	8	0	0	9	7	0	0	0	7	0	11	9	0	20	0	0	0	0	0	36	0
16:30	1	11	0	0	12	1	0	2	0	3	0	15	9	0	24	0	0	0	0	0	39	0
16:45	0	2	0	0	2	7	0	2	0	9	0	12	6	0	18	0	0	0	0	0	29	0
Total	2	27	0	0	29	22	0	5	0	27	0	49	25	0	74	0	0	0	0	0	130	0
Grand Total	6	63	0	0	69	45	0	14	0	59	0	104	48	0	152	1	0	0	0	1	281	0
Apprch %	8.7%	91.3%	0.0%	0.0%		76.3%	0.0%	23.7%	0.0%		0.0%	68.4%	31.6%	0.0%		100.0%	0.0%	0.0%	0.0%			
Total %	2.1%	22.4%	0.0%	0.0%	24.6%	16.0%	0.0%	5.0%	0.0%	21.0%	0.0%	37.0%	17.1%	0.0%	54.1%	0.4%	0.0%	0.0%	0.0%	0.4%	100.0%	

PM PEAK HOUR	Horton Street Southbound					Stanford Avenue Westbound					Horton Street Northbound					Stanford Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	3	9	0	0	12	4	0	3	0	7	0	13	10	0	23	0	0	0	0	0	42
15:15	1	4	0	0	5	8	0	5	0	13	0	17	7	0	24	0	0	0	0	0	42
15:30	0	14	0	0	14	6	0	1	0	7	0	14	4	0	18	0	0	0	0	0	39
15:45	0	9	0	0	9	5	0	0	0	5	0	11	2	0	13	1	0	0	0	1	28
Total Volume	4	36	0	0	40	23	0	9	0	32	0	55	23	0	78	1	0	0	0	1	151
% App Total	10.0%	90.0%	0.0%	0.0%		71.9%	0.0%	28.1%	0.0%		0.0%	70.5%	29.5%	0.0%		100.0%	0.0%	0.0%	0.0%		
PHF	.333	.643	.000	.000	.714	.719	.000	.450	.000	.615	.000	.809	.575	.000	.813	.250	.000	.000	.000	.250	.899

ALL TRAFFIC DATA

City of Emeryville
(916) 771-8700
orders@atdtraffic.com

All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

File Name : 15-7050-010 Horton Street-Stanford Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Stanford Avenue Westbound					Horton Street Northbound					Stanford Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	3	18	0	0	21	4	2	3	0	9	1	15	5	0	21	0	0	2	0	2	53	0
07:15	5	9	0	0	14	9	2	4	0	15	0	15	5	0	20	0	0	1	0	1	50	0
07:30	1	10	0	0	11	15	0	5	0	20	1	18	2	0	21	0	0	0	0	0	52	0
07:45	3	10	0	0	13	17	0	7	0	24	1	20	6	0	27	1	0	0	0	1	65	0
Total	12	47	0	0	59	45	4	19	0	68	3	68	18	0	89	1	0	3	0	4	220	0
08:00	1	18	0	0	19	21	2	6	0	29	2	17	4	0	23	0	0	0	0	0	71	0
08:15	2	13	1	0	16	22	1	4	0	27	0	23	4	0	27	1	0	0	0	1	71	0
08:30	4	20	0	0	24	15	1	6	0	22	1	20	7	0	28	0	0	0	0	0	74	0
08:45	3	14	0	0	17	16	1	11	0	28	2	19	8	0	29	0	1	1	0	2	76	0
Total	10	65	1	0	76	74	5	27	0	106	5	79	23	0	107	1	1	1	0	3	292	0
16:00	6	18	0	0	24	11	1	7	0	19	1	34	14	0	49	0	1	1	0	2	94	0
16:15	4	12	0	0	16	8	0	9	0	17	0	43	15	0	58	0	0	0	0	0	91	0
16:30	6	25	1	0	32	8	0	7	0	15	0	51	22	0	73	1	0	1	0	2	122	0
16:45	8	23	0	0	31	9	1	6	0	16	0	48	15	0	63	0	2	1	0	3	113	0
Total	24	78	1	0	103	36	2	29	0	67	1	176	66	0	243	1	3	3	0	7	420	0
17:00	8	27	0	0	35	11	0	5	0	16	0	69	23	0	92	1	0	1	0	2	145	0
17:15	6	28	0	0	34	15	0	11	0	26	0	64	21	0	85	0	0	1	0	1	146	0
17:30	2	21	1	0	24	12	0	8	0	20	0	57	26	0	83	0	0	2	0	2	129	0
17:45	4	19	0	0	23	17	0	3	0	20	1	46	17	0	64	0	1	1	0	2	109	0
Total	20	95	1	0	116	55	0	27	0	82	1	236	87	0	324	1	1	5	0	7	529	0
Grand Total	66	285	3	0	354	210	11	102	0	323	10	559	194	0	763	4	5	12	0	21	1461	0
Apprch %	18.6%	80.5%	0.8%	0.0%		65.0%	3.4%	31.6%	0.0%		1.3%	73.3%	25.4%	0.0%		19.0%	23.8%	57.1%	0.0%			
Total %	4.5%	19.5%	0.2%	0.0%	24.2%	14.4%	0.8%	7.0%	0.0%	22.1%	0.7%	38.3%	13.3%	0.0%	52.2%	0.3%	0.3%	0.8%	0.0%	1.4%	100.0%	

AM PEAK HOUR	Horton Street Southbound					Stanford Avenue Westbound					Horton Street Northbound					Stanford Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	18	0	0	19	21	2	6	0	29	2	17	4	0	23	0	0	0	0	0	71
08:15	2	13	1	0	16	22	1	4	0	27	0	23	4	0	27	1	0	0	0	1	71
08:30	4	20	0	0	24	15	1	6	0	22	1	20	7	0	28	0	0	0	0	0	74
08:45	3	14	0	0	17	16	1	11	0	28	2	19	8	0	29	0	1	1	0	2	76
Total Volume	10	65	1	0	76	74	5	27	0	106	5	79	23	0	107	1	1	1	0	3	292
% App Total	13.2%	85.5%	1.3%	0.0%		69.8%	4.7%	25.5%	0.0%		4.7%	73.8%	21.5%	0.0%		33.3%	33.3%	33.3%	0.0%		
PHF	.625	.813	.250	.000	.792	.841	.625	.614	.000	.914	.625	.859	.719	.000	.922	.250	.250	.250	.000	.375	.961

PM PEAK HOUR	Horton Street Southbound					Stanford Avenue Westbound					Horton Street Northbound					Stanford Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	8	23	0	0	31	9	1	6	0	16	0	48	15	0	63	0	2	1	0	3	113
17:00	8	27	0	0	35	11	0	5	0	16	0	69	23	0	92	1	0	1	0	2	145
17:15	6	28	0	0	34	15	0	11	0	26	0	64	21	0	85	0	0	1	0	1	146
17:30	2	21	1	0	24	12	0	8	0	20	0	57	26	0	83	0	0	2	0	2	129
Total Volume	24	99	1	0	124	47	1	30	0	78	0	238	85	0	323	1	2	5	0	8	533
% App Total	19.4%	79.8%	0.8%	0.0%		60.3%	1.3%	38.5%	0.0%		0.0%	73.7%	26.3%	0.0%		12.5%	25.0%	62.5%	0.0%		
PHF	.750	.884	.250	.000	.886	.783	.250	.682	.000	.750	.000	.862	.817	.000	.878	.250	.250	.625	.000	.667	.913

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-011 Hollis Street-Stanford Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					Stanford Avenue Westbound					Hollis Street Northbound					Stanford Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	2	108	4	0	114	0	2	2	0	4	1	79	1	0	81	12	0	4	0	16	215	0
15:15	3	85	8	0	96	2	0	4	0	6	4	82	5	0	91	9	1	3	0	13	206	0
15:30	3	83	4	1	91	1	1	2	0	4	3	77	4	0	84	4	2	0	0	6	185	1
15:45	1	69	4	0	74	1	3	2	0	6	1	78	3	0	82	3	1	0	0	4	166	0
Total	9	345	20	1	375	4	6	10	0	20	9	316	13	0	338	28	4	7	0	39	772	1
16:00	3	78	7	0	88	1	0	0	0	1	1	83	2	0	86	1	0	1	0	2	177	0
16:15	1	71	3	0	75	4	0	1	0	5	1	66	6	0	73	7	4	0	0	11	164	0
16:30	3	74	3	0	80	0	0	2	0	2	1	78	0	0	79	9	3	1	0	13	174	0
16:45	3	79	6	0	88	1	1	0	0	2	2	72	3	0	77	7	0	0	0	7	174	0
Total	10	302	19	0	331	6	1	3	0	10	5	299	11	0	315	24	7	2	0	33	689	0
Grand Total	19	647	39	1	706	10	7	13	0	30	14	615	24	0	653	52	11	9	0	72	1461	1
Apprch %	2.7%	91.6%	5.5%	0.1%		33.3%	23.3%	43.3%	0.0%		2.1%	94.2%	3.7%	0.0%		72.2%	15.3%	12.5%	0.0%			
Total %	1.3%	44.3%	2.7%	0.1%	48.3%	0.7%	0.5%	0.9%	0.0%	2.1%	1.0%	42.1%	1.6%	0.0%	44.7%	3.6%	0.8%	0.6%	0.0%	4.9%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					Stanford Avenue Westbound					Hollis Street Northbound					Stanford Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	2	108	4	0	114	0	2	2	0	4	1	79	1	0	81	12	0	4	0	16	215
15:15	3	85	8	0	96	2	0	4	0	6	4	82	5	0	91	9	1	3	0	13	206
15:30	3	83	4	1	91	1	1	2	0	4	3	77	4	0	84	4	2	0	0	6	185
15:45	1	69	4	0	74	1	3	2	0	6	1	78	3	0	82	3	1	0	0	4	166
Total Volume	9	345	20	1	375	4	6	10	0	20	9	316	13	0	338	28	4	7	0	39	772
% App Total	2.4%	92.0%	5.3%	0.3%		20.0%	30.0%	50.0%	0.0%		2.7%	93.5%	3.8%	0.0%		71.8%	10.3%	17.9%	0.0%		
PHF	.750	.799	.625	.250	.822	.500	.500	.625	.000	.833	.563	.963	.650	.000	.929	.583	.500	.438	.000	.609	.898

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-011 Hollis Street-Stanford Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					Stanford Avenue Westbound					Hollis Street Northbound					Stanford Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	5	100	9	1	115	3	2	8	0	13	6	115	17	0	138	21	3	8	0	32	298	1
16:15	4	95	2	0	101	1	2	4	0	7	7	151	10	0	168	28	7	2	0	37	313	0
16:30	1	86	11	0	98	4	0	2	0	6	6	133	11	0	150	27	4	9	0	40	294	0
16:45	2	86	6	0	94	4	1	1	0	6	6	158	10	0	174	22	9	5	0	36	310	0
Total	12	367	28	1	408	12	5	15	0	32	25	557	48	0	630	98	23	24	0	145	1215	1
17:00	1	124	6	0	131	4	0	7	0	11	4	171	20	0	195	26	22	9	0	57	394	0
17:15	4	113	17	0	134	3	0	7	0	10	7	173	12	0	192	27	5	10	0	42	378	0
17:30	3	108	14	1	126	1	4	2	0	7	8	153	12	0	173	33	8	8	1	50	356	2
17:45	3	94	8	0	105	4	4	2	0	10	9	161	9	0	179	20	9	10	0	39	333	0
Total	11	439	45	1	496	12	8	18	0	38	28	658	53	0	739	106	44	37	1	188	1461	2
Grand Total	23	806	73	2	904	24	13	33	0	70	53	1215	101	0	1369	204	67	61	1	333	2676	3
Apprch %	2.5%	89.2%	8.1%	0.2%		34.3%	18.6%	47.1%	0.0%		3.9%	88.8%	7.4%	0.0%		61.3%	20.1%	18.3%	0.3%			
Total %	0.9%	30.1%	2.7%	0.1%	33.8%	0.9%	0.5%	1.2%	0.0%	2.6%	2.0%	45.4%	3.8%	0.0%	51.2%	7.6%	2.5%	2.3%	0.0%	12.4%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					Stanford Avenue Westbound					Hollis Street Northbound					Stanford Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	124	6	0	131	4	0	7	0	11	4	171	20	0	195	26	22	9	0	57	394
17:15	4	113	17	0	134	3	0	7	0	10	7	173	12	0	192	27	5	10	0	42	378
17:30	3	108	14	1	126	1	4	2	0	7	8	153	12	0	173	33	8	8	1	50	356
17:45	3	94	8	0	105	4	4	2	0	10	9	161	9	0	179	20	9	10	0	39	333
Total Volume	11	439	45	1	496	12	8	18	0	38	28	658	53	0	739	106	44	37	1	188	1461
% App Total	2.2%	88.5%	9.1%	0.2%		31.6%	21.1%	47.4%	0.0%		3.8%	89.0%	7.2%	0.0%		56.4%	23.4%	19.7%	0.5%		
PHF	.688	.885	.662	.250	.925	.750	.500	.643	.000	.864	.778	.951	.663	.000	.947	.803	.500	.925	.250	.825	.927

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-012 Horton Street-53rd Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					53rd Street Westbound					Horton Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	1	15	0	0	16	0	0	0	0	0	0	25	3	1	29	0	0	0	0	0	45	1
15:15	0	12	0	0	12	0	0	2	0	2	0	21	4	0	25	0	0	0	0	0	39	0
15:30	3	18	0	1	22	1	0	1	0	2	0	16	0	0	16	0	0	0	0	0	40	1
15:45	0	14	0	0	14	0	0	1	0	1	0	12	0	0	12	0	0	0	0	0	27	0
Total	4	59	0	1	64	1	0	4	0	5	0	74	7	1	82	0	0	0	0	0	151	2
16:00	0	13	0	0	13	3	0	0	0	3	0	13	3	1	17	0	0	0	0	0	33	1
16:15	1	11	0	0	12	0	0	0	0	0	0	20	2	0	22	0	0	0	0	0	34	0
16:30	0	15	0	0	15	3	0	0	0	3	0	23	3	0	26	0	0	0	0	0	44	0
16:45	0	8	0	0	8	2	0	0	0	2	0	18	1	0	19	0	0	0	0	0	29	0
Total	1	47	0	0	48	8	0	0	0	8	0	74	9	1	84	0	0	0	0	0	140	1
Grand Total	5	106	0	1	112	9	0	4	0	13	0	148	16	2	166	0	0	0	0	0	291	3
Apprch %	4.5%	94.6%	0.0%	0.9%		69.2%	0.0%	30.8%	0.0%		0.0%	89.2%	9.6%	1.2%		0.0%	0.0%	0.0%	0.0%			
Total %	1.7%	36.4%	0.0%	0.3%	38.5%	3.1%	0.0%	1.4%	0.0%	4.5%	0.0%	50.9%	5.5%	0.7%	57.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Horton Street Southbound					53rd Street Westbound					Horton Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	15	0	0	16	0	0	0	0	0	0	25	3	1	29	0	0	0	0	0	45
15:15	0	12	0	0	12	0	0	2	0	2	0	21	4	0	25	0	0	0	0	0	39
15:30	3	18	0	1	22	1	0	1	0	2	0	16	0	0	16	0	0	0	0	0	40
15:45	0	14	0	0	14	0	0	1	0	1	0	12	0	0	12	0	0	0	0	0	27
Total Volume	4	59	0	1	64	1	0	4	0	5	0	74	7	1	82	0	0	0	0	0	151
% App Total	6.3%	92.2%	0.0%	1.6%		20.0%	0.0%	80.0%	0.0%		0.0%	90.2%	8.5%	1.2%		0.0%	0.0%	0.0%	0.0%		
PHF	.333	.819	.000	.250	.727	.250	.000	.500	.000	.625	.000	.740	.438	.250	.707	.000	.000	.000	.000	.000	.839

ALL TRAFFIC DATA

City of Emeryville
(916) 771-8700
orders@atdtraffic.com

All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

File Name : 15-7050-012 Horton Street-53rd Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					53rd Street Westbound					Horton Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	3	17	0	2	22	1	0	2	0	3	0	18	3	0	21	0	0	0	0	0	46	2
07:15	2	14	0	1	17	1	0	6	1	8	0	11	0	0	11	0	0	0	0	0	36	2
07:30	2	23	0	1	26	1	0	0	0	1	0	23	2	0	25	0	0	0	0	0	52	1
07:45	3	23	0	0	26	5	0	5	0	10	0	18	2	0	20	0	0	0	0	0	56	0
Total	10	77	0	4	91	8	0	13	1	22	0	70	7	0	77	0	0	0	0	0	190	5
08:00	3	38	0	0	41	2	0	2	0	4	0	17	6	0	23	0	0	0	0	0	68	0
08:15	3	31	0	0	34	3	0	3	0	6	0	28	5	0	33	0	0	0	0	0	73	0
08:30	3	30	0	0	33	4	0	2	0	6	0	23	5	0	28	0	0	0	0	0	67	0
08:45	2	21	0	0	23	5	0	0	0	5	0	31	1	0	32	0	0	0	0	0	60	0
Total	11	120	0	0	131	14	0	7	0	21	0	99	17	0	116	0	0	0	0	0	268	0
16:00	4	24	0	0	28	1	0	0	0	1	0	48	1	0	49	0	0	0	0	0	78	0
16:15	1	20	0	0	21	0	0	2	0	2	0	69	3	0	72	0	0	0	0	0	95	0
16:30	1	30	0	0	31	2	0	2	0	4	0	59	3	0	62	0	0	0	0	0	97	0
16:45	4	31	0	0	35	1	0	2	0	3	0	66	3	0	69	0	0	0	0	0	107	0
Total	10	105	0	0	115	4	0	6	0	10	0	242	10	0	252	0	0	0	0	0	377	0
17:00	4	33	0	0	37	4	0	1	0	5	0	87	2	0	89	0	0	0	0	0	131	0
17:15	4	51	0	0	55	4	0	3	1	8	0	87	7	0	94	0	0	0	0	0	157	1
17:30	2	35	0	0	37	6	0	4	0	10	0	80	1	0	81	0	0	0	0	0	128	0
17:45	7	30	0	1	38	5	0	2	0	7	0	56	4	0	60	0	0	0	0	0	105	1
Total	17	149	0	1	167	19	0	10	1	30	0	310	14	0	324	0	0	0	0	0	521	2
Grand Total	48	451	0	5	504	45	0	36	2	83	0	721	48	0	769	0	0	0	0	0	1356	7
Apprch %	9.5%	89.5%	0.0%	1.0%		54.2%	0.0%	43.4%	2.4%		0.0%	93.8%	6.2%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	3.5%	33.3%	0.0%	0.4%	37.2%	3.3%	0.0%	2.7%	0.1%	6.1%	0.0%	53.2%	3.5%	0.0%	56.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Horton Street Southbound					53rd Street Westbound					Horton Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	3	38	0	0	41	2	0	2	0	4	0	17	6	0	23	0	0	0	0	0	68
08:15	3	31	0	0	34	3	0	3	0	6	0	28	5	0	33	0	0	0	0	0	73
08:30	3	30	0	0	33	4	0	2	0	6	0	23	5	0	28	0	0	0	0	0	67
08:45	2	21	0	0	23	5	0	0	0	5	0	31	1	0	32	0	0	0	0	0	60
Total Volume	11	120	0	0	131	14	0	7	0	21	0	99	17	0	116	0	0	0	0	0	268
% App Total	8.4%	91.6%	0.0%	0.0%		66.7%	0.0%	33.3%	0.0%		0.0%	85.3%	14.7%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.917	.789	.000	.000	.799	.700	.000	.583	.000	.875	.000	.798	.708	.000	.879	.000	.000	.000	.000	.000	.918

PM PEAK HOUR	Horton Street Southbound					53rd Street Westbound					Horton Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	4	31	0	0	35	1	0	2	0	3	0	66	3	0	69	0	0	0	0	0	107
17:00	4	33	0	0	37	4	0	1	0	5	0	87	2	0	89	0	0	0	0	0	131
17:15	4	51	0	0	55	4	0	3	1	8	0	87	7	0	94	0	0	0	0	0	157
17:30	2	35	0	0	37	6	0	4	0	10	0	80	1	0	81	0	0	0	0	0	128
Total Volume	14	150	0	0	164	15	0	10	1	26	0	320	13	0	333	0	0	0	0	0	523
% App Total	8.5%	91.5%	0.0%	0.0%		57.7%	0.0%	38.5%	3.8%		0.0%	96.1%	3.9%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.875	.735	.000	.000	.745	.625	.000	.625	.250	.650	.000	.920	.464	.000	.886	.000	.000	.000	.000	.000	.833

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-013 Hollis Street-53rd Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					53rd Street Westbound					Hollis Street Northbound					53rd Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	17	95	0	0	112	3	0	3	0	6	0	70	3	0	73	5	1	0	0	6	197	0
15:15	7	74	0	1	82	3	0	6	0	9	2	78	7	0	87	4	0	0	0	4	182	1
15:30	8	81	1	0	90	0	1	4	0	5	0	84	3	0	87	0	2	0	0	2	184	0
15:45	5	65	0	0	70	3	0	3	0	6	1	77	4	0	82	0	0	1	0	1	159	0
Total	37	315	1	1	354	9	1	16	0	26	3	309	17	0	329	9	3	1	0	13	722	1
16:00	5	76	0	1	82	1	3	6	0	10	0	76	3	0	79	1	2	0	0	3	174	1
16:15	3	72	0	0	75	1	0	3	0	4	0	66	4	0	70	3	1	0	0	4	153	0
16:30	4	69	1	0	74	2	1	3	0	6	1	76	1	0	78	2	1	1	0	4	162	0
16:45	5	78	0	0	83	3	2	13	0	18	0	63	2	0	65	0	1	0	0	1	167	0
Total	17	295	1	1	314	7	6	25	0	38	1	281	10	0	292	6	5	1	0	12	656	1
Grand Total	54	610	2	2	668	16	7	41	0	64	4	590	27	0	621	15	8	2	0	25	1378	2
Apprch %	8.1%	91.3%	0.3%	0.3%		25.0%	10.9%	64.1%	0.0%		0.6%	95.0%	4.3%	0.0%		60.0%	32.0%	8.0%	0.0%			
Total %	3.9%	44.3%	0.1%	0.1%	48.5%	1.2%	0.5%	3.0%	0.0%	4.6%	0.3%	42.8%	2.0%	0.0%	45.1%	1.1%	0.6%	0.1%	0.0%	1.8%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					53rd Street Westbound					Hollis Street Northbound					53rd Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	17	95	0	0	112	3	0	3	0	6	0	70	3	0	73	5	1	0	0	6	197
15:15	7	74	0	1	82	3	0	6	0	9	2	78	7	0	87	4	0	0	0	4	182
15:30	8	81	1	0	90	0	1	4	0	5	0	84	3	0	87	0	2	0	0	2	184
15:45	5	65	0	0	70	3	0	3	0	6	1	77	4	0	82	0	0	1	0	1	159
Total Volume	37	315	1	1	354	9	1	16	0	26	3	309	17	0	329	9	3	1	0	13	722
% App Total	10.5%	89.0%	0.3%	0.3%		34.6%	3.8%	61.5%	0.0%		0.9%	93.9%	5.2%	0.0%		69.2%	23.1%	7.7%	0.0%		
PHF	.544	.829	.250	.250	.790	.750	.250	.667	.000	.722	.375	.920	.607	.000	.945	.450	.375	.250	.000	.542	.916

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-013 Hollis Street-53rd Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					53rd Street Westbound					Hollis Street Northbound					53rd Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	13	100	1	0	114	3	1	15	0	19	1	103	4	0	108	11	4	1	0	16	257	0
16:15	7	93	2	0	102	2	1	15	0	18	0	127	6	0	133	9	1	0	0	10	263	0
16:30	15	88	2	0	105	2	2	11	0	15	0	120	5	0	125	6	1	2	0	9	254	0
16:45	8	88	2	0	98	8	1	14	0	23	0	142	6	1	149	7	5	1	0	13	283	1
Total	43	369	7	0	419	15	5	55	0	75	1	492	21	1	515	33	11	4	0	48	1057	1
17:00	16	123	2	0	141	9	2	16	0	27	2	157	7	0	166	6	4	1	0	11	345	0
17:15	11	117	1	0	129	8	4	14	0	26	2	143	2	0	147	11	5	2	0	18	320	0
17:30	18	94	3	0	115	5	6	22	0	33	1	138	7	0	146	6	1	0	0	7	301	0
17:45	10	104	1	0	115	6	4	19	0	29	2	155	3	0	160	4	6	2	0	12	316	0
Total	55	438	7	0	500	28	16	71	0	115	7	593	19	0	619	27	16	5	0	48	1282	0
Grand Total	98	807	14	0	919	43	21	126	0	190	8	1085	40	1	1134	60	27	9	0	96	2339	1
Apprch %	10.7%	87.8%	1.5%	0.0%		22.6%	11.1%	66.3%	0.0%		0.7%	95.7%	3.5%	0.1%		62.5%	28.1%	9.4%	0.0%			
Total %	4.2%	34.5%	0.6%	0.0%	39.3%	1.8%	0.9%	5.4%	0.0%	8.1%	0.3%	46.4%	1.7%	0.0%	48.5%	2.6%	1.2%	0.4%	0.0%	4.1%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					53rd Street Westbound					Hollis Street Northbound					53rd Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	16	123	2	0	141	9	2	16	0	27	2	157	7	0	166	6	4	1	0	11	345
17:15	11	117	1	0	129	8	4	14	0	26	2	143	2	0	147	11	5	2	0	18	320
17:30	18	94	3	0	115	5	6	22	0	33	1	138	7	0	146	6	1	0	0	7	301
17:45	10	104	1	0	115	6	4	19	0	29	2	155	3	0	160	4	6	2	0	12	316
Total Volume	55	438	7	0	500	28	16	71	0	115	7	593	19	0	619	27	16	5	0	48	1282
% App Total	11.0%	87.6%	1.4%	0.0%		24.3%	13.9%	61.7%	0.0%		1.1%	95.8%	3.1%	0.0%		56.3%	33.3%	10.4%	0.0%		
PHF	.764	.890	.583	.000	.887	.778	.667	.807	.000	.871	.875	.944	.679	.000	.932	.614	.667	.625	.000	.667	.929

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-014 Horton Street-Future Project Roadway.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Driveway Westbound					Horton Street Northbound					Future Project Roadway Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	1	18	0	0	19	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	47	0
15:15	0	12	0	0	12	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	37	0
15:30	0	17	0	0	17	0	0	0	0	0	0	16	1	0	17	0	0	0	0	0	34	0
15:45	0	15	0	0	15	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	28	0
Total	1	62	0	0	63	0	0	0	0	0	0	82	1	0	83	0	0	0	0	0	146	0
16:00	0	15	0	0	15	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	32	0
16:15	0	12	0	0	12	0	0	1	0	1	0	22	0	0	22	0	0	0	0	0	35	0
16:30	0	17	0	0	17	1	0	0	0	1	0	30	0	0	30	0	0	0	0	0	48	0
16:45	0	11	0	0	11	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	28	0
Total	0	55	0	0	55	1	0	1	0	2	0	86	0	0	86	0	0	0	0	0	143	0
Grand Total	1	117	0	0	118	1	0	1	0	2	0	168	1	0	169	0	0	0	0	0	289	0
Apprch %	0.8%	99.2%	0.0%	0.0%		50.0%	0.0%	50.0%	0.0%		0.0%	99.4%	0.6%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.3%	40.5%	0.0%	0.0%	40.8%	0.3%	0.0%	0.3%	0.0%	0.7%	0.0%	58.1%	0.3%	0.0%	58.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Horton Street Southbound					Driveway Westbound					Horton Street Northbound					Future Project Roadway Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	18	0	0	19	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	47
15:15	0	12	0	0	12	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	37
15:30	0	17	0	0	17	0	0	0	0	0	0	16	1	0	17	0	0	0	0	0	34
15:45	0	15	0	0	15	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	28
Total Volume	1	62	0	0	63	0	0	0	0	0	0	82	1	0	83	0	0	0	0	0	146
% App Total	1.6%	98.4%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	98.8%	1.2%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.250	.861	.000	.000	.829	.000	.000	.000	.000	.000	.000	.732	.250	.000	.741	.000	.000	.000	.000	.000	.777

ALL TRAFFIC DATA

City of Emeryville
(916) 771-8700
orders@atdtraffic.com

All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

File Name : 15-7050-014 Horton Street-Future Project Roadway.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Driveway Westbound					Horton Street Northbound					Future Project Roadway Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	16	0	0	16	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	38	0
07:15	0	9	0	0	9	0	0	0	0	0	0	19	0	1	20	0	0	0	0	0	29	1
07:30	0	15	0	0	15	0	0	0	0	0	0	28	1	0	29	0	0	0	0	0	44	0
07:45	1	20	0	0	21	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	53	0
Total	1	60	0	0	61	0	0	0	0	0	0	101	1	1	103	0	0	0	0	0	164	1
08:00	0	32	0	0	32	0	0	1	0	1	0	28	0	0	28	0	0	0	0	0	61	0
08:15	0	30	0	0	30	0	0	1	0	1	0	40	0	0	40	0	0	0	0	0	71	0
08:30	0	25	0	0	25	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	57	0
08:45	0	22	0	0	22	0	0	1	0	1	0	39	0	0	39	0	0	0	0	0	62	0
Total	0	109	0	0	109	0	0	3	0	3	0	139	0	0	139	0	0	0	0	0	251	0
16:00	0	30	0	0	30	0	0	0	0	0	0	43	0	0	43	0	0	0	0	0	73	0
16:15	0	26	0	0	26	0	0	0	0	0	0	61	0	0	61	0	0	0	0	0	87	0
16:30	0	40	0	0	40	0	0	0	0	0	0	58	0	0	58	0	0	0	0	0	98	0
16:45	0	43	0	0	43	0	0	0	0	0	0	60	0	0	60	0	0	0	0	0	103	0
Total	0	139	0	0	139	0	0	0	0	0	0	222	0	0	222	0	0	0	0	0	361	0
17:00	0	49	0	0	49	0	0	0	0	0	0	80	0	0	80	0	0	0	0	0	129	0
17:15	0	55	0	0	55	0	0	1	0	1	0	90	0	0	90	0	0	0	0	0	146	0
17:30	0	51	0	0	51	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	129	0
17:45	1	41	0	0	42	0	0	2	0	2	0	53	0	0	53	0	0	0	0	0	97	0
Total	1	196	0	0	197	0	0	3	0	3	0	301	0	0	301	0	0	0	0	0	501	0
Grand Total	2	504	0	0	506	0	0	6	0	6	0	763	1	1	765	0	0	0	0	0	1277	1
Apprch %	0.4%	99.6%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	99.7%	0.1%	0.1%		0.0%	0.0%	0.0%	0.0%			
Total %	0.2%	39.5%	0.0%	0.0%	39.6%	0.0%	0.0%	0.5%	0.0%	0.5%	0.0%	59.7%	0.1%	0.1%	59.9%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Horton Street Southbound					Driveway Westbound					Horton Street Northbound					Future Project Roadway Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	32	0	0	32	0	0	1	0	1	0	28	0	0	28	0	0	0	0	0	61
08:15	0	30	0	0	30	0	0	1	0	1	0	40	0	0	40	0	0	0	0	0	71
08:30	0	25	0	0	25	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	57
08:45	0	22	0	0	22	0	0	1	0	1	0	39	0	0	39	0	0	0	0	0	62
Total Volume	0	109	0	0	109	0	0	3	0	3	0	139	0	0	139	0	0	0	0	0	251
% App Total	0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.852	.000	.000	.852	.000	.000	.750	.000	.750	.000	.869	.000	.000	.869	.000	.000	.000	.000	.000	.884

PM PEAK HOUR	Horton Street Southbound					Driveway Westbound					Horton Street Northbound					Future Project Roadway Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	43	0	0	43	0	0	0	0	0	0	60	0	0	60	0	0	0	0	0	103
17:00	0	49	0	0	49	0	0	0	0	0	0	80	0	0	80	0	0	0	0	0	129
17:15	0	55	0	0	55	0	0	1	0	1	0	90	0	0	90	0	0	0	0	0	146
17:30	0	51	0	0	51	0	0	0	0	0	0	78	0	0	78	0	0	0	0	0	129
Total Volume	0	198	0	0	198	0	0	1	0	1	0	308	0	0	308	0	0	0	0	0	507
% App Total	0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.900	.000	.000	.900	.000	.000	.250	.000	.250	.000	.856	.000	.000	.856	.000	.000	.000	.000	.000	.868

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-015 Horton Street-45th Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					45th Street Westbound					Horton Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	20	0	0	20	3	0	0	0	3	0	28	11	0	39	0	0	0	0	0	62	0
15:15	0	11	0	0	11	4	0	1	0	5	0	24	7	0	31	0	0	0	0	0	47	0
15:30	3	15	0	0	18	3	0	0	0	3	0	17	5	1	23	0	0	0	0	0	44	1
15:45	0	15	0	0	15	1	0	1	0	2	0	12	3	0	15	0	0	0	0	0	32	0
Total	3	61	0	0	64	11	0	2	0	13	0	81	26	1	108	0	0	0	0	0	185	1
16:00	0	14	0	0	14	0	0	0	0	0	0	18	3	1	22	0	0	0	0	0	36	1
16:15	2	11	0	0	13	1	0	3	0	4	0	20	1	0	21	0	0	0	0	0	38	0
16:30	3	15	0	0	18	3	0	2	0	5	0	25	5	0	30	0	0	0	0	0	53	0
16:45	2	9	0	0	11	3	0	1	0	4	0	15	3	0	18	0	0	0	0	0	33	0
Total	7	49	0	0	56	7	0	6	0	13	0	78	12	1	91	0	0	0	0	0	160	1
Grand Total	10	110	0	0	120	18	0	8	0	26	0	159	38	2	199	0	0	0	0	0	345	2
Apprch %	8.3%	91.7%	0.0%	0.0%		69.2%	0.0%	30.8%	0.0%		0.0%	79.9%	19.1%	1.0%		0.0%	0.0%	0.0%	0.0%			
Total %	2.9%	31.9%	0.0%	0.0%	34.8%	5.2%	0.0%	2.3%	0.0%	7.5%	0.0%	46.1%	11.0%	0.6%	57.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Horton Street Southbound					45th Street Westbound					Horton Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	20	0	0	20	3	0	0	0	3	0	28	11	0	39	0	0	0	0	0	62
15:15	0	11	0	0	11	4	0	1	0	5	0	24	7	0	31	0	0	0	0	0	47
15:30	3	15	0	0	18	3	0	0	0	3	0	17	5	1	23	0	0	0	0	0	44
15:45	0	15	0	0	15	1	0	1	0	2	0	12	3	0	15	0	0	0	0	0	32
Total Volume	3	61	0	0	64	11	0	2	0	13	0	81	26	1	108	0	0	0	0	0	185
% App Total	4.7%	95.3%	0.0%	0.0%		84.6%	0.0%	15.4%	0.0%		0.0%	75.0%	24.1%	0.9%		0.0%	0.0%	0.0%	0.0%		
PHF	.250	.763	.000	.000	.800	.688	.000	.500	.000	.650	.000	.723	.591	.250	.692	.000	.000	.000	.000	.000	.746

ALL TRAFFIC DATA

City of Emeryville
(916) 771-8700
orders@atdtraffic.com

All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

File Name : 15-7050-015 Horton Street-45th Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					45th Street Westbound					Horton Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	4	11	0	0	15	2	0	6	0	8	0	15	2	0	17	0	0	0	0	0	40	0
07:15	0	10	0	0	10	3	0	4	0	7	0	16	1	0	17	0	0	0	0	0	34	0
07:30	2	13	0	0	15	4	0	4	0	8	0	23	4	1	28	0	0	0	0	0	51	1
07:45	1	18	0	0	19	3	0	9	0	12	0	24	3	0	27	0	0	0	0	0	58	0
Total	7	52	0	0	59	12	0	23	0	35	0	78	10	1	89	0	0	0	0	0	183	1
08:00	1	32	0	0	33	5	0	2	0	7	0	27	5	0	32	0	0	0	0	0	72	0
08:15	2	29	0	0	31	7	0	7	0	14	0	32	5	0	37	0	0	0	0	0	82	0
08:30	4	19	0	0	23	3	0	3	0	6	0	32	10	0	42	0	0	0	0	0	71	0
08:45	3	22	0	0	25	5	0	9	0	14	0	30	6	0	36	0	0	0	0	0	75	0
Total	10	102	0	0	112	20	0	21	0	41	0	121	26	0	147	0	0	0	0	0	300	0
16:00	3	27	0	0	30	5	0	5	0	10	0	39	11	1	51	0	0	0	0	0	91	1
16:15	8	18	0	0	26	7	0	3	0	10	0	58	4	0	62	0	0	0	0	0	98	0
16:30	3	39	0	0	42	10	0	3	0	13	0	56	9	0	65	0	0	0	0	0	120	0
16:45	8	36	0	0	44	5	0	7	1	13	0	53	4	0	57	0	0	0	0	0	114	1
Total	22	120	0	0	142	27	0	18	1	46	0	206	28	1	235	0	0	0	0	0	423	2
17:00	8	43	0	0	51	6	0	6	0	12	0	75	14	0	89	0	0	0	0	0	152	0
17:15	5	50	0	0	55	8	0	6	0	14	0	81	4	0	85	0	0	0	0	0	154	0
17:30	7	44	0	0	51	9	0	2	0	11	0	78	11	0	89	0	0	0	0	0	151	0
17:45	3	38	0	0	41	8	0	3	0	11	0	51	5	0	56	0	0	0	0	0	108	0
Total	23	175	0	0	198	31	0	17	0	48	0	285	34	0	319	0	0	0	0	0	565	0
Grand Total	62	449	0	0	511	90	0	79	1	170	0	690	98	2	790	0	0	0	0	0	1471	3
Apprch %	12.1%	87.9%	0.0%	0.0%		52.9%	0.0%	46.5%	0.6%		0.0%	87.3%	12.4%	0.3%		0.0%	0.0%	0.0%	0.0%			
Total %	4.2%	30.5%	0.0%	0.0%	34.7%	6.1%	0.0%	5.4%	0.1%	11.6%	0.0%	46.9%	6.7%	0.1%	53.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Horton Street Southbound					45th Street Westbound					Horton Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	1	32	0	0	33	5	0	2	0	7	0	27	5	0	32	0	0	0	0	0	72
08:15	2	29	0	0	31	7	0	7	0	14	0	32	5	0	37	0	0	0	0	0	82
08:30	4	19	0	0	23	3	0	3	0	6	0	32	10	0	42	0	0	0	0	0	71
08:45	3	22	0	0	25	5	0	9	0	14	0	30	6	0	36	0	0	0	0	0	75
Total Volume	10	102	0	0	112	20	0	21	0	41	0	121	26	0	147	0	0	0	0	0	300
% App Total	8.9%	91.1%	0.0%	0.0%		48.8%	0.0%	51.2%	0.0%		0.0%	82.3%	17.7%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.625	.797	.000	.000	.848	.714	.000	.583	.000	.732	.000	.945	.650	.000	.875	.000	.000	.000	.000	.000	.915

PM PEAK HOUR	Horton Street Southbound					45th Street Westbound					Horton Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	8	36	0	0	44	5	0	7	1	13	0	53	4	0	57	0	0	0	0	0	114
17:00	8	43	0	0	51	6	0	6	0	12	0	75	14	0	89	0	0	0	0	0	152
17:15	5	50	0	0	55	8	0	6	0	14	0	81	4	0	85	0	0	0	0	0	154
17:30	7	44	0	0	51	9	0	2	0	11	0	78	11	0	89	0	0	0	0	0	151
Total Volume	28	173	0	0	201	28	0	21	1	50	0	287	33	0	320	0	0	0	0	0	571
% App Total	13.9%	86.1%	0.0%	0.0%		56.0%	0.0%	42.0%	2.0%		0.0%	89.7%	10.3%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.875	.865	.000	.000	.914	.778	.000	.750	.250	.893	.000	.886	.589	.000	.899	.000	.000	.000	.000	.000	.927

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-016 Hollis Street-45th Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					45th Street Westbound					Hollis Street Northbound					45th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	11	95	2	0	108	7	2	7	0	16	1	58	2	0	61	8	2	0	0	10	195	0
15:15	4	73	2	0	79	3	3	8	0	14	2	76	3	0	81	5	2	0	0	7	181	0
15:30	8	71	2	0	81	3	0	5	0	8	1	79	7	0	87	4	3	1	0	8	184	0
15:45	4	60	1	1	66	2	1	6	0	9	0	73	3	0	76	2	3	0	0	5	156	1
Total	27	299	7	1	334	15	6	26	0	47	4	286	15	0	305	19	10	1	0	30	716	1
16:00	7	72	0	0	79	2	0	4	0	6	0	72	2	0	74	2	0	1	0	3	162	0
16:15	6	68	2	0	76	0	2	4	0	6	0	63	2	0	65	3	4	0	0	7	154	0
16:30	3	66	3	0	72	4	2	7	0	13	0	62	1	0	63	3	4	1	0	8	156	0
16:45	2	72	0	0	74	4	2	2	0	8	2	62	2	0	66	3	4	0	0	7	155	0
Total	18	278	5	0	301	10	6	17	0	33	2	259	7	0	268	11	12	2	0	25	627	0
Grand Total	45	577	12	1	635	25	12	43	0	80	6	545	22	0	573	30	22	3	0	55	1343	1
Apprch %	7.1%	90.9%	1.9%	0.2%		31.3%	15.0%	53.8%	0.0%		1.0%	95.1%	3.8%	0.0%		54.5%	40.0%	5.5%	0.0%			
Total %	3.4%	43.0%	0.9%	0.1%	47.3%	1.9%	0.9%	3.2%	0.0%	6.0%	0.4%	40.6%	1.6%	0.0%	42.7%	2.2%	1.6%	0.2%	0.0%	4.1%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					45th Street Westbound					Hollis Street Northbound					45th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	11	95	2	0	108	7	2	7	0	16	1	58	2	0	61	8	2	0	0	10	195
15:15	4	73	2	0	79	3	3	8	0	14	2	76	3	0	81	5	2	0	0	7	181
15:30	8	71	2	0	81	3	0	5	0	8	1	79	7	0	87	4	3	1	0	8	184
15:45	4	60	1	1	66	2	1	6	0	9	0	73	3	0	76	2	3	0	0	5	156
Total Volume	27	299	7	1	334	15	6	26	0	47	4	286	15	0	305	19	10	1	0	30	716
% App Total	8.1%	89.5%	2.1%	0.3%		31.9%	12.8%	55.3%	0.0%		1.3%	93.8%	4.9%	0.0%		63.3%	33.3%	3.3%	0.0%		
PHF	.614	.787	.875	.250	.773	.536	.500	.813	.000	.734	.500	.905	.536	.000	.876	.594	.833	.250	.000	.750	.918

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-016 Hollis Street-45th Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					45th Street Westbound					Hollis Street Northbound					45th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	12	86	1	0	99	4	8	16	0	28	0	83	5	0	88	6	5	1	0	12	227	0
16:15	5	91	4	0	100	3	8	11	0	22	1	110	4	0	115	10	6	1	0	17	254	0
16:30	8	85	3	0	96	9	8	5	0	22	2	118	4	0	124	6	8	1	0	15	257	0
16:45	9	83	1	0	93	12	7	5	0	24	3	129	4	0	136	5	9	2	0	16	269	0
Total	34	345	9	0	388	28	31	37	0	96	6	440	17	0	463	27	28	5	0	60	1007	0
17:00	13	115	0	0	128	6	8	18	0	32	4	136	6	0	146	10	13	1	0	24	330	0
17:15	14	115	1	0	130	10	6	11	0	27	4	134	4	0	142	3	6	4	0	13	312	0
17:30	13	84	0	0	97	7	8	10	0	25	0	127	8	0	135	12	6	3	0	21	278	0
17:45	10	99	5	0	114	4	3	7	0	14	0	139	6	0	145	7	9	4	0	20	293	0
Total	50	413	6	0	469	27	25	46	0	98	8	536	24	0	568	32	34	12	0	78	1213	0
Grand Total	84	758	15	0	857	55	56	83	0	194	14	976	41	0	1031	59	62	17	0	138	2220	0
Apprch %	9.8%	88.4%	1.8%	0.0%		28.4%	28.9%	42.8%	0.0%		1.4%	94.7%	4.0%	0.0%		42.8%	44.9%	12.3%	0.0%			
Total %	3.8%	34.1%	0.7%	0.0%	38.6%	2.5%	2.5%	3.7%	0.0%	8.7%	0.6%	44.0%	1.8%	0.0%	46.4%	2.7%	2.8%	0.8%	0.0%	6.2%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					45th Street Westbound					Hollis Street Northbound					45th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	13	115	0	0	128	6	8	18	0	32	4	136	6	0	146	10	13	1	0	24	330
17:15	14	115	1	0	130	10	6	11	0	27	4	134	4	0	142	3	6	4	0	13	312
17:30	13	84	0	0	97	7	8	10	0	25	0	127	8	0	135	12	6	3	0	21	278
17:45	10	99	5	0	114	4	3	7	0	14	0	139	6	0	145	7	9	4	0	20	293
Total Volume	50	413	6	0	469	27	25	46	0	98	8	536	24	0	568	32	34	12	0	78	1213
% App Total	10.7%	88.1%	1.3%	0.0%		27.6%	25.5%	46.9%	0.0%		1.4%	94.4%	4.2%	0.0%		41.0%	43.6%	15.4%	0.0%		
PHF	.893	.898	.300	.000	.902	.675	.781	.639	.000	.766	.500	.964	.750	.000	.973	.667	.654	.750	.000	.813	.919

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-017 Halleck Street-Sherwin Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Southbound					Sherwin Avenue Westbound					Halleck Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	0	0	0	0	3	0	0	0	3	0	0	9	0	9	0	0	0	0	0	12	0
15:15	0	0	0	0	0	4	0	0	0	4	0	0	2	0	2	0	0	0	0	0	6	0
15:30	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5	0
15:45	0	0	0	0	0	4	0	0	0	4	0	0	3	0	3	0	0	0	0	0	7	0
Total	0	0	0	0	0	14	0	0	0	14	0	0	16	0	16	0	0	0	0	0	30	0
16:00	0	0	0	0	0	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	3	0
16:15	0	0	0	0	0	3	0	0	0	3	0	0	6	0	6	0	0	0	0	0	9	0
16:30	0	0	0	0	0	2	0	0	0	2	0	0	4	0	4	0	0	0	0	0	6	0
16:45	0	0	0	0	0	3	0	0	0	3	0	0	4	0	4	0	0	0	0	0	7	0
Total	0	0	0	0	0	9	0	0	0	9	0	0	16	0	16	0	0	0	0	0	25	0
Grand Total	0	0	0	0	0	23	0	0	0	23	0	0	32	0	32	0	0	0	0	0	55	0
Apprch %	0.0%	0.0%	0.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	41.8%	0.0%	0.0%	0.0%	41.8%	0.0%	0.0%	58.2%	0.0%	58.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

PM PEAK HOUR	Southbound					Sherwin Avenue Westbound					Halleck Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	0	0	3	0	0	0	3	0	0	9	0	9	0	0	0	0	0	12
15:15	0	0	0	0	0	4	0	0	0	4	0	0	2	0	2	0	0	0	0	0	6
15:30	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5
15:45	0	0	0	0	0	4	0	0	0	4	0	0	3	0	3	0	0	0	0	0	7
Total Volume	0	0	0	0	0	14	0	0	0	14	0	0	16	0	16	0	0	0	0	0	30
% App Total	0.0%	0.0%	0.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.875	.000	.000	.000	.875	.000	.000	.444	.000	.444	.000	.000	.000	.000	.000	.625

ALL TRAFFIC DATA

City of Emeryville
(916) 771-8700
orders@atdtraffic.com

All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

File Name : 15-7050-017 Halleck Street-Sherwin Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Southbound					Sherwin Avenue Westbound					Halleck Street Northbound					Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	0	0	0	0	2	0	0	0	2	0	0	3	0	3	0	0	0	0	0	5	0
07:15	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2	0
07:30	0	0	0	0	0	1	0	0	1	2	0	0	2	0	2	0	0	0	0	0	4	1
07:45	0	0	0	0	0	4	0	0	0	4	0	0	3	0	3	0	0	0	0	0	7	0
Total	0	0	0	0	0	8	0	0	1	9	0	0	9	0	9	0	0	0	0	0	18	1
08:00	0	0	0	0	0	3	0	0	0	3	0	0	3	0	3	0	0	0	0	0	6	0
08:15	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5	0
08:30	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5	0
08:45	0	0	0	0	0	3	0	0	0	3	0	0	3	0	3	0	0	0	0	0	6	0
Total	0	0	0	0	0	12	0	0	0	12	0	0	10	0	10	0	0	0	0	0	22	0
16:00	0	0	0	0	0	9	0	0	0	9	0	0	4	0	4	0	0	0	0	0	13	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	8	0
16:30	0	0	0	0	0	4	0	0	0	4	0	0	10	0	10	0	0	0	0	0	14	0
16:45	0	0	0	0	0	3	0	0	1	4	0	0	3	0	3	0	0	0	0	0	7	1
Total	0	0	0	0	0	16	0	0	1	17	0	0	25	0	25	0	0	0	0	0	42	1
17:00	0	0	0	0	0	8	0	0	0	8	0	0	3	0	3	0	0	0	0	0	11	0
17:15	0	0	0	0	0	5	0	0	1	6	0	0	4	0	4	0	0	0	0	0	10	1
17:30	0	0	0	0	0	6	0	0	0	6	0	0	7	0	7	0	0	0	0	0	13	0
17:45	0	0	0	0	0	8	0	0	0	8	0	0	4	0	4	0	0	0	0	0	12	0
Total	0	0	0	0	0	27	0	0	1	28	0	0	18	0	18	0	0	0	0	0	46	1
Grand Total	0	0	0	0	0	63	0	0	3	66	0	0	62	0	62	0	0	0	0	0	128	3
Apprch %	0.0%	0.0%	0.0%	0.0%		95.5%	0.0%	0.0%	4.5%		0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	49.2%	0.0%	0.0%	2.3%	51.6%	0.0%	0.0%	48.4%	0.0%	48.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Southbound					Sherwin Avenue Westbound					Halleck Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	0	0	0	0	0	4	0	0	0	4	0	0	3	0	3	0	0	0	0	0	7
08:00	0	0	0	0	0	3	0	0	0	3	0	0	3	0	3	0	0	0	0	0	6
08:15	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5
08:30	0	0	0	0	0	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	5
Total Volume	0	0	0	0	0	13	0	0	0	13	0	0	10	0	10	0	0	0	0	0	23
% App Total	0.0%	0.0%	0.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.813	.000	.000	.000	.813	.000	.000	.833	.000	.833	.000	.000	.000	.000	.000	.821

PM PEAK HOUR	Southbound					Sherwin Avenue Westbound					Halleck Street Northbound					Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	8	0	0	0	8	0	0	3	0	3	0	0	0	0	0	11
17:15	0	0	0	0	0	5	0	0	1	6	0	0	4	0	4	0	0	0	0	0	10
17:30	0	0	0	0	0	6	0	0	0	6	0	0	7	0	7	0	0	0	0	0	13
17:45	0	0	0	0	0	8	0	0	0	8	0	0	4	0	4	0	0	0	0	0	12
Total Volume	0	0	0	0	0	27	0	0	1	28	0	0	18	0	18	0	0	0	0	0	46
% App Total	0.0%	0.0%	0.0%	0.0%		96.4%	0.0%	0.0%	3.6%		0.0%	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.844	.000	.000	.250	.875	.000	.000	.643	.000	.643	.000	.000	.000	.000	.000	.885

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-018 Hubbard Street-Future Project Roadway-Sher
Date : 1/31/2015

Unshifted Count = All Vehicles

	Future Project Roadway Southbound					Sherwin Avenue Westbound					Hubbard Street Northbound					Sherwin Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	0	0	0	0	0	3	0	0	3	2	0	2	0	4	0	10	0	0	10	17	0
15:15	0	0	0	0	0	1	3	0	0	4	1	0	2	0	3	0	1	0	0	1	8	0
15:30	0	0	0	0	0	3	3	0	0	6	0	0	1	0	1	0	2	1	1	4	11	1
15:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	0
Total	0	0	0	0	0	4	11	0	0	15	3	0	5	0	8	0	16	1	1	18	41	1
16:00	0	0	0	0	0	3	0	0	0	3	3	0	1	0	4	0	3	0	0	3	10	0
16:15	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7	0
16:30	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	0	4	1	0	5	10	0
16:45	0	0	0	0	0	0	5	0	1	6	1	0	0	1	2	0	3	0	1	4	12	3
Total	0	0	0	0	0	3	11	0	1	15	4	0	3	1	8	0	14	1	1	16	39	3
Grand Total	0	0	0	0	0	7	22	0	1	30	7	0	8	1	16	0	30	2	2	34	80	4
Apprch %	0.0%	0.0%	0.0%	0.0%		23.3%	73.3%	0.0%	3.3%		43.8%	0.0%	50.0%	6.3%		0.0%	88.2%	5.9%	5.9%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	27.5%	0.0%	1.3%	37.5%	8.8%	0.0%	10.0%	1.3%	20.0%	0.0%	37.5%	2.5%	2.5%	42.5%	100.0%	

PM PEAK HOUR	Future Project Roadway Southbound					Sherwin Avenue Westbound					Hubbard Street Northbound					Sherwin Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	0	0	0	3	0	0	3	2	0	2	0	4	0	10	0	0	10	17
15:15	0	0	0	0	0	1	3	0	0	4	1	0	2	0	3	0	1	0	0	1	8
15:30	0	0	0	0	0	3	3	0	0	6	0	0	1	0	1	0	2	1	1	4	11
15:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
Total Volume	0	0	0	0	0	4	11	0	0	15	3	0	5	0	8	0	16	1	1	18	41
% App Total	0.0%	0.0%	0.0%	0.0%		26.7%	73.3%	0.0%	0.0%		37.5%	0.0%	62.5%	0.0%		0.0%	88.9%	5.6%	5.6%		
PHF	.000	.000	.000	.000	.000	.333	.917	.000	.000	.625	.375	.000	.625	.000	.500	.000	.400	.250	.250	.450	.603

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-018 Hubbard Street-Future Project Roadway-Sher
Date : 1/29/2015

Unshifted Count = All Vehicles

	Future Project Roadway Southbound					Sherwin Avenue Westbound					Hubbard Street Northbound					Sherwin Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	4	0	0	4	8	0
07:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2	0
07:30	0	0	0	0	0	2	1	0	0	3	1	0	1	0	2	0	3	0	0	3	8	0
07:45	0	0	0	0	0	0	5	0	0	5	0	0	4	0	4	0	4	1	0	5	14	0
Total	0	0	0	0	0	3	9	0	0	12	2	0	5	0	7	0	12	1	0	13	32	0
08:00	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	3	0	0	3	9	0
08:15	0	0	0	0	0	4	6	0	0	10	0	0	4	0	4	0	1	2	0	3	17	0
08:30	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	2	0	0	2	6	0
08:45	0	0	0	0	0	2	3	0	0	5	1	0	2	0	3	0	2	0	0	2	10	0
Total	0	0	0	0	0	11	14	0	0	25	1	0	6	0	7	0	8	2	0	10	42	0
16:00	0	0	0	0	0	2	9	0	0	11	0	0	3	0	3	0	4	0	0	4	18	0
16:15	0	0	0	0	0	2	0	0	0	2	0	0	1	0	1	0	9	1	0	10	13	0
16:30	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	9	1	0	10	13	0
16:45	0	0	0	0	0	2	4	0	0	6	0	0	2	0	2	0	3	0	0	3	11	0
Total	0	0	0	0	0	6	16	0	0	22	0	0	6	0	6	0	25	2	0	27	55	0
17:00	0	0	0	0	0	1	4	0	0	5	4	0	3	0	7	0	4	1	0	5	17	0
17:15	0	0	0	0	0	0	5	0	0	5	2	0	0	0	2	0	7	0	0	7	14	0
17:30	0	0	0	0	0	1	7	0	3	11	0	0	2	0	2	0	8	1	0	9	22	3
17:45	0	0	0	0	0	0	7	0	0	7	1	0	1	0	2	0	5	0	0	5	14	0
Total	0	0	0	0	0	2	23	0	3	28	7	0	6	0	13	0	24	2	0	26	67	3
Grand Total	0	0	0	0	0	22	62	0	3	87	10	0	23	0	33	0	69	7	0	76	196	3
Apprch %	0.0%	0.0%	0.0%	0.0%		25.3%	71.3%	0.0%	3.4%		30.3%	0.0%	69.7%	0.0%		0.0%	90.8%	9.2%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	11.2%	31.6%	0.0%	1.5%	44.4%	5.1%	0.0%	11.7%	0.0%	16.8%	0.0%	35.2%	3.6%	0.0%	38.8%	100.0%	

AM PEAK HOUR	Future Project Roadway Southbound					Sherwin Avenue Westbound					Hubbard Street Northbound					Sherwin Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
07:30	0	0	0	0	0	2	1	0	0	3	1	0	1	0	2	0	3	0	0	3	8
07:45	0	0	0	0	0	0	5	0	0	5	0	0	4	0	4	0	4	1	0	5	14
08:00	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	3	0	0	3	9
08:15	0	0	0	0	0	4	6	0	0	10	0	0	4	0	4	0	1	2	0	3	17
Total Volume	0	0	0	0	0	9	15	0	0	24	1	0	9	0	10	0	11	3	0	14	48
% App Total	0.0%	0.0%	0.0%	0.0%		37.5%	62.5%	0.0%	0.0%		10.0%	0.0%	90.0%	0.0%		0.0%	78.6%	21.4%	0.0%		
PHF	.000	.000	.000	.000	.000	.563	.625	.000	.000	.600	.250	.000	.563	.000	.625	.000	.688	.375	.000	.700	.706

PM PEAK HOUR	Future Project Roadway Southbound					Sherwin Avenue Westbound					Hubbard Street Northbound					Sherwin Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	1	4	0	0	5	4	0	3	0	7	0	4	1	0	5	17
17:15	0	0	0	0	0	0	5	0	0	5	2	0	0	0	2	0	7	0	0	7	14
17:30	0	0	0	0	0	1	7	0	3	11	0	0	2	0	2	0	8	1	0	9	22
17:45	0	0	0	0	0	0	7	0	0	7	1	0	1	0	2	0	5	0	0	5	14
Total Volume	0	0	0	0	0	2	23	0	3	28	7	0	6	0	13	0	24	2	0	26	67
% App Total	0.0%	0.0%	0.0%	0.0%		7.1%	82.1%	0.0%	10.7%		53.8%	0.0%	46.2%	0.0%		0.0%	92.3%	7.7%	0.0%		
PHF	.000	.000	.000	.000	.000	.500	.821	.000	.250	.636	.438	.000	.500	.000	.464	.000	.750	.500	.000	.722	.761

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-019 Horton Street-Sherwin Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Westbound					Horton Street Northbound					Sherwin Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	17	4	0	21	0	0	0	0	0	1	28	0	0	29	11	0	4	0	15	65	0
15:15	0	10	4	0	14	0	0	0	0	0	0	26	0	0	26	1	0	2	0	3	43	0
15:30	0	14	6	0	20	0	0	0	0	0	1	20	0	1	22	2	0	1	0	3	45	1
15:45	0	14	2	0	16	0	0	0	0	0	0	11	0	0	11	4	0	0	0	4	31	0
Total	0	55	16	0	71	0	0	0	0	0	2	85	0	1	88	18	0	7	0	25	184	1
16:00	0	11	3	0	14	0	0	0	0	0	2	18	0	0	20	2	0	3	0	5	39	0
16:15	0	10	3	0	13	0	0	0	0	0	0	17	0	0	17	4	0	0	0	4	34	0
16:30	0	15	3	0	18	0	0	0	0	0	0	25	0	0	25	6	0	0	0	6	49	0
16:45	0	7	5	0	12	0	0	0	0	0	1	15	0	0	16	3	0	0	0	3	31	0
Total	0	43	14	0	57	0	0	0	0	0	3	75	0	0	78	15	0	3	0	18	153	0
Grand Total	0	98	30	0	128	0	0	0	0	0	5	160	0	1	166	33	0	10	0	43	337	1
Apprch %	0.0%	76.6%	23.4%	0.0%		0.0%	0.0%	0.0%	0.0%		3.0%	96.4%	0.0%	0.6%		76.7%	0.0%	23.3%	0.0%			
Total %	0.0%	29.1%	8.9%	0.0%	38.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	47.5%	0.0%	0.3%	49.3%	9.8%	0.0%	3.0%	0.0%	12.8%	100.0%	

PM PEAK HOUR	Horton Street Southbound					Westbound					Horton Street Northbound					Sherwin Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	17	4	0	21	0	0	0	0	0	1	28	0	0	29	11	0	4	0	15	65
15:15	0	10	4	0	14	0	0	0	0	0	0	26	0	0	26	1	0	2	0	3	43
15:30	0	14	6	0	20	0	0	0	0	0	1	20	0	1	22	2	0	1	0	3	45
15:45	0	14	2	0	16	0	0	0	0	0	0	11	0	0	11	4	0	0	0	4	31
Total Volume	0	55	16	0	71	0	0	0	0	0	2	85	0	1	88	18	0	7	0	25	184
% App Total	0.0%	77.5%	22.5%	0.0%		0.0%	0.0%	0.0%	0.0%		2.3%	96.6%	0.0%	1.1%		72.0%	0.0%	28.0%	0.0%		
PHF	.000	.809	.667	.000	.845	.000	.000	.000	.000	.000	.500	.759	.000	.250	.759	.409	.000	.438	.000	.417	.708

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-019 Horton Street-Sherwin Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Westbound					Horton Street Northbound					Sherwin Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	0	13	2	0	15	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	30	0
07:15	0	10	2	0	12	0	0	0	0	0	3	15	0	0	18	2	0	1	0	3	33	0
07:30	0	17	2	0	19	0	0	0	0	0	1	23	0	0	24	4	0	1	0	5	48	0
07:45	0	18	2	0	20	0	0	0	0	0	2	29	0	0	31	1	0	1	0	2	53	0
Total	0	58	8	0	66	0	0	0	0	0	6	82	0	0	88	7	0	3	0	10	164	0
08:00	0	25	8	0	33	0	0	0	0	0	0	31	0	0	31	2	0	2	0	4	68	0
08:15	0	33	8	0	41	0	0	0	0	0	2	27	0	0	29	9	0	1	0	10	80	0
08:30	0	15	7	0	22	0	0	0	0	0	1	43	0	0	44	2	0	0	0	2	68	0
08:45	0	18	6	0	24	0	0	0	0	0	4	32	0	0	36	4	0	4	0	8	68	0
Total	0	91	29	0	120	0	0	0	0	0	7	133	0	0	140	17	0	7	0	24	284	0
16:00	0	28	7	0	35	0	0	0	0	0	0	45	0	0	45	7	0	1	0	8	88	0
16:15	0	21	6	0	27	0	0	0	0	0	0	49	0	0	49	8	0	2	0	10	86	0
16:30	0	47	3	0	50	0	0	0	0	0	1	61	0	0	62	7	0	0	0	7	119	0
16:45	0	34	5	0	39	0	0	0	0	0	0	43	0	0	43	10	0	2	0	12	94	0
Total	0	130	21	0	151	0	0	0	0	0	1	198	0	0	199	32	0	5	0	37	387	0
17:00	0	46	8	0	54	0	0	0	0	0	1	84	0	0	85	11	0	1	0	12	151	0
17:15	0	46	4	0	50	0	0	0	0	0	0	71	0	0	71	11	0	0	0	11	132	0
17:30	0	48	6	0	54	0	0	0	0	0	1	77	0	0	78	11	0	1	0	12	144	0
17:45	0	37	5	0	42	0	0	0	0	0	0	54	0	0	54	6	0	3	0	9	105	0
Total	0	177	23	0	200	0	0	0	0	0	2	286	0	0	288	39	0	5	0	44	532	0
Grand Total	0	456	81	0	537	0	0	0	0	0	16	699	0	0	715	95	0	20	0	115	1367	0
Apprch %	0.0%	84.9%	15.1%	0.0%		0.0%	0.0%	0.0%	0.0%		2.2%	97.8%	0.0%	0.0%		82.6%	0.0%	17.4%	0.0%			
Total %	0.0%	33.4%	5.9%	0.0%	39.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	51.1%	0.0%	0.0%	52.3%	6.9%	0.0%	1.5%	0.0%	8.4%	100.0%	

AM PEAK HOUR	Horton Street Southbound					Westbound					Horton Street Northbound					Sherwin Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	25	8	0	33	0	0	0	0	0	0	31	0	0	31	2	0	2	0	4	68
08:15	0	33	8	0	41	0	0	0	0	0	2	27	0	0	29	9	0	1	0	10	80
08:30	0	15	7	0	22	0	0	0	0	0	1	43	0	0	44	2	0	0	0	2	68
08:45	0	18	6	0	24	0	0	0	0	0	4	32	0	0	36	4	0	4	0	8	68
Total Volume	0	91	29	0	120	0	0	0	0	0	7	133	0	0	140	17	0	7	0	24	284
% App Total	0.0%	75.8%	24.2%	0.0%		0.0%	0.0%	0.0%	0.0%		5.0%	95.0%	0.0%	0.0%		70.8%	0.0%	29.2%	0.0%		
PHF	.000	.689	.906	.000	.732	.000	.000	.000	.000	.000	.438	.773	.000	.000	.795	.472	.000	.438	.000	.600	.888

PM PEAK HOUR	Horton Street Southbound					Westbound					Horton Street Northbound					Sherwin Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	46	8	0	54	0	0	0	0	0	1	84	0	0	85	11	0	1	0	12	151
17:15	0	46	4	0	50	0	0	0	0	0	0	71	0	0	71	11	0	0	0	11	132
17:30	0	48	6	0	54	0	0	0	0	0	1	77	0	0	78	11	0	1	0	12	144
17:45	0	37	5	0	42	0	0	0	0	0	0	54	0	0	54	6	0	3	0	9	105
Total Volume	0	177	23	0	200	0	0	0	0	0	2	286	0	0	288	39	0	5	0	44	532
% App Total	0.0%	88.5%	11.5%	0.0%		0.0%	0.0%	0.0%	0.0%		0.7%	99.3%	0.0%	0.0%		88.6%	0.0%	11.4%	0.0%		
PHF	.000	.922	.719	.000	.926	.000	.000	.000	.000	.000	.500	.851	.000	.000	.847	.886	.000	.417	.000	.917	.881

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-020 Halleck Street-Park Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Halleck Street Southbound					Park Avenue Westbound					Halleck Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	4	3	0	0	7	11	1	4	3	19	0	7	6	0	13	0	1	0	0	1	40	3
15:15	1	3	0	0	4	5	0	2	1	8	0	1	5	0	6	0	0	0	0	0	18	1
15:30	2	1	0	0	3	6	1	4	0	11	0	0	5	0	5	0	0	1	0	1	20	0
15:45	4	1	0	0	5	6	0	3	0	9	0	0	9	0	9	0	1	0	0	1	24	0
Total	11	8	0	0	19	28	2	13	4	47	0	8	25	0	33	0	2	1	0	3	102	4
16:00	2	0	0	0	2	7	0	4	0	11	0	2	6	0	8	0	0	0	0	0	21	0
16:15	2	4	0	1	7	4	0	6	1	11	0	1	7	0	8	0	0	0	0	0	26	2
16:30	1	0	0	0	1	7	1	4	1	13	0	3	3	0	6	0	0	1	0	1	21	1
16:45	2	3	0	0	5	2	1	1	2	6	0	4	8	0	12	0	0	1	0	1	24	2
Total	7	7	0	1	15	20	2	15	4	41	0	10	24	0	34	0	0	2	0	2	92	5
Grand Total	18	15	0	1	34	48	4	28	8	88	0	18	49	0	67	0	2	3	0	5	194	9
Apprch %	52.9%	44.1%	0.0%	2.9%		54.5%	4.5%	31.8%	9.1%		0.0%	26.9%	73.1%	0.0%		0.0%	40.0%	60.0%	0.0%			
Total %	9.3%	7.7%	0.0%	0.5%	17.5%	24.7%	2.1%	14.4%	4.1%	45.4%	0.0%	9.3%	25.3%	0.0%	34.5%	0.0%	1.0%	1.5%	0.0%	2.6%	100.0%	

PM PEAK HOUR	Halleck Street Southbound					Park Avenue Westbound					Halleck Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	4	3	0	0	7	11	1	4	3	19	0	7	6	0	13	0	1	0	0	1	40
15:15	1	3	0	0	4	5	0	2	1	8	0	1	5	0	6	0	0	0	0	0	18
15:30	2	1	0	0	3	6	1	4	0	11	0	0	5	0	5	0	0	1	0	1	20
15:45	4	1	0	0	5	6	0	3	0	9	0	0	9	0	9	0	1	0	0	1	24
Total Volume	11	8	0	0	19	28	2	13	4	47	0	8	25	0	33	0	2	1	0	3	102
% App Total	57.9%	42.1%	0.0%	0.0%		59.6%	4.3%	27.7%	8.5%		0.0%	24.2%	75.8%	0.0%		0.0%	66.7%	33.3%	0.0%		
PHF	.688	.667	.000	.000	.679	.636	.500	.813	.333	.618	.000	.286	.694	.000	.635	.000	.500	.250	.000	.750	.638

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-020 Halleck Street-Park Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Halleck Street Southbound					Park Avenue Westbound					Halleck Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	1	6	0	0	7	4	1	3	1	9	0	2	16	0	18	0	1	0	0	1	35	1
16:15	2	1	0	0	3	5	0	1	0	6	0	6	23	0	29	0	1	1	0	2	40	0
16:30	2	0	0	0	2	7	0	7	0	14	0	3	32	0	35	0	1	0	0	1	52	0
16:45	3	2	0	0	5	12	0	0	0	12	0	3	24	0	27	0	0	0	0	0	44	0
Total	8	9	0	0	17	28	1	11	1	41	0	14	95	0	109	0	3	1	0	4	171	1
17:00	3	5	0	0	8	14	1	2	3	20	0	2	39	0	41	0	1	0	0	1	70	3
17:15	1	4	0	0	5	14	1	1	1	17	0	4	38	0	42	0	2	0	0	2	66	1
17:30	4	4	0	0	8	14	0	2	0	16	0	4	24	0	28	1	3	0	0	4	56	0
17:45	4	4	0	0	8	13	1	1	1	16	0	4	12	0	16	0	1	1	0	2	42	1
Total	12	17	0	0	29	55	3	6	5	69	0	14	113	0	127	1	7	1	0	9	234	5
Grand Total	20	26	0	0	46	83	4	17	6	110	0	28	208	0	236	1	10	2	0	13	405	6
Apprch %	43.5%	56.5%	0.0%	0.0%		75.5%	3.6%	15.5%	5.5%		0.0%	11.9%	88.1%	0.0%		7.7%	76.9%	15.4%	0.0%			
Total %	4.9%	6.4%	0.0%	0.0%	11.4%	20.5%	1.0%	4.2%	1.5%	27.2%	0.0%	6.9%	51.4%	0.0%	58.3%	0.2%	2.5%	0.5%	0.0%	3.2%	100.0%	

PM PEAK HOUR	Halleck Street Southbound					Park Avenue Westbound					Halleck Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	3	2	0	0	5	12	0	0	0	12	0	3	24	0	27	0	0	0	0	0	44
17:00	3	5	0	0	8	14	1	2	3	20	0	2	39	0	41	0	1	0	0	1	70
17:15	1	4	0	0	5	14	1	1	1	17	0	4	38	0	42	0	2	0	0	2	66
17:30	4	4	0	0	8	14	0	2	0	16	0	4	24	0	28	1	3	0	0	4	56
Total Volume	11	15	0	0	26	54	2	5	4	65	0	13	125	0	138	1	6	0	0	7	236
% App Total	42.3%	57.7%	0.0%	0.0%		83.1%	3.1%	7.7%	6.2%		0.0%	9.4%	90.6%	0.0%		14.3%	85.7%	0.0%	0.0%		
PHF	.688	.750	.000	.000	.813	.964	.500	.625	.333	.813	.000	.813	.801	.000	.821	.250	.500	.000	.000	.438	.843

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-021 Hubbard Street-Park Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Hubbard Street Southbound					Park Avenue Westbound					Hubbard Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	0	0	0	0	2	16	3	0	21	1	0	4	0	5	0	13	2	0	15	41	0
15:15	1	0	0	0	1	2	6	0	0	8	0	2	2	0	4	0	5	3	0	8	21	0
15:30	3	0	1	0	4	1	11	0	0	12	1	0	3	0	4	0	5	3	0	8	28	0
15:45	0	0	0	0	0	3	10	0	0	13	0	0	1	0	1	0	12	3	0	15	29	0
Total	4	0	1	0	5	8	43	3	0	54	2	2	10	0	14	0	35	11	0	46	119	0
16:00	4	1	2	0	7	3	10	4	0	17	1	2	0	0	3	0	4	2	0	6	33	0
16:15	0	0	1	0	1	1	10	1	1	13	1	0	4	0	5	0	9	1	0	10	29	1
16:30	1	1	1	0	3	2	11	3	0	16	1	0	1	0	2	1	4	1	0	6	27	0
16:45	1	0	0	0	1	1	6	4	0	11	0	1	3	0	4	0	11	2	0	13	29	0
Total	6	2	4	0	12	7	37	12	1	57	3	3	8	0	14	1	28	6	0	35	118	1
Grand Total	10	2	5	0	17	15	80	15	1	111	5	5	18	0	28	1	63	17	0	81	237	1
Apprch %	58.8%	11.8%	29.4%	0.0%		13.5%	72.1%	13.5%	0.9%		17.9%	17.9%	64.3%	0.0%		1.2%	77.8%	21.0%	0.0%			
Total %	4.2%	0.8%	2.1%	0.0%	7.2%	6.3%	33.8%	6.3%	0.4%	46.8%	2.1%	2.1%	7.6%	0.0%	11.8%	0.4%	26.6%	7.2%	0.0%	34.2%	100.0%	

PM PEAK HOUR	Hubbard Street Southbound					Park Avenue Westbound					Hubbard Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	0	0	2	16	3	0	21	1	0	4	0	5	0	13	2	0	15	41
15:15	1	0	0	0	1	2	6	0	0	8	0	2	2	0	4	0	5	3	0	8	21
15:30	3	0	1	0	4	1	11	0	0	12	1	0	3	0	4	0	5	3	0	8	28
15:45	0	0	0	0	0	3	10	0	0	13	0	0	1	0	1	0	12	3	0	15	29
Total Volume	4	0	1	0	5	8	43	3	0	54	2	2	10	0	14	0	35	11	0	46	119
% App Total	80.0%	0.0%	20.0%	0.0%		14.8%	79.6%	5.6%	0.0%		14.3%	14.3%	71.4%	0.0%		0.0%	76.1%	23.9%	0.0%		
PHF	.333	.000	.250	.000	.313	.667	.672	.250	.000	.643	.500	.250	.625	.000	.700	.000	.673	.917	.000	.767	.726

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-021 Hubbard Street-Park Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Hubbard Street Southbound					Park Avenue Westbound					Hubbard Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	1	1	0	0	2	5	8	2	0	15	2	1	2	0	5	0	20	1	0	21	43	0
16:15	1	1	1	0	3	2	5	2	1	10	0	0	1	0	1	1	19	8	0	28	42	1
16:30	1	0	1	0	2	2	14	0	0	16	3	0	2	0	5	0	27	11	0	38	61	0
16:45	1	1	1	0	3	5	13	1	0	19	0	0	2	0	2	0	24	2	0	26	50	0
Total	4	3	3	0	10	14	40	5	1	60	5	1	7	0	13	1	90	22	0	113	196	1
17:00	2	0	0	0	2	5	15	6	0	26	2	1	8	0	11	1	45	4	0	50	89	0
17:15	2	0	0	0	2	4	17	3	0	24	0	0	5	0	5	0	34	9	0	43	74	0
17:30	1	0	1	0	2	2	14	2	0	18	2	0	7	0	9	1	27	5	0	33	62	0
17:45	0	0	0	0	0	1	17	0	0	18	1	0	3	0	4	1	18	1	0	20	42	0
Total	5	0	1	0	6	12	63	11	0	86	5	1	23	0	29	3	124	19	0	146	267	0
Grand Total	9	3	4	0	16	26	103	16	1	146	10	2	30	0	42	4	214	41	0	259	463	1
Apprch %	56.3%	18.8%	25.0%	0.0%		17.8%	70.5%	11.0%	0.7%		23.8%	4.8%	71.4%	0.0%		1.5%	82.6%	15.8%	0.0%			
Total %	1.9%	0.6%	0.9%	0.0%	3.5%	5.6%	22.2%	3.5%	0.2%	31.5%	2.2%	0.4%	6.5%	0.0%	9.1%	0.9%	46.2%	8.9%	0.0%	55.9%	100.0%	

PM PEAK HOUR	Hubbard Street Southbound					Park Avenue Westbound					Hubbard Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	1	1	1	0	3	5	13	1	0	19	0	0	2	0	2	0	24	2	0	26	50
17:00	2	0	0	0	2	5	15	6	0	26	2	1	8	0	11	1	45	4	0	50	89
17:15	2	0	0	0	2	4	17	3	0	24	0	0	5	0	5	0	34	9	0	43	74
17:30	1	0	1	0	2	2	14	2	0	18	2	0	7	0	9	1	27	5	0	33	62
Total Volume	6	1	2	0	9	16	59	12	0	87	4	1	22	0	27	2	130	20	0	152	275
% App Total	66.7%	11.1%	22.2%	0.0%		18.4%	67.8%	13.8%	0.0%		14.8%	3.7%	81.5%	0.0%		1.3%	85.5%	13.2%	0.0%		
PHF	.750	.250	.500	.000	.750	.800	.868	.500	.000	.837	.500	.250	.688	.000	.614	.500	.722	.556	.000	.760	.772

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-022 Horton Street-Park Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Park Avenue Westbound					Horton Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	4	11	4	0	19	8	13	0	1	22	4	25	6	0	35	4	9	5	0	18	94	1
15:15	1	6	3	0	10	7	3	3	1	14	3	18	10	1	32	2	5	2	0	9	65	2
15:30	1	10	3	0	14	9	7	1	0	17	4	20	12	0	36	1	9	6	0	16	83	0
15:45	4	9	2	0	15	6	8	0	0	14	3	11	8	0	22	0	8	5	0	13	64	0
Total	10	36	12	0	58	30	31	4	2	67	14	74	36	1	125	7	31	18	0	56	306	3
16:00	2	12	0	0	14	5	13	0	0	18	5	22	13	0	40	0	6	2	0	8	80	0
16:15	1	9	1	0	11	4	7	1	0	12	6	15	12	1	34	0	10	4	0	14	71	1
16:30	1	11	3	0	15	1	10	1	0	12	5	22	4	0	31	0	5	2	0	7	65	0
16:45	0	7	0	0	7	7	8	2	0	17	2	12	7	1	22	2	11	4	0	17	63	1
Total	4	39	4	0	47	17	38	4	0	59	18	71	36	2	127	2	32	12	0	46	279	2
Grand Total	14	75	16	0	105	47	69	8	2	126	32	145	72	3	252	9	63	30	0	102	585	5
Apprch %	13.3%	71.4%	15.2%	0.0%		37.3%	54.8%	6.3%	1.6%		12.7%	57.5%	28.6%	1.2%		8.8%	61.8%	29.4%	0.0%			
Total %	2.4%	12.8%	2.7%	0.0%	17.9%	8.0%	11.8%	1.4%	0.3%	21.5%	5.5%	24.8%	12.3%	0.5%	43.1%	1.5%	10.8%	5.1%	0.0%	17.4%	100.0%	

PM PEAK HOUR	Horton Street Southbound					Park Avenue Westbound					Horton Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	4	11	4	0	19	8	13	0	1	22	4	25	6	0	35	4	9	5	0	18	94
15:15	1	6	3	0	10	7	3	3	1	14	3	18	10	1	32	2	5	2	0	9	65
15:30	1	10	3	0	14	9	7	1	0	17	4	20	12	0	36	1	9	6	0	16	83
15:45	4	9	2	0	15	6	8	0	0	14	3	11	8	0	22	0	8	5	0	13	64
Total Volume	10	36	12	0	58	30	31	4	2	67	14	74	36	1	125	7	31	18	0	56	306
% App Total	17.2%	62.1%	20.7%	0.0%		44.8%	46.3%	6.0%	3.0%		11.2%	59.2%	28.8%	0.8%		12.5%	55.4%	32.1%	0.0%		
PHF	.625	.818	.750	.000	.763	.833	.596	.333	.500	.761	.875	.740	.750	.250	.868	.438	.861	.750	.000	.778	.814

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-022 Horton Street-Park Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					Park Avenue Westbound					Horton Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	1	3	4	0	8	1	7	6	0	14	3	12	3	0	18	1	5	1	0	7	47	0
07:15	1	5	4	0	10	1	4	6	0	11	2	12	3	0	17	1	1	0	0	2	40	0
07:30	2	6	5	0	13	0	4	6	0	10	4	29	6	0	39	2	7	2	0	11	73	0
07:45	1	9	3	0	13	3	17	9	0	29	5	27	5	0	37	1	7	0	0	8	87	0
Total	5	23	16	0	44	5	32	27	0	64	14	80	17	0	111	5	20	3	0	28	247	0
08:00	2	16	4	0	22	7	8	5	0	20	6	35	8	0	49	2	10	5	0	17	108	0
08:15	2	12	3	0	17	6	10	11	0	27	9	37	10	0	56	7	9	1	0	17	117	0
08:30	2	15	3	0	20	6	8	12	0	26	2	38	6	0	46	2	8	3	0	13	105	0
08:45	4	11	3	0	18	2	7	5	0	14	7	32	15	0	54	4	10	3	0	17	103	0
Total	10	54	13	0	77	21	33	33	0	87	24	142	39	0	205	15	37	12	0	64	433	0
16:00	7	17	1	0	25	3	8	2	0	13	4	29	10	0	43	10	12	0	0	22	103	0
16:15	6	25	2	0	33	9	9	2	0	20	0	44	7	0	51	8	12	2	0	22	126	0
16:30	12	43	4	0	59	5	8	1	0	14	4	40	7	0	51	11	22	2	0	35	159	0
16:45	7	28	6	0	41	12	9	2	0	23	6	39	8	0	53	12	13	3	0	28	145	0
Total	32	113	13	0	158	29	34	7	0	70	14	152	32	0	198	41	59	7	0	107	533	0
17:00	14	40	2	0	56	12	17	6	0	35	4	37	13	0	54	28	23	8	0	59	204	0
17:15	7	53	7	0	67	5	12	4	0	21	7	49	8	0	64	27	15	4	0	46	198	0
17:30	8	40	4	0	52	9	10	1	0	20	4	56	8	0	68	16	16	5	0	37	177	0
17:45	10	32	6	0	48	8	9	2	0	19	2	38	11	0	51	8	10	5	0	23	141	0
Total	39	165	19	0	223	34	48	13	0	95	17	180	40	0	237	79	64	22	0	165	720	0
Grand Total	86	355	61	0	502	89	147	80	0	316	69	554	128	0	751	140	180	44	0	364	1933	0
Apprch %	17.1%	70.7%	12.2%	0.0%		28.2%	46.5%	25.3%	0.0%		9.2%	73.8%	17.0%	0.0%		38.5%	49.5%	12.1%	0.0%			
Total %	4.4%	18.4%	3.2%	0.0%	26.0%	4.6%	7.6%	4.1%	0.0%	16.3%	3.6%	28.7%	6.6%	0.0%	38.9%	7.2%	9.3%	2.3%	0.0%	18.8%	100.0%	

AM PEAK HOUR	Horton Street Southbound					Park Avenue Westbound					Horton Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	2	16	4	0	22	7	8	5	0	20	6	35	8	0	49	2	10	5	0	17	108
08:15	2	12	3	0	17	6	10	11	0	27	9	37	10	0	56	7	9	1	0	17	117
08:30	2	15	3	0	20	6	8	12	0	26	2	38	6	0	46	2	8	3	0	13	105
08:45	4	11	3	0	18	2	7	5	0	14	7	32	15	0	54	4	10	3	0	17	103
Total Volume	10	54	13	0	77	21	33	33	0	87	24	142	39	0	205	15	37	12	0	64	433
% App Total	13.0%	70.1%	16.9%	0.0%		24.1%	37.9%	37.9%	0.0%		11.7%	69.3%	19.0%	0.0%		23.4%	57.8%	18.8%	0.0%		
PHF	.625	.844	.813	.000	.875	.750	.825	.688	.000	.806	.667	.934	.650	.000	.915	.536	.925	.600	.000	.941	.925

PM PEAK HOUR	Horton Street Southbound					Park Avenue Westbound					Horton Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	7	28	6	0	41	12	9	2	0	23	6	39	8	0	53	12	13	3	0	28	145
17:00	14	40	2	0	56	12	17	6	0	35	4	37	13	0	54	28	23	8	0	59	204
17:15	7	53	7	0	67	5	12	4	0	21	7	49	8	0	64	27	15	4	0	46	198
17:30	8	40	4	0	52	9	10	1	0	20	4	56	8	0	68	16	16	5	0	37	177
Total Volume	36	161	19	0	216	38	48	13	0	99	21	181	37	0	239	83	67	20	0	170	724
% App Total	16.7%	74.5%	8.8%	0.0%		38.4%	48.5%	13.1%	0.0%		8.8%	75.7%	15.5%	0.0%		48.8%	39.4%	11.8%	0.0%		
PHF	.643	.759	.679	.000	.806	.792	.706	.542	.000	.707	.750	.808	.712	.000	.879	.741	.728	.625	.000	.720	.887

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-023 Hollis Street-Park Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					Park Avenue Westbound					Hollis Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	10	77	13	0	100	8	14	14	0	36	4	44	2	0	50	7	13	5	0	25	211	0
15:15	8	71	2	0	81	6	11	13	0	30	4	53	2	1	60	8	8	4	0	20	191	1
15:30	7	68	1	0	76	8	13	17	0	38	2	65	2	0	69	6	14	8	0	28	211	0
15:45	3	58	5	0	66	2	8	11	0	21	4	56	2	0	62	6	13	5	0	24	173	0
Total	28	274	21	0	323	24	46	55	0	125	14	218	8	1	241	27	48	22	0	97	786	1
16:00	6	63	7	0	76	7	14	16	0	37	0	50	5	0	55	7	17	0	0	24	192	0
16:15	4	57	7	0	68	9	10	14	0	33	1	42	6	0	49	7	12	2	0	21	171	0
16:30	6	61	3	0	70	6	4	14	0	24	0	46	7	0	53	3	9	8	0	20	167	0
16:45	7	66	4	0	77	5	15	10	0	30	0	46	3	0	49	3	13	4	0	20	176	0
Total	23	247	21	0	291	27	43	54	0	124	1	184	21	0	206	20	51	14	0	85	706	0
Grand Total	51	521	42	0	614	51	89	109	0	249	15	402	29	1	447	47	99	36	0	182	1492	1
Apprch %	8.3%	84.9%	6.8%	0.0%		20.5%	35.7%	43.8%	0.0%		3.4%	89.9%	6.5%	0.2%		25.8%	54.4%	19.8%	0.0%			
Total %	3.4%	34.9%	2.8%	0.0%	41.2%	3.4%	6.0%	7.3%	0.0%	16.7%	1.0%	26.9%	1.9%	0.1%	30.0%	3.2%	6.6%	2.4%	0.0%	12.2%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					Park Avenue Westbound					Hollis Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	10	77	13	0	100	8	14	14	0	36	4	44	2	0	50	7	13	5	0	25	211
15:15	8	71	2	0	81	6	11	13	0	30	4	53	2	1	60	8	8	4	0	20	191
15:30	7	68	1	0	76	8	13	17	0	38	2	65	2	0	69	6	14	8	0	28	211
15:45	3	58	5	0	66	2	8	11	0	21	4	56	2	0	62	6	13	5	0	24	173
Total Volume	28	274	21	0	323	24	46	55	0	125	14	218	8	1	241	27	48	22	0	97	786
% App Total	8.7%	84.8%	6.5%	0.0%		19.2%	36.8%	44.0%	0.0%		5.8%	90.5%	3.3%	0.4%		27.8%	49.5%	22.7%	0.0%		
PHF	.700	.890	.404	.000	.808	.750	.821	.809	.000	.822	.875	.838	1.000	.250	.873	.844	.857	.688	.000	.866	.931

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-023 Hollis Street-Park Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					Park Avenue Westbound					Hollis Street Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	15	65	3	0	83	4	4	21	0	29	5	59	3	0	67	9	22	4	0	35	214	0
16:15	18	74	5	0	97	5	10	20	0	35	3	85	4	0	92	5	16	5	0	26	250	0
16:30	11	82	5	0	98	7	9	16	0	32	1	94	4	0	99	9	35	8	0	52	281	0
16:45	13	71	10	0	94	2	13	33	0	48	3	93	2	0	98	15	15	6	0	36	276	0
Total	57	292	23	0	372	18	36	90	0	144	12	331	13	0	356	38	88	23	0	149	1021	0
17:00	15	99	9	0	123	10	17	36	0	63	5	102	6	0	113	11	34	12	0	57	356	0
17:15	19	102	11	0	132	8	9	25	0	42	2	107	10	0	119	6	25	4	0	35	328	0
17:30	11	77	9	0	97	9	12	30	0	51	1	91	3	0	95	8	29	4	0	41	284	0
17:45	15	90	1	0	106	2	10	36	0	48	2	100	3	0	105	7	21	8	0	36	295	0
Total	60	368	30	0	458	29	48	127	0	204	10	400	22	0	432	32	109	28	0	169	1263	0
Grand Total	117	660	53	0	830	47	84	217	0	348	22	731	35	0	788	70	197	51	0	318	2284	0
Apprch %	14.1%	79.5%	6.4%	0.0%		13.5%	24.1%	62.4%	0.0%		2.8%	92.8%	4.4%	0.0%		22.0%	61.9%	16.0%	0.0%			
Total %	5.1%	28.9%	2.3%	0.0%	36.3%	2.1%	3.7%	9.5%	0.0%	15.2%	1.0%	32.0%	1.5%	0.0%	34.5%	3.1%	8.6%	2.2%	0.0%	13.9%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					Park Avenue Westbound					Hollis Street Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	15	99	9	0	123	10	17	36	0	63	5	102	6	0	113	11	34	12	0	57	356
17:15	19	102	11	0	132	8	9	25	0	42	2	107	10	0	119	6	25	4	0	35	328
17:30	11	77	9	0	97	9	12	30	0	51	1	91	3	0	95	8	29	4	0	41	284
17:45	15	90	1	0	106	2	10	36	0	48	2	100	3	0	105	7	21	8	0	36	295
Total Volume	60	368	30	0	458	29	48	127	0	204	10	400	22	0	432	32	109	28	0	169	1263
% App Total	13.1%	80.3%	6.6%	0.0%		14.2%	23.5%	62.3%	0.0%		2.3%	92.6%	5.1%	0.0%		18.9%	64.5%	16.6%	0.0%		
PHF	.789	.902	.682	.000	.867	.725	.706	.882	.000	.810	.500	.935	.550	.000	.908	.727	.801	.583	.000	.741	.887

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-024 Horton Street-40th Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					40th Street Westbound					Horton Street Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	6	18	8	0	32	49	137	0	0	186	82	26	46	0	154	7	147	38	4	196	568	4
15:15	4	11	4	0	19	60	152	5	0	217	57	19	52	0	128	7	181	68	1	257	621	1
15:30	2	13	7	0	22	47	117	10	0	174	57	20	55	0	132	4	168	72	1	245	573	1
15:45	1	13	4	0	18	50	171	0	0	221	63	17	48	0	128	4	170	63	3	240	607	3
Total	13	55	23	0	91	206	577	15	0	798	259	82	201	0	542	22	666	241	9	938	2369	9
16:00	3	14	2	0	19	46	153	8	0	207	70	25	38	0	133	7	167	49	0	223	582	0
16:15	1	12	3	0	16	36	139	7	1	183	52	18	50	0	120	9	194	54	5	262	581	6
16:30	2	8	3	0	13	53	121	4	0	178	59	17	41	0	117	11	146	57	2	216	524	2
16:45	2	13	6	0	21	46	130	4	0	180	51	9	50	0	110	8	163	62	2	235	546	2
Total	8	47	14	0	69	181	543	23	1	748	232	69	179	0	480	35	670	222	9	936	2233	10
Grand Total	21	102	37	0	160	387	1120	38	1	1546	491	151	380	0	1022	57	1336	463	18	1874	4602	19
Apprch %	13.1%	63.8%	23.1%	0.0%		25.0%	72.4%	2.5%	0.1%		48.0%	14.8%	37.2%	0.0%		3.0%	71.3%	24.7%	1.0%			
Total %	0.5%	2.2%	0.8%	0.0%	3.5%	8.4%	24.3%	0.8%	0.0%	33.6%	10.7%	3.3%	8.3%	0.0%	22.2%	1.2%	29.0%	10.1%	0.4%	40.7%	100.0%	

PM PEAK HOUR	Horton Street Southbound					40th Street Westbound					Horton Street Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	4	11	4	0	19	60	152	5	0	217	57	19	52	0	128	7	181	68	1	257	621
15:30	2	13	7	0	22	47	117	10	0	174	57	20	55	0	132	4	168	72	1	245	573
15:45	1	13	4	0	18	50	171	0	0	221	63	17	48	0	128	4	170	63	3	240	607
16:00	3	14	2	0	19	46	153	8	0	207	70	25	38	0	133	7	167	49	0	223	582
Total Volume	10	51	17	0	78	203	593	23	0	819	247	81	193	0	521	22	686	252	5	965	2383
% App Total	12.8%	65.4%	21.8%	0.0%		24.8%	72.4%	2.8%	0.0%		47.4%	15.5%	37.0%	0.0%		2.3%	71.1%	26.1%	0.5%		
PHF	.625	.911	.607	.000	.886	.846	.867	.575	.000	.926	.882	.810	.877	.000	.979	.786	.948	.875	.417	.939	.959

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-024 Horton Street-40th Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Horton Street Southbound					40th Street Westbound					Horton Street Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	2	5	1	0	8	5	36	10	0	51	10	7	4	0	21	1	32	8	2	43	123	2
07:15	1	5	0	0	6	11	38	8	0	57	16	9	7	0	32	2	32	12	0	46	141	0
07:30	1	8	0	0	9	13	50	16	0	79	16	15	9	0	40	7	32	25	2	66	194	2
07:45	0	9	3	0	12	20	50	21	0	91	14	18	5	0	37	4	44	14	1	63	203	1
Total	4	27	4	0	35	49	174	55	0	278	56	49	25	0	130	14	140	59	5	218	661	5
08:00	4	19	2	0	25	20	36	15	1	72	13	26	9	0	48	5	49	17	1	72	217	2
08:15	4	13	2	0	19	29	53	20	0	102	21	40	12	0	73	2	38	10	0	50	244	0
08:30	1	20	1	0	22	29	48	14	0	91	18	22	16	0	56	5	41	14	1	61	230	1
08:45	1	9	1	0	11	28	62	19	0	109	25	31	17	0	73	8	38	24	0	70	263	0
Total	10	61	6	0	77	106	199	68	1	374	77	119	54	0	250	20	166	65	2	253	954	3
16:00	6	14	0	0	20	29	114	7	0	150	60	32	34	0	126	9	133	41	1	184	480	1
16:15	9	27	1	0	37	53	93	7	0	153	56	35	44	0	135	6	101	41	0	148	473	0
16:30	10	35	5	0	50	43	89	10	0	142	60	36	31	0	127	8	118	30	0	156	475	0
16:45	10	33	3	0	46	30	106	9	0	145	65	41	35	0	141	6	97	42	3	148	480	3
Total	35	109	9	0	153	155	402	33	0	590	241	144	144	0	529	29	449	154	4	636	1908	4
17:00	11	44	3	0	58	39	99	12	0	150	74	40	34	0	148	8	117	44	0	169	525	0
17:15	13	46	5	0	64	33	110	13	0	156	63	42	31	0	136	2	135	37	4	178	534	4
17:30	12	43	3	0	58	43	113	10	0	166	55	55	25	0	135	4	115	45	3	167	526	3
17:45	5	38	5	0	48	41	98	6	0	145	75	39	34	0	148	5	97	49	2	153	494	2
Total	41	171	16	0	228	156	420	41	0	617	267	176	124	0	567	19	464	175	9	667	2079	9
Grand Total	90	368	35	0	493	466	1195	197	1	1859	641	488	347	0	1476	82	1219	453	20	1774	5602	21
Apprch %	18.3%	74.6%	7.1%	0.0%		25.1%	64.3%	10.6%	0.1%		43.4%	33.1%	23.5%	0.0%		4.6%	68.7%	25.5%	1.1%			
Total %	1.6%	6.6%	0.6%	0.0%	8.8%	8.3%	21.3%	3.5%	0.0%	33.2%	11.4%	8.7%	6.2%	0.0%	26.3%	1.5%	21.8%	8.1%	0.4%	31.7%	100.0%	

AM PEAK HOUR	Horton Street Southbound					40th Street Westbound					Horton Street Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	4	19	2	0	25	20	36	15	1	72	13	26	9	0	48	5	49	17	1	72	217
08:15	4	13	2	0	19	29	53	20	0	102	21	40	12	0	73	2	38	10	0	50	244
08:30	1	20	1	0	22	29	48	14	0	91	18	22	16	0	56	5	41	14	1	61	230
08:45	1	9	1	0	11	28	62	19	0	109	25	31	17	0	73	8	38	24	0	70	263
Total Volume	10	61	6	0	77	106	199	68	1	374	77	119	54	0	250	20	166	65	2	253	954
% App Total	13.0%	79.2%	7.8%	0.0%		28.3%	53.2%	18.2%	0.3%		30.8%	47.6%	21.6%	0.0%		7.9%	65.6%	25.7%	0.8%		
PHF	.625	.763	.750	.000	.770	.914	.802	.850	.250	.858	.770	.744	.794	.000	.856	.625	.847	.677	.500	.878	.907

PM PEAK HOUR	Horton Street Southbound					40th Street Westbound					Horton Street Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	11	44	3	0	58	39	99	12	0	150	74	40	34	0	148	8	117	44	0	169	525
17:15	13	46	5	0	64	33	110	13	0	156	63	42	31	0	136	2	135	37	4	178	534
17:30	12	43	3	0	58	43	113	10	0	166	55	55	25	0	135	4	115	45	3	167	526
17:45	5	38	5	0	48	41	98	6	0	145	75	39	34	0	148	5	97	49	2	153	494
Total Volume	41	171	16	0	228	156	420	41	0	617	267	176	124	0	567	19	464	175	9	667	2079
% App Total	18.0%	75.0%	7.0%	0.0%		25.3%	68.1%	6.6%	0.0%		47.1%	31.0%	21.9%	0.0%		2.8%	69.6%	26.2%	1.3%		
PHF	.788	.929	.800	.000	.891	.907	.929	.788	.000	.929	.890	.800	.912	.000	.958	.594	.859	.893	.563	.937	.973

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-025 Hollis Street-40th Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					40th Street Westbound					Hollis Street Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	12	62	20	0	94	40	156	12	0	208	15	32	32	0	79	14	158	21	0	193	574	0
15:15	8	50	18	0	76	47	170	15	0	232	17	29	27	0	73	12	207	25	0	244	625	0
15:30	21	56	20	0	97	44	137	22	0	203	19	32	41	0	92	16	186	27	0	229	621	0
15:45	8	41	16	0	65	44	178	19	0	241	29	26	23	0	78	17	175	24	0	216	600	0
Total	49	209	74	0	332	175	641	68	0	884	80	119	123	0	322	59	726	97	0	882	2420	0
16:00	19	37	16	0	72	45	172	22	0	239	21	16	29	0	66	13	155	21	0	189	566	0
16:15	12	42	18	0	72	32	152	18	0	202	10	22	25	0	57	10	200	25	0	235	566	0
16:30	7	50	13	0	70	41	151	14	0	206	22	31	23	0	76	11	182	21	0	214	566	0
16:45	5	58	9	0	72	37	157	14	0	208	17	29	26	0	72	13	168	26	0	207	559	0
Total	43	187	56	0	286	155	632	68	0	855	70	98	103	0	271	47	705	93	0	845	2257	0
Grand Total	92	396	130	0	618	330	1273	136	0	1739	150	217	226	0	593	106	1431	190	0	1727	4677	0
Apprch %	14.9%	64.1%	21.0%	0.0%		19.0%	73.2%	7.8%	0.0%		25.3%	36.6%	38.1%	0.0%		6.1%	82.9%	11.0%	0.0%			
Total %	2.0%	8.5%	2.8%	0.0%	13.2%	7.1%	27.2%	2.9%	0.0%	37.2%	3.2%	4.6%	4.8%	0.0%	12.7%	2.3%	30.6%	4.1%	0.0%	36.9%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					40th Street Westbound					Hollis Street Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	12	62	20	0	94	40	156	12	0	208	15	32	32	0	79	14	158	21	0	193	574
15:15	8	50	18	0	76	47	170	15	0	232	17	29	27	0	73	12	207	25	0	244	625
15:30	21	56	20	0	97	44	137	22	0	203	19	32	41	0	92	16	186	27	0	229	621
15:45	8	41	16	0	65	44	178	19	0	241	29	26	23	0	78	17	175	24	0	216	600
Total Volume	49	209	74	0	332	175	641	68	0	884	80	119	123	0	322	59	726	97	0	882	2420
% App Total	14.8%	63.0%	22.3%	0.0%		19.8%	72.5%	7.7%	0.0%		24.8%	37.0%	38.2%	0.0%		6.7%	82.3%	11.0%	0.0%		
PHF	.583	.843	.925	.000	.856	.931	.900	.773	.000	.917	.690	.930	.750	.000	.875	.868	.877	.898	.000	.904	.968

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-025 Hollis Street-40th Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Hollis Street Southbound					40th Street Westbound					Hollis Street Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	20	41	11	0	72	26	140	16	0	182	8	38	14	0	60	8	156	18	0	182	496	0
16:15	18	46	9	0	73	24	118	31	0	173	17	50	12	0	79	13	132	9	0	154	479	0
16:30	31	56	13	0	100	28	113	27	0	168	18	60	19	1	98	13	127	18	0	158	524	1
16:45	15	71	6	0	92	21	136	23	0	180	19	54	16	0	89	14	117	12	0	143	504	0
Total	84	214	39	0	337	99	507	97	0	703	62	202	61	1	326	48	532	57	0	637	2003	1
17:00	27	81	1	0	109	16	112	31	0	159	12	63	13	0	88	13	142	15	0	170	526	0
17:15	25	80	8	0	113	32	123	39	0	194	20	69	22	0	111	10	148	22	0	180	598	0
17:30	20	67	11	0	98	31	134	36	0	201	21	55	23	0	99	9	117	15	0	141	539	0
17:45	17	70	8	0	95	26	124	33	0	183	15	62	20	0	97	11	131	10	0	152	527	0
Total	89	298	28	0	415	105	493	139	0	737	68	249	78	0	395	43	538	62	0	643	2190	0
Grand Total	173	512	67	0	752	204	1000	236	0	1440	130	451	139	1	721	91	1070	119	0	1280	4193	1
Apprch %	23.0%	68.1%	8.9%	0.0%		14.2%	69.4%	16.4%	0.0%		18.0%	62.6%	19.3%	0.1%		7.1%	83.6%	9.3%	0.0%			
Total %	4.1%	12.2%	1.6%	0.0%	17.9%	4.9%	23.8%	5.6%	0.0%	34.3%	3.1%	10.8%	3.3%	0.0%	17.2%	2.2%	25.5%	2.8%	0.0%	30.5%	100.0%	

PM PEAK HOUR	Hollis Street Southbound					40th Street Westbound					Hollis Street Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	27	81	1	0	109	16	112	31	0	159	12	63	13	0	88	13	142	15	0	170	526
17:15	25	80	8	0	113	32	123	39	0	194	20	69	22	0	111	10	148	22	0	180	598
17:30	20	67	11	0	98	31	134	36	0	201	21	55	23	0	99	9	117	15	0	141	539
17:45	17	70	8	0	95	26	124	33	0	183	15	62	20	0	97	11	131	10	0	152	527
Total Volume	89	298	28	0	415	105	493	139	0	737	68	249	78	0	395	43	538	62	0	643	2190
% App Total	21.4%	71.8%	6.7%	0.0%		14.2%	66.9%	18.9%	0.0%		17.2%	63.0%	19.7%	0.0%		6.7%	83.7%	9.6%	0.0%		
PHF	.824	.920	.636	.000	.918	.820	.920	.891	.000	.917	.810	.902	.848	.000	.890	.827	.909	.705	.000	.893	.916

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-026 Emery Street-40th Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	Emery Street Southbound					40th Street Westbound					Emery Street Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	7	9	4	0	20	19	210	8	0	237	34	15	38	0	87	1	202	18	0	221	565	0
15:15	5	15	5	0	25	39	207	10	1	257	33	15	33	0	81	3	211	17	2	233	596	3
15:30	8	10	5	0	23	28	205	19	0	252	36	27	34	0	97	3	213	23	1	240	612	1
15:45	1	14	5	0	20	31	232	11	0	274	35	16	32	0	83	2	232	22	1	257	634	1
Total	21	48	19	0	88	117	854	48	1	1020	138	73	137	0	348	9	858	80	4	951	2407	5
16:00	2	13	4	0	19	18	215	9	0	242	40	15	59	0	114	1	209	36	2	248	623	2
16:15	5	11	6	0	22	30	223	13	0	266	26	13	26	0	65	3	201	13	0	217	570	0
16:30	4	13	4	0	21	23	191	11	0	225	30	28	30	0	88	3	225	21	1	250	584	1
16:45	7	13	4	0	24	21	206	10	0	237	28	25	55	0	108	3	218	25	0	246	615	0
Total	18	50	18	0	86	92	835	43	0	970	124	81	170	0	375	10	853	95	3	961	2392	3
Grand Total	39	98	37	0	174	209	1689	91	1	1990	262	154	307	0	723	19	1711	175	7	1912	4799	8
Apprch %	22.4%	56.3%	21.3%	0.0%		10.5%	84.9%	4.6%	0.1%		36.2%	21.3%	42.5%	0.0%		1.0%	89.5%	9.2%	0.4%			
Total %	0.8%	2.0%	0.8%	0.0%	3.6%	4.4%	35.2%	1.9%	0.0%	41.5%	5.5%	3.2%	6.4%	0.0%	15.1%	0.4%	35.7%	3.6%	0.1%	39.8%	100.0%	

PM PEAK HOUR	Emery Street Southbound					40th Street Westbound					Emery Street Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	5	15	5	0	25	39	207	10	1	257	33	15	33	0	81	3	211	17	2	233	596
15:30	8	10	5	0	23	28	205	19	0	252	36	27	34	0	97	3	213	23	1	240	612
15:45	1	14	5	0	20	31	232	11	0	274	35	16	32	0	83	2	232	22	1	257	634
16:00	2	13	4	0	19	18	215	9	0	242	40	15	59	0	114	1	209	36	2	248	623
Total Volume	16	52	19	0	87	116	859	49	1	1025	144	73	158	0	375	9	865	98	6	978	2465
% App Total	18.4%	59.8%	21.8%	0.0%		11.3%	83.8%	4.8%	0.1%		38.4%	19.5%	42.1%	0.0%		0.9%	88.4%	10.0%	0.6%		
PHF	.500	.867	.950	.000	.870	.744	.926	.645	.250	.935	.900	.676	.669	.000	.822	.750	.932	.681	.750	.951	.972

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-026 Emery Street-40th Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	Emery Street Southbound					40th Street Westbound					Emery Street Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	8	23	2	0	33	16	185	13	0	214	22	31	61	0	114	0	187	18	0	205	566	0
16:15	8	18	3	0	29	12	154	7	0	173	31	13	68	0	112	5	181	12	0	198	512	0
16:30	15	27	2	0	44	24	153	7	1	185	36	28	59	0	123	1	166	18	2	187	539	3
16:45	9	24	1	0	34	11	175	12	0	198	30	30	68	0	128	0	170	18	0	188	548	0
Total	40	92	8	0	140	63	667	39	1	770	119	102	256	0	477	6	704	66	2	778	2165	3
17:00	20	28	0	0	48	21	149	16	0	186	50	29	65	0	144	5	147	21	0	173	551	0
17:15	23	30	4	0	57	15	173	11	0	199	43	27	73	0	143	7	164	12	0	183	582	0
17:30	17	30	1	0	48	15	156	10	0	181	48	31	67	0	146	7	149	27	0	183	558	0
17:45	15	29	3	0	47	16	180	13	1	210	34	25	64	0	123	3	160	19	1	183	563	2
Total	75	117	8	0	200	67	658	50	1	776	175	112	269	0	556	22	620	79	1	722	2254	2
Grand Total	115	209	16	0	340	130	1325	89	2	1546	294	214	525	0	1033	28	1324	145	3	1500	4419	5
Apprch %	33.8%	61.5%	4.7%	0.0%		8.4%	85.7%	5.8%	0.1%		28.5%	20.7%	50.8%	0.0%		1.9%	88.3%	9.7%	0.2%			
Total %	2.6%	4.7%	0.4%	0.0%	7.7%	2.9%	30.0%	2.0%	0.0%	35.0%	6.7%	4.8%	11.9%	0.0%	23.4%	0.6%	30.0%	3.3%	0.1%	33.9%	100.0%	

PM PEAK HOUR	Emery Street Southbound					40th Street Westbound					Emery Street Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	20	28	0	0	48	21	149	16	0	186	50	29	65	0	144	5	147	21	0	173	551
17:15	23	30	4	0	57	15	173	11	0	199	43	27	73	0	143	7	164	12	0	183	582
17:30	17	30	1	0	48	15	156	10	0	181	48	31	67	0	146	7	149	27	0	183	558
17:45	15	29	3	0	47	16	180	13	1	210	34	25	64	0	123	3	160	19	1	183	563
Total Volume	75	117	8	0	200	67	658	50	1	776	175	112	269	0	556	22	620	79	1	722	2254
% App Total	37.5%	58.5%	4.0%	0.0%		8.6%	84.8%	6.4%	0.1%		31.5%	20.1%	48.4%	0.0%		3.0%	85.9%	10.9%	0.1%		
PHF	.815	.975	.500	.000	.877	.798	.914	.781	.250	.924	.875	.903	.921	.000	.952	.786	.945	.731	.250	.986	.968

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-027 San Pablo Avenue-40th Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					40th Street Westbound					San Pablo Avenue Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	39	157	41	0	237	12	111	33	0	156	99	135	10	0	244	42	124	76	0	242	879	0
15:15	24	153	51	0	228	8	86	43	0	137	120	120	7	0	247	34	137	85	0	256	868	0
15:30	35	181	39	0	255	16	85	20	0	121	124	132	5	0	261	34	130	77	0	241	878	0
15:45	28	125	52	0	205	13	100	34	0	147	111	130	8	0	249	36	148	89	0	273	874	0
Total	126	616	183	0	925	49	382	130	0	561	454	517	30	0	1001	146	539	327	0	1012	3499	0
16:00	39	174	47	0	260	6	107	22	0	135	111	138	12	0	261	36	142	82	0	260	916	0
16:15	37	152	43	0	232	9	101	30	0	140	105	122	3	0	230	28	125	81	0	234	836	0
16:30	34	151	35	0	220	16	101	23	0	140	99	133	13	0	245	36	131	84	0	251	856	0
16:45	40	139	37	0	216	13	79	30	0	122	112	100	11	0	223	51	141	100	0	292	853	0
Total	150	616	162	0	928	44	388	105	0	537	427	493	39	0	959	151	539	347	0	1037	3461	0
Grand Total	276	1232	345	0	1853	93	770	235	0	1098	881	1010	69	0	1960	297	1078	674	0	2049	6960	0
Apprch %	14.9%	66.5%	18.6%	0.0%		8.5%	70.1%	21.4%	0.0%		44.9%	51.5%	3.5%	0.0%		14.5%	52.6%	32.9%	0.0%			
Total %	4.0%	17.7%	5.0%	0.0%	26.6%	1.3%	11.1%	3.4%	0.0%	15.8%	12.7%	14.5%	1.0%	0.0%	28.2%	4.3%	15.5%	9.7%	0.0%	29.4%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					40th Street Westbound					San Pablo Avenue Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	24	153	51	0	228	8	86	43	0	137	120	120	7	0	247	34	137	85	0	256	868
15:30	35	181	39	0	255	16	85	20	0	121	124	132	5	0	261	34	130	77	0	241	878
15:45	28	125	52	0	205	13	100	34	0	147	111	130	8	0	249	36	148	89	0	273	874
16:00	39	174	47	0	260	6	107	22	0	135	111	138	12	0	261	36	142	82	0	260	916
Total Volume	126	633	189	0	948	43	378	119	0	540	466	520	32	0	1018	140	557	333	0	1030	3536
% App Total	13.3%	66.8%	19.9%	0.0%		8.0%	70.0%	22.0%	0.0%		45.8%	51.1%	3.1%	0.0%		13.6%	54.1%	32.3%	0.0%		
PHF	.808	.874	.909	.000	.912	.672	.883	.692	.000	.918	.940	.942	.667	.000	.975	.972	.941	.935	.000	.943	.965

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-027 San Pablo Avenue-40th Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					40th Street Westbound					San Pablo Avenue Northbound					40th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	29	165	27	0	221	7	121	24	0	152	65	156	3	0	224	48	137	79	0	264	861	0
16:15	34	190	24	0	248	10	81	40	0	131	65	183	4	0	252	54	141	51	0	246	877	0
16:30	45	183	25	0	253	10	102	34	0	146	69	176	7	0	252	51	145	53	0	249	900	0
16:45	36	177	31	0	244	13	98	41	0	152	69	192	7	0	268	51	136	51	0	238	902	0
Total	144	715	107	0	966	40	402	139	0	581	268	707	21	0	996	204	559	234	0	997	3540	0
17:00	46	204	26	0	276	13	89	35	0	137	66	212	6	0	284	45	124	50	0	219	916	0
17:15	37	182	22	0	241	10	102	43	0	155	71	199	11	0	281	58	138	66	0	262	939	0
17:30	47	191	17	0	255	14	107	40	0	161	63	188	6	0	257	54	145	42	0	241	914	0
17:45	45	184	25	0	254	14	100	39	0	153	88	171	6	0	265	54	149	47	0	250	922	0
Total	175	761	90	0	1026	51	398	157	0	606	288	770	29	0	1087	211	556	205	0	972	3691	0
Grand Total	319	1476	197	0	1992	91	800	296	0	1187	556	1477	50	0	2083	415	1115	439	0	1969	7231	0
Apprch %	16.0%	74.1%	9.9%	0.0%		7.7%	67.4%	24.9%	0.0%		26.7%	70.9%	2.4%	0.0%		21.1%	56.6%	22.3%	0.0%			
Total %	4.4%	20.4%	2.7%	0.0%	27.5%	1.3%	11.1%	4.1%	0.0%	16.4%	7.7%	20.4%	0.7%	0.0%	28.8%	5.7%	15.4%	6.1%	0.0%	27.2%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					40th Street Westbound					San Pablo Avenue Northbound					40th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	46	204	26	0	276	13	89	35	0	137	66	212	6	0	284	45	124	50	0	219	916
17:15	37	182	22	0	241	10	102	43	0	155	71	199	11	0	281	58	138	66	0	262	939
17:30	47	191	17	0	255	14	107	40	0	161	63	188	6	0	257	54	145	42	0	241	914
17:45	45	184	25	0	254	14	100	39	0	153	88	171	6	0	265	54	149	47	0	250	922
Total Volume	175	761	90	0	1026	51	398	157	0	606	288	770	29	0	1087	211	556	205	0	972	3691
% App Total	17.1%	74.2%	8.8%	0.0%		8.4%	65.7%	25.9%	0.0%		26.5%	70.8%	2.7%	0.0%		21.7%	57.2%	21.1%	0.0%		
PHF	.931	.933	.865	.000	.929	.911	.930	.913	.000	.941	.818	.908	.659	.000	.957	.909	.933	.777	.000	.927	.983

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-028 San Pablo Avenue-Park Avenue.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					Driveway Westbound					San Pablo Avenue Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	1	194	19	1	215	3	0	0	0	3	22	196	2	3	223	16	0	23	0	39	480	4
15:15	0	232	23	1	256	2	0	0	0	2	22	196	2	0	220	20	0	16	0	36	514	1
15:30	0	196	16	2	214	2	1	1	0	4	17	162	1	0	180	37	0	29	0	66	464	2
15:45	0	204	15	2	221	1	1	0	0	2	21	203	0	9	233	26	0	23	0	49	505	11
Total	1	826	73	6	906	8	2	1	0	11	82	757	5	12	856	99	0	91	0	190	1963	18
16:00	1	214	19	2	236	2	2	0	0	4	20	186	3	3	212	27	0	26	0	53	505	5
16:15	0	209	12	3	224	1	0	0	0	1	17	168	6	3	194	28	0	10	0	38	457	6
16:30	1	193	16	1	211	0	2	2	0	4	8	178	3	3	192	26	1	14	0	41	448	4
16:45	0	206	26	0	232	0	0	1	0	1	21	180	1	1	203	25	0	18	0	43	479	1
Total	2	822	73	6	903	3	4	3	0	10	66	712	13	10	801	106	1	68	0	175	1889	16
Grand Total	3	1648	146	12	1809	11	6	4	0	21	148	1469	18	22	1657	205	1	159	0	365	3852	34
Apprch %	0.2%	91.1%	8.1%	0.7%		52.4%	28.6%	19.0%	0.0%		8.9%	88.7%	1.1%	1.3%		56.2%	0.3%	43.6%	0.0%			
Total %	0.1%	42.8%	3.8%	0.3%	47.0%	0.3%	0.2%	0.1%	0.0%	0.5%	3.8%	38.1%	0.5%	0.6%	43.0%	5.3%	0.0%	4.1%	0.0%	9.5%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					Driveway Westbound					San Pablo Avenue Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	0	232	23	1	256	2	0	0	0	2	22	196	2	0	220	20	0	16	0	36	514
15:30	0	196	16	2	214	2	1	1	0	4	17	162	1	0	180	37	0	29	0	66	464
15:45	0	204	15	2	221	1	1	0	0	2	21	203	0	9	233	26	0	23	0	49	505
16:00	1	214	19	2	236	2	2	0	0	4	20	186	3	3	212	27	0	26	0	53	505
Total Volume	1	846	73	7	927	7	4	1	0	12	80	747	6	12	845	110	0	94	0	204	1988
% App Total	0.1%	91.3%	7.9%	0.8%		58.3%	33.3%	8.3%	0.0%		9.5%	88.4%	0.7%	1.4%		53.9%	0.0%	46.1%	0.0%		
PHF	.250	.912	.793	.875	.905	.875	.500	.250	.000	.750	.909	.920	.500	.333	.907	.743	.000	.810	.000	.773	.967

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-028 San Pablo Avenue-Park Avenue.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					Driveway Westbound					San Pablo Avenue Northbound					Park Avenue Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	3	202	24	2	231	1	1	1	0	3	13	219	3	3	238	39	2	28	0	69	541	5
16:15	1	202	18	1	222	1	1	0	0	2	12	275	2	1	290	12	1	28	0	41	555	2
16:30	1	231	14	0	246	1	2	1	0	4	17	261	3	4	285	40	1	30	0	71	606	4
16:45	3	228	15	1	247	0	2	3	0	5	22	269	4	1	296	33	0	21	0	54	602	2
Total	8	863	71	4	946	3	6	5	0	14	64	1024	12	9	1109	124	4	107	0	235	2304	13
17:00	1	224	19	1	245	3	1	2	0	6	21	279	2	1	303	51	0	30	0	81	635	2
17:15	0	233	25	1	259	1	0	2	0	3	14	284	3	1	302	50	1	26	0	77	641	2
17:30	1	204	16	0	221	0	1	4	0	5	16	265	5	0	286	71	1	36	0	108	620	0
17:45	0	211	11	1	223	1	1	2	0	4	9	210	1	1	221	47	8	31	0	86	534	2
Total	2	872	71	3	948	5	3	10	0	18	60	1038	11	3	1112	219	10	123	0	352	2430	6
Grand Total	10	1735	142	7	1894	8	9	15	0	32	124	2062	23	12	2221	343	14	230	0	587	4734	19
Apprch %	0.5%	91.6%	7.5%	0.4%		25.0%	28.1%	46.9%	0.0%		5.6%	92.8%	1.0%	0.5%		58.4%	2.4%	39.2%	0.0%			
Total %	0.2%	36.6%	3.0%	0.1%	40.0%	0.2%	0.2%	0.3%	0.0%	0.7%	2.6%	43.6%	0.5%	0.3%	46.9%	7.2%	0.3%	4.9%	0.0%	12.4%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					Driveway Westbound					San Pablo Avenue Northbound					Park Avenue Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	3	228	15	1	247	0	2	3	0	5	22	269	4	1	296	33	0	21	0	54	602
17:00	1	224	19	1	245	3	1	2	0	6	21	279	2	1	303	51	0	30	0	81	635
17:15	0	233	25	1	259	1	0	2	0	3	14	284	3	1	302	50	1	26	0	77	641
17:30	1	204	16	0	221	0	1	4	0	5	16	265	5	0	286	71	1	36	0	108	620
Total Volume	5	889	75	3	972	4	4	11	0	19	73	1097	14	3	1187	205	2	113	0	320	2498
% App Total	0.5%	91.5%	7.7%	0.3%		21.1%	21.1%	57.9%	0.0%		6.1%	92.4%	1.2%	0.3%		64.1%	0.6%	35.3%	0.0%		
PHF	.417	.954	.750	.750	.938	.333	.500	.688	.000	.792	.830	.966	.700	.750	.979	.722	.500	.785	.000	.741	.974

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-029 San Pablo Avenue-45th Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					Westbound					San Pablo Avenue Northbound					45th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	0	219	5	0	224	0	0	0	0	0	7	191	0	9	207	7	0	16	0	23	454	9
15:15	0	233	2	0	235	0	0	0	0	0	8	212	0	6	226	0	0	6	0	6	467	6
15:30	0	218	3	0	221	0	0	0	0	0	10	181	0	5	196	5	0	12	0	17	434	5
15:45	0	213	5	0	218	0	0	0	0	0	8	216	0	9	233	7	0	10	0	17	468	9
Total	0	883	15	0	898	0	0	0	0	0	33	800	0	29	862	19	0	44	0	63	1823	29
16:00	0	228	1	0	229	0	0	0	0	0	5	200	0	13	218	6	0	7	0	13	460	13
16:15	0	217	1	1	219	0	0	0	0	0	8	171	0	5	184	0	0	14	0	14	417	6
16:30	0	215	3	0	218	0	0	0	0	0	10	192	0	9	211	9	0	6	0	15	444	9
16:45	0	236	4	1	241	0	0	0	0	0	10	182	0	4	196	5	0	11	0	16	453	5
Total	0	896	9	2	907	0	0	0	0	0	33	745	0	31	809	20	0	38	0	58	1774	33
Grand Total	0	1779	24	2	1805	0	0	0	0	0	66	1545	0	60	1671	39	0	82	0	121	3597	62
Apprch %	0.0%	98.6%	1.3%	0.1%		0.0%	0.0%	0.0%	0.0%		3.9%	92.5%	0.0%	3.6%		32.2%	0.0%	67.8%	0.0%			
Total %	0.0%	49.5%	0.7%	0.1%	50.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	43.0%	0.0%	1.7%	46.5%	1.1%	0.0%	2.3%	0.0%	3.4%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					Westbound					San Pablo Avenue Northbound					45th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	0	233	2	0	235	0	0	0	0	0	8	212	0	6	226	0	0	6	0	6	467
15:30	0	218	3	0	221	0	0	0	0	0	10	181	0	5	196	5	0	12	0	17	434
15:45	0	213	5	0	218	0	0	0	0	0	8	216	0	9	233	7	0	10	0	17	468
16:00	0	228	1	0	229	0	0	0	0	0	5	200	0	13	218	6	0	7	0	13	460
Total Volume	0	892	11	0	903	0	0	0	0	0	31	809	0	33	873	18	0	35	0	53	1829
% App Total	0.0%	98.8%	1.2%	0.0%		0.0%	0.0%	0.0%	0.0%		3.6%	92.7%	0.0%	3.8%		34.0%	0.0%	66.0%	0.0%		
PHF	.000	.957	.550	.000	.961	.000	.000	.000	.000	.000	.775	.936	.000	.635	.937	.643	.000	.729	.000	.779	.977

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-029 San Pablo Avenue-45th Street.ppd
Date : 1/29/2015

Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					Westbound					San Pablo Avenue Northbound					45th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	0	226	8	0	234	0	0	0	0	0	13	238	0	3	254	11	0	26	0	37	525	3
16:15	0	211	2	1	214	0	0	0	0	0	14	260	0	8	282	13	0	14	0	27	523	9
16:30	0	276	6	0	282	0	0	0	0	0	14	249	0	9	272	9	0	18	0	27	581	9
16:45	0	238	13	0	251	0	0	0	0	0	32	257	0	6	295	9	0	19	0	28	574	6
Total	0	951	29	1	981	0	0	0	0	0	73	1004	0	26	1103	42	0	77	0	119	2203	27
17:00	0	239	10	1	250	0	0	0	0	0	11	297	0	6	314	16	0	24	0	40	604	7
17:15	0	243	5	0	248	0	0	0	0	0	13	296	0	10	319	11	0	19	0	30	597	10
17:30	0	244	6	0	250	0	0	0	0	0	17	284	0	2	303	16	0	26	0	42	595	2
17:45	0	219	4	0	223	0	0	0	0	0	18	285	0	7	310	12	0	21	0	33	566	7
Total	0	945	25	1	971	0	0	0	0	0	59	1162	0	25	1246	55	0	90	0	145	2362	26
Grand Total	0	1896	54	2	1952	0	0	0	0	0	132	2166	0	51	2349	97	0	167	0	264	4565	53
Apprch %	0.0%	97.1%	2.8%	0.1%		0.0%	0.0%	0.0%	0.0%		5.6%	92.2%	0.0%	2.2%		36.7%	0.0%	63.3%	0.0%			
Total %	0.0%	41.5%	1.2%	0.0%	42.8%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	47.4%	0.0%	1.1%	51.5%	2.1%	0.0%	3.7%	0.0%	5.8%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					Westbound					San Pablo Avenue Northbound					45th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	238	13	0	251	0	0	0	0	0	32	257	0	6	295	9	0	19	0	28	574
17:00	0	239	10	1	250	0	0	0	0	0	11	297	0	6	314	16	0	24	0	40	604
17:15	0	243	5	0	248	0	0	0	0	0	13	296	0	10	319	11	0	19	0	30	597
17:30	0	244	6	0	250	0	0	0	0	0	17	284	0	2	303	16	0	26	0	42	595
Total Volume	0	964	34	1	999	0	0	0	0	0	73	1134	0	24	1231	52	0	88	0	140	2370
% App Total	0.0%	96.5%	3.4%	0.1%		0.0%	0.0%	0.0%	0.0%		5.9%	92.1%	0.0%	1.9%		37.1%	0.0%	62.9%	0.0%		
PHF	.000	.988	.654	.250	.995	.000	.000	.000	.000	.000	.570	.955	.000	.600	.965	.813	.000	.846	.000	.833	.981

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-030 San Pablo Avenue-53rd Street.ppd
Date : 1/31/2015

Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					53rd Street Westbound					San Pablo Avenue Northbound					53rd Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
15:00	4	215	2	1	222	4	2	2	0	8	3	184	4	1	192	8	1	6	1	16	438	3
15:15	5	233	5	1	244	2	0	3	0	5	2	203	2	0	207	1	1	8	0	10	466	1
15:30	5	224	0	2	231	2	2	0	0	4	3	190	1	0	194	4	3	10	0	17	446	2
15:45	8	217	1	4	230	5	0	6	0	11	5	208	1	0	214	4	0	5	0	9	464	4
Total	22	889	8	8	927	13	4	11	0	28	13	785	8	1	807	17	5	29	1	52	1814	10
16:00	10	215	3	3	231	4	4	4	0	12	7	196	0	0	203	4	3	6	0	13	459	3
16:15	3	232	4	4	243	4	0	2	0	6	1	173	5	0	179	3	1	4	1	9	437	5
16:30	2	231	2	2	237	3	2	2	0	7	4	207	2	0	213	3	1	4	0	8	465	2
16:45	1	210	2	4	217	8	4	1	0	13	5	161	5	0	171	3	1	5	0	9	410	4
Total	16	888	11	13	928	19	10	9	0	38	17	737	12	0	766	13	6	19	1	39	1771	14
Grand Total	38	1777	19	21	1855	32	14	20	0	66	30	1522	20	1	1573	30	11	48	2	91	3585	24
Apprch %	2.0%	95.8%	1.0%	1.1%		48.5%	21.2%	30.3%	0.0%		1.9%	96.8%	1.3%	0.1%		33.0%	12.1%	52.7%	2.2%			
Total %	1.1%	49.6%	0.5%	0.6%	51.7%	0.9%	0.4%	0.6%	0.0%	1.8%	0.8%	42.5%	0.6%	0.0%	43.9%	0.8%	0.3%	1.3%	0.1%	2.5%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					53rd Street Westbound					San Pablo Avenue Northbound					53rd Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	5	233	5	1	244	2	0	3	0	5	2	203	2	0	207	1	1	8	0	10	466
15:30	5	224	0	2	231	2	2	0	0	4	3	190	1	0	194	4	3	10	0	17	446
15:45	8	217	1	4	230	5	0	6	0	11	5	208	1	0	214	4	0	5	0	9	464
16:00	10	215	3	3	231	4	4	4	0	12	7	196	0	0	203	4	3	6	0	13	459
Total Volume	28	889	9	10	936	13	6	13	0	32	17	797	4	0	818	13	7	29	0	49	1835
% App Total	3.0%	95.0%	1.0%	1.1%		40.6%	18.8%	40.6%	0.0%		2.1%	97.4%	0.5%	0.0%		26.5%	14.3%	59.2%	0.0%		
PHF	.700	.954	.450	.625	.959	.650	.375	.542	.000	.667	.607	.958	.500	.000	.956	.813	.583	.725	.000	.721	.984

ALL TRAFFIC DATA

City of Emeryville
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7050-030 San Pablo Avenue-53rd Street.ppd
Date : 1/29/2015

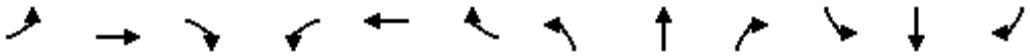
Unshifted Count = All Vehicles

	San Pablo Avenue Southbound					53rd Street Westbound					San Pablo Avenue Northbound					53rd Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
16:00	7	217	9	3	236	6	2	1	0	9	7	240	5	0	252	7	4	11	0	22	519	3
16:15	3	208	4	1	216	1	2	6	0	9	12	251	3	0	266	7	2	13	0	22	513	1
16:30	2	288	2	2	294	4	1	3	0	8	4	269	3	0	276	5	4	11	0	20	598	2
16:45	3	236	1	4	244	5	0	3	0	8	7	239	3	1	250	4	2	11	0	17	519	5
Total	15	949	16	10	990	16	5	13	0	34	30	999	14	1	1044	23	12	46	0	81	2149	11
17:00	2	228	1	1	232	4	2	2	0	8	11	292	3	0	306	12	4	22	0	38	584	1
17:15	6	238	6	2	252	0	5	2	0	7	8	312	4	1	325	5	7	18	0	30	614	3
17:30	3	261	10	0	274	2	4	1	0	7	6	312	6	0	324	11	4	17	0	32	637	0
17:45	8	218	9	4	239	3	3	4	0	10	6	273	7	0	286	5	5	14	0	24	559	4
Total	19	945	26	7	997	9	14	9	0	32	31	1189	20	1	1241	33	20	71	0	124	2394	8
Grand Total	34	1894	42	17	1987	25	19	22	0	66	61	2188	34	2	2285	56	32	117	0	205	4543	19
Apprch %	1.7%	95.3%	2.1%	0.9%		37.9%	28.8%	33.3%	0.0%		2.7%	95.8%	1.5%	0.1%		27.3%	15.6%	57.1%	0.0%			
Total %	0.7%	41.7%	0.9%	0.4%	43.7%	0.6%	0.4%	0.5%	0.0%	1.5%	1.3%	48.2%	0.7%	0.0%	50.3%	1.2%	0.7%	2.6%	0.0%	4.5%	100.0%	

PM PEAK HOUR	San Pablo Avenue Southbound					53rd Street Westbound					San Pablo Avenue Northbound					53rd Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	2	228	1	1	232	4	2	2	0	8	11	292	3	0	306	12	4	22	0	38	584
17:15	6	238	6	2	252	0	5	2	0	7	8	312	4	1	325	5	7	18	0	30	614
17:30	3	261	10	0	274	2	4	1	0	7	6	312	6	0	324	11	4	17	0	32	637
17:45	8	218	9	4	239	3	3	4	0	10	6	273	7	0	286	5	5	14	0	24	559
Total Volume	19	945	26	7	997	9	14	9	0	32	31	1189	20	1	1241	33	20	71	0	124	2394
% App Total	1.9%	94.8%	2.6%	0.7%		28.1%	43.8%	28.1%	0.0%		2.5%	95.8%	1.6%	0.1%		26.6%	16.1%	57.3%	0.0%		
PHF	.594	.905	.650	.438	.910	.563	.700	.563	.000	.800	.705	.953	.714	.250	.955	.688	.714	.807	.000	.816	.940

APPENDIX B LOS CALCULATION WORKSHEETS

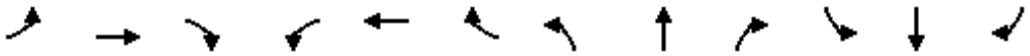




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	74	5	27	5	79	23	10	65	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1	1	80	5	29	5	86	25	11	71	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	83	32	5	111	83
Volume Left (vph)	1	80	0	5	0	11
Volume Right (vph)	1	0	29	0	25	1
Hadj (s)	-0.10	0.52	-0.61	0.53	-0.12	0.05
Departure Headway (s)	5.0	5.5	4.4	5.4	4.8	5.0
Degree Utilization, x	0.00	0.13	0.04	0.01	0.15	0.11
Capacity (veh/h)	679	624	780	642	730	692
Control Delay (s)	8.1	8.1	6.4	7.3	7.4	8.6
Approach Delay (s)	8.1	7.6		7.4		8.6
Approach LOS	A	A		A		A

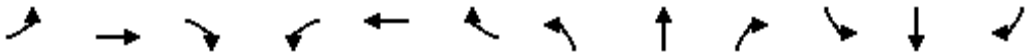
Intersection Summary				
Delay	7.8			
Level of Service	A			
Intersection Capacity Utilization	29.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	14	0	7	0	99	17	11	120	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
Hourly flow rate (vph)	0	0	0	15	0	8	0	108	18	12	130	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	23	126	142
Volume Left (vph)	0	15	0	12
Volume Right (vph)	0	8	18	0
Hadj (s)	0.00	-0.03	-0.05	0.05
Departure Headway (s)	4.5	4.4	4.0	4.1
Degree Utilization, x	0.00	0.03	0.14	0.16
Capacity (veh/h)	762	753	872	861
Control Delay (s)	7.5	7.6	7.7	7.9
Approach Delay (s)	0.0	7.6	7.7	7.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.8			
Level of Service	A			
Intersection Capacity Utilization	25.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	3	0	139	0	0	109	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	0	0	0	0	3	0	151	0	0	118	0
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	274	270	118	270	270	152	118			151		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	274	270	118	270	270	152	118			151		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	676	637	933	683	637	893	1470			1430		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	3	151	118
Volume Left	0	0	0	0
Volume Right	0	3	0	0
cSH	1700	893	1470	1430
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	9.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	9.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A	
Analysis Period (min)	15			

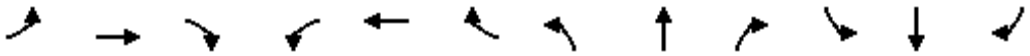


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	20	21	121	26	10	102
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	23	132	28	11	111

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	45	160	122
Volume Left (vph)	22	0	11
Volume Right (vph)	23	28	0
Hadj (s)	-0.18	-0.07	0.05
Departure Headway (s)	4.3	4.1	4.2
Degree Utilization, x	0.05	0.18	0.14
Capacity (veh/h)	770	866	838
Control Delay (s)	7.6	7.9	7.9
Approach Delay (s)	7.6	7.9	7.9
Approach LOS	A	A	A

Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

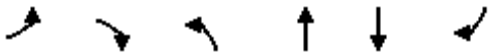
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	8	2	11	14	0	1	0	6	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	9	2	12	15	0	1	0	7	0	0	0
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	15			16			57	54	15	55	55	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	15			16			57	54	15	55	55	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	100	100	100
cM capacity (veh/h)	1603			1595			925	828	1060	928	826	1058

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	27	8	0
Volume Left	0	12	1	0
Volume Right	2	0	7	0
cSH	1603	1595	1039	1700
Volume to Capacity	0.00	0.01	0.01	0.00
Queue Length 95th (ft)	0	1	1	0
Control Delay (s)	0.0	3.2	8.5	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	3.2	8.5	0.0
Approach LOS			A	A

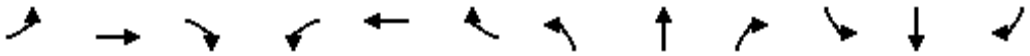
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	7	7	133	91	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	8	8	145	99	32
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	295	137	148			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	295	137	148			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	680	895	1412			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	152	130
Volume Left	18	8	0
Volume Right	8	0	32
cSH	731	1412	1700
Volume to Capacity	0.04	0.01	0.08
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.1	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.1	0.4	0.0
Approach LOS	B		

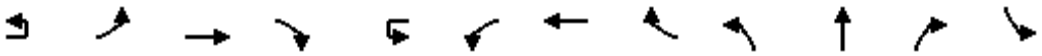
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	37	12	21	33	33	24	142	39	10	54	13
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
Hourly flow rate (vph)	16	40	13	23	36	36	26	154	42	11	59	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	70	95	223	84
Volume Left (vph)	16	23	26	11
Volume Right (vph)	13	36	42	14
Hadj (s)	-0.03	-0.15	-0.06	-0.04
Departure Headway (s)	4.7	4.5	4.3	4.5
Degree Utilization, x	0.09	0.12	0.27	0.10
Capacity (veh/h)	706	732	797	751
Control Delay (s)	8.2	8.2	8.9	8.0
Approach Delay (s)	8.2	8.2	8.9	8.0
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.5			
Level of Service	A			
Intersection Capacity Utilization	32.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	2	20	166	65	1	106	199	68	77	119	54	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	12	16	16	12
Total Lost time (s)		4.0	4.0			4.0	4.0	4.0	4.0	4.0		
Lane Util. Factor		1.00	0.95			1.00	0.95	1.00	1.00	1.00		
Frpb, ped/bikes		1.00	0.99			1.00	1.00	0.96	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	0.96			1.00	1.00	0.85	1.00	0.95		
Flt Protected		0.95	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1676	3114			1676	3353	1442	1676	1865		
Flt Permitted		0.95	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1676	3114			1676	3353	1442	1676	1865		
Peak-hour factor, PHF	0.92	0.91	0.91	0.91	0.92	0.95	0.95	0.95	0.83	0.83	0.83	0.97
Adj. Flow (vph)	2	22	182	71	1	112	209	72	93	143	65	10
RTOR Reduction (vph)	0	0	32	0	0	0	0	34	0	18	0	0
Lane Group Flow (vph)	0	24	221	0	0	113	209	38	93	190	0	0
Confl. Peds. (#/hr)		8		13		13		8	13		10	10
Confl. Bikes (#/hr)				8				4			30	
Bus Blockages (#/hr)	0	0	8	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Turn Type	Prot	Prot	NA		Prot	Prot	NA	Perm	Split	NA		Split
Protected Phases	1	1	6		5	5	2		7	7		8
Permitted Phases								2				
Actuated Green, G (s)		3.3	42.4			10.5	49.6	49.6	13.7	13.7		
Effective Green, g (s)		3.8	43.4			11.0	50.6	50.6	13.2	13.2		
Actuated g/C Ratio		0.04	0.46			0.12	0.53	0.53	0.14	0.14		
Clearance Time (s)		4.5	5.0			4.5	5.0	5.0	3.5	3.5		
Vehicle Extension (s)		2.5	3.0			2.5	3.0	3.0	2.5	2.5		
Lane Grp Cap (vph)		67	1422			194	1785	768	232	259		
v/s Ratio Prot		0.01	c0.07			c0.07	0.06		0.06	c0.10		
v/s Ratio Perm								0.03				
v/c Ratio		0.36	0.16			0.58	0.12	0.05	0.40	0.73		
Uniform Delay, d1		44.4	15.1			39.8	11.1	10.7	37.3	39.2		
Progression Factor		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		2.4	0.2			3.7	0.1	0.1	0.8	9.7		
Delay (s)		46.8	15.3			43.5	11.2	10.8	38.1	48.9		
Level of Service		D	B			D	B	B	D	D		
Approach Delay (s)			18.0				20.4			45.6		
Approach LOS			B				C			D		

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	61	6
Ideal Flow (vphpl)	1800	1800
Lane Width	12	12
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	0.99	
Satd. Flow (prot)	1537	
Flt Permitted	0.99	
Satd. Flow (perm)	1537	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	63	6
RTOR Reduction (vph)	4	0
Lane Group Flow (vph)	75	0
Confl. Peds. (#/hr)		13
Confl. Bikes (#/hr)		24
Bus Blockages (#/hr)	0	0
Parking (#/hr)	2	2
Turn Type	NA	
Protected Phases	8	
Permitted Phases		
Actuated Green, G (s)	11.9	
Effective Green, g (s)	11.4	
Actuated g/C Ratio	0.12	
Clearance Time (s)	3.5	
Vehicle Extension (s)	2.5	
Lane Grp Cap (vph)	184	
v/s Ratio Prot	c0.05	
v/s Ratio Perm		
v/c Ratio	0.41	
Uniform Delay, d1	38.7	
Progression Factor	1.00	
Incremental Delay, d2	1.1	
Delay (s)	39.8	
Level of Service	D	
Approach Delay (s)	39.8	
Approach LOS	D	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	3	91	407	399	0	441	1254	0	0	0	582	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0			4.0	4.0				4.0	
Lane Util. Factor		1.00	0.95			0.91	0.91				*0.75	
Frpb, ped/bikes		1.00	0.97			0.97	0.94				1.00	
Flpb, ped/bikes		1.00	1.00			1.00	1.00				1.00	
Frt		1.00	0.93			0.92	0.85				1.00	
Flt Protected		0.95	1.00			1.00	1.00				0.95	
Satd. Flow (prot)		1676	3003			2860	1283				2515	
Flt Permitted		0.95	1.00			1.00	1.00				0.95	
Satd. Flow (perm)		1676	3003			2860	1283				2515	
Peak-hour factor, PHF	0.92	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92
Adj. Flow (vph)	3	95	424	416	0	459	1306	0	0	0	633	0
RTOR Reduction (vph)	0	0	141	0	0	169	437	0	0	0	0	0
Lane Group Flow (vph)	0	98	699	0	0	812	347	0	0	0	633	0
Confl. Peds. (#/hr)		32		45	45		32	21				
Confl. Bikes (#/hr)				19			8					
Turn Type	Prot	Prot	NA			NA	Perm				Prot	
Protected Phases	5	5	2			6					4	
Permitted Phases							6					
Actuated Green, G (s)		18.5	72.5			50.5	50.5				33.0	
Effective Green, g (s)		18.0	72.5			50.5	50.5				33.5	
Actuated g/C Ratio		0.16	0.64			0.44	0.44				0.29	
Clearance Time (s)		3.5	4.0			4.0	4.0				4.5	
Vehicle Extension (s)		2.0	4.0			4.0	4.0				2.5	
Lane Grp Cap (vph)		264	1909			1266	568				739	
v/s Ratio Prot		0.06	c0.23			c0.28					c0.25	
v/s Ratio Perm							0.27					
v/c Ratio		0.37	0.37			0.64	0.61				0.86	
Uniform Delay, d1		42.9	9.8			24.7	24.3				38.0	
Progression Factor		1.00	1.00			0.52	4.31				1.00	
Incremental Delay, d2		0.3	0.5			1.6	3.2				9.5	
Delay (s)		43.3	10.4			14.4	107.8				47.5	
Level of Service		D	B			B	F				D	
Approach Delay (s)			13.8			55.9			0.0			42.3
Approach LOS			B			E			A			D

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	251
Ideal Flow (vphpl)	1800
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.96
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1444
Flt Permitted	1.00
Satd. Flow (perm)	1444
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	273
RTOR Reduction (vph)	193
Lane Group Flow (vph)	80
Confl. Peds. (#/hr)	21
Confl. Bikes (#/hr)	4
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	33.0
Effective Green, g (s)	33.5
Actuated g/C Ratio	0.29
Clearance Time (s)	4.5
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	424
v/s Ratio Prot	
v/s Ratio Perm	0.06
v/c Ratio	0.19
Uniform Delay, d1	30.1
Progression Factor	1.00
Incremental Delay, d2	0.2
Delay (s)	30.3
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	1	147	844	0	0	1205	337	491	289	663	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0			4.0	4.0	4.0	4.0	4.0		
Lane Util. Factor		1.00	0.91			0.91	1.00	0.95	0.91	0.95		
Frpb, ped/bikes		1.00	1.00			1.00	0.92	1.00	1.00	1.00		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	0.95	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	1.00	1.00		
Satd. Flow (prot)		1676	4818			4818	1383	1593	1519	1425		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	1.00	1.00		
Satd. Flow (perm)		1676	4818			4818	1383	1593	1519	1425		
Peak-hour factor, PHF	0.92	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00
Adj. Flow (vph)	1	153	879	0	0	1255	351	540	318	729	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	209	0	15	20	0	0
Lane Group Flow (vph)	0	154	879	0	0	1255	142	486	539	527	0	0
Confl. Peds. (#/hr)		24		54	54		24					
Confl. Bikes (#/hr)				20			9					
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	custom		
Protected Phases	5	5	2			6		4	4	4 1		
Permitted Phases							6					
Actuated Green, G (s)		18.5	46.0			43.0	43.0	41.0	41.0	60.0		
Effective Green, g (s)		18.0	46.0			43.0	43.0	41.0	41.0	60.0		
Actuated g/C Ratio		0.16	0.40			0.38	0.38	0.36	0.36	0.53		
Clearance Time (s)		3.5	4.0			4.0	4.0	4.0	4.0			
Vehicle Extension (s)		2.0	4.0			4.0	4.0	3.0	3.0			
Lane Grp Cap (vph)		264	1944			1817	521	572	546	750		
v/s Ratio Prot		c0.09	0.18			c0.26		0.31	c0.35	0.37		
v/s Ratio Perm							0.10					
v/c Ratio		0.58	0.45			0.69	0.27	0.85	0.99	0.70		
Uniform Delay, d1		44.5	24.8			29.9	24.7	33.7	36.2	20.3		
Progression Factor		0.75	0.48			0.69	0.46	1.00	1.00	1.00		
Incremental Delay, d2		7.2	0.6			1.7	1.0	11.3	34.7	3.0		
Delay (s)		40.5	12.4			22.3	12.3	45.0	70.9	23.3		
Level of Service		D	B			C	B	D	E	C		
Approach Delay (s)			16.6			20.1			46.6			0.0
Approach LOS			B			C			D			A

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1800
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	491	46	1	282	73	18	380
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0			4.2	4.2		4.2
Lane Util. Factor	0.97			0.95	1.00		0.95
Frpb, ped/bikes	0.99			1.00	0.97		1.00
Flpb, ped/bikes	1.00			1.00	1.00		1.00
Frt	0.99			1.00	0.85		1.00
Flt Protected	0.96			1.00	1.00		1.00
Satd. Flow (prot)	3212			3352	1455		3345
Flt Permitted	0.96			0.95	1.00		0.93
Satd. Flow (perm)	3212			3200	1455		3127
Peak-hour factor, PHF	0.89	0.89	0.92	0.93	0.93	0.93	0.93
Adj. Flow (vph)	552	52	1	303	78	19	409
RTOR Reduction (vph)	7	0	0	0	41	0	0
Lane Group Flow (vph)	597	0	0	304	37	0	428
Confl. Peds. (#/hr)		19			4	4	
Confl. Bikes (#/hr)		9			2		
Turn Type	Prot		Perm	NA	Perm	Perm	NA
Protected Phases	4			2			6
Permitted Phases			2		2	6	
Actuated Green, G (s)	52.5			54.3	54.3		54.3
Effective Green, g (s)	52.0			53.8	53.8		53.8
Actuated g/C Ratio	0.46			0.47	0.47		0.47
Clearance Time (s)	3.5			3.7	3.7		3.7
Vehicle Extension (s)	2.5			3.0	3.0		3.0
Lane Grp Cap (vph)	1465			1510	686		1475
v/s Ratio Prot	c0.19						
v/s Ratio Perm				0.09	0.03		c0.14
v/c Ratio	0.41			0.20	0.05		0.29
Uniform Delay, d1	20.7			17.6	16.3		18.4
Progression Factor	0.49			0.17	0.01		1.00
Incremental Delay, d2	0.8			0.3	0.1		0.5
Delay (s)	11.0			3.2	0.4		18.9
Level of Service	B			A	A		B
Approach Delay (s)	11.0			2.6			18.9
Approach LOS	B			A			B

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



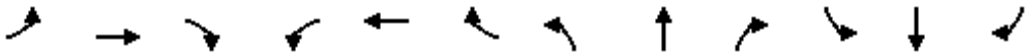
Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (vph)	1	56	38	388	381	122	131
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)		1676	1500	3252	1765	1765	1500
Flt Permitted		0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)		1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.92	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	1	69	47	422	414	139	149
RTOR Reduction (vph)	0	0	10	0	0	0	134
Lane Group Flow (vph)	0	70	37	422	414	139	15
Confl. Peds. (#/hr)			7	24			24
Confl. Bikes (#/hr)			1				11
Turn Type	Prot	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4!	4	4 5	5	2	6	4!
Permitted Phases							
Actuated Green, G (s)		12.2	89.9	74.2	94.8	17.1	12.2
Effective Green, g (s)		11.7	89.4	73.7	94.3	16.6	11.7
Actuated g/C Ratio		0.10	0.78	0.65	0.83	0.15	0.10
Clearance Time (s)		3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		172	1176	2102	1459	257	153
v/s Ratio Prot		c0.04	0.02	0.13	c0.23	c0.08	0.01
v/s Ratio Perm							
v/c Ratio		0.41	0.03	0.20	0.28	0.54	0.10
Uniform Delay, d1		47.9	2.7	8.2	2.2	45.2	46.4
Progression Factor		1.45	3.42	0.17	0.13	1.00	1.00
Incremental Delay, d2		1.6	0.0	0.2	0.5	2.3	0.3
Delay (s)		71.2	9.3	1.6	0.7	47.5	46.7
Level of Service		E	A	A	A	D	D
Approach Delay (s)		46.4			1.2	47.1	
Approach LOS		D			A	D	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	285	630	594	227	747	98	140	37	103	147	159	580
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3058	1365	1676	3353	1480	1593	1629	1479		1723	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3058	1365	1676	3353	1480	1593	1629	1479		1723	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	328	724	683	236	778	102	156	41	114	163	177	644
RTOR Reduction (vph)	0	28	118	0	0	52	0	0	101	0	0	87
Lane Group Flow (vph)	328	949	312	236	778	50	98	99	13	0	340	557
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	987	592	249	1102	486	177	181	164		453	1106
v/s Ratio Prot	0.10	c0.31	0.23	c0.14	0.23		c0.06	0.06			c0.20	0.21
v/s Ratio Perm						0.03			0.01			
v/c Ratio	0.65	0.96	0.53	0.95	0.71	0.10	0.55	0.55	0.08		0.75	0.50
Uniform Delay, d1	45.2	37.9	23.7	48.1	33.4	26.6	48.0	47.9	45.4		38.6	24.4
Progression Factor	0.96	0.69	0.40	0.78	0.71	0.55	1.00	1.00	1.00		0.86	0.32
Incremental Delay, d2	5.3	18.5	0.5	38.1	3.3	0.4	3.0	2.7	0.1		10.4	1.6
Delay (s)	48.7	44.6	10.1	75.8	27.1	15.0	50.9	50.6	45.5		43.5	9.3
Level of Service	D	D	B	E	C	B	D	D	D		D	A
Approach Delay (s)		36.8			36.3			48.9			21.1	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

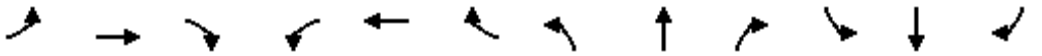


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	103	576	39	0	84	0	632	28	4	161	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	0.99	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3188	2250	1676		1463		3326			3347	
Flt Permitted	0.95	0.99	1.00	0.95		1.00		1.00			0.94	
Satd. Flow (perm)	1526	3188	2250	1676		1463		3326			3148	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	117	655	48	0	102	0	687	30	5	187	0
RTOR Reduction (vph)	0	0	452	0	0	93	0	2	0	0	0	0
Lane Group Flow (vph)	65	137	203	48	0	9	0	715	0	0	192	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA		Perm	NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3				6		
Actuated Green, G (s)	11.4	11.4	36.4	10.3		10.3		55.9			31.1	
Effective Green, g (s)	10.4	10.4	35.4	9.8		9.8		55.4			30.6	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.49			0.27	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	139	290	698	144		125		1616			844	
v/s Ratio Prot	0.04	c0.04	0.09	c0.03				c0.21				
v/s Ratio Perm						0.01					0.06	
v/c Ratio	0.47	0.47	0.29	0.33		0.07		0.44			0.23	
Uniform Delay, d1	49.2	49.2	29.8	49.0		47.9		19.2			32.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.52	
Incremental Delay, d2	1.8	0.9	0.2	1.0		0.2		0.9			0.6	
Delay (s)	51.0	50.1	30.0	50.0		48.1		20.1			17.6	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.8			48.7			20.1			17.6	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	75	2	79	10	568	101	92	644	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3304	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3304	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	97	3	103	10	580	103	96	671	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	59	0	4	0
Lane Group Flow (vph)	0	29	1	97	24	0	10	580	44	96	705	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.9	31.9	8.5	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.4	32.4	8.0	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1448	624	178	1722	
v/s Ratio Prot		c0.02			0.02		0.01	0.17		c0.06	c0.21	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.25	0.08		0.34	0.40	0.07	0.54	0.41	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	14.6	12.5	31.8	10.9	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	0.8	0.2	1.6	0.7	
Delay (s)		35.8	34.2	25.3	24.4		39.0	15.5	12.7	33.3	11.6	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			15.4			14.2	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	532	175	73	405	50	341	392	58	122	249	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3189		1676	3267		1676	1720		1664	1765	1450
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.50	1.00	1.00
Satd. Flow (perm)	1676	3189		1676	3267		1676	1720		869	1765	1450
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	149	611	201	76	422	52	352	404	60	134	274	201
RTOR Reduction (vph)	0	29	0	0	8	0	0	4	0	0	0	80
Lane Group Flow (vph)	149	783	0	76	466	0	352	460	0	134	274	121
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	15.5	33.0		8.5	26.0		27.2	46.8		30.3	30.1	45.6
Effective Green, g (s)	15.0	33.5		8.0	26.5		26.7	46.3		29.8	29.6	44.6
Actuated g/C Ratio	0.13	0.29		0.07	0.23		0.23	0.41		0.26	0.26	0.39
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	220	937		117	759		392	698		296	458	567
v/s Ratio Prot	0.09	c0.25		0.05	c0.14		c0.21	c0.27		0.04	c0.16	0.03
v/s Ratio Perm										0.08		0.06
v/c Ratio	0.68	0.84		0.65	0.61		0.90	0.66		0.45	0.60	0.21
Uniform Delay, d1	47.2	37.7		51.6	39.2		42.3	27.4		36.8	37.0	23.0
Progression Factor	0.55	0.67		1.00	1.00		1.00	1.16		1.00	1.00	1.00
Incremental Delay, d2	3.9	3.2		11.8	1.5		21.4	4.6		1.1	5.7	0.2
Delay (s)	30.0	28.6		63.4	40.6		63.7	36.3		37.9	42.7	23.2
Level of Service	C	C		E	D		E	D		D	D	C
Approach Delay (s)		28.8			43.8			48.1			35.2	
Approach LOS		C			D			D			D	

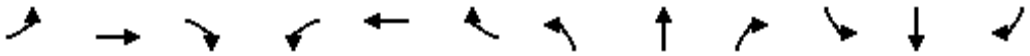
Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	715	0	0	466	0	96
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	777	0	0	507	0	104
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			777		1030	389
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			777		1030	389
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	83
cM capacity (veh/h)			835		229	610

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	389	389	253	253	104
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	104
cSH	1700	1700	1700	1700	610
Volume to Capacity	0.23	0.23	0.15	0.15	0.17
Queue Length 95th (ft)	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	12.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.1
Approach LOS					B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	55	0	27	1	236	87	20	95	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
Hourly flow rate (vph)	1	1	5	60	0	29	1	257	95	22	103	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	60	29	1	351	126
Volume Left (vph)	1	60	0	1	0	22
Volume Right (vph)	5	0	29	0	95	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.15	0.06
Departure Headway (s)	5.5	6.2	5.0	5.4	4.7	5.2
Degree Utilization, x	0.01	0.10	0.04	0.00	0.46	0.18
Capacity (veh/h)	591	535	656	644	743	661
Control Delay (s)	8.5	8.7	7.0	7.2	10.6	9.4
Approach Delay (s)	8.5	8.2		10.6		9.4
Approach LOS	A	A		B		A

Intersection Summary				
Delay	9.9			
Level of Service	A			
Intersection Capacity Utilization	40.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	1	106	44	37	12	8	18	28	658	53	1	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0		4.0	4.0			4.2			
Lane Util. Factor		1.00	1.00		1.00	1.00			0.95			
Frpb, ped/bikes		1.00	0.97		1.00	0.98			1.00			
Flpb, ped/bikes		0.99	1.00		0.97	1.00			1.00			
Frt		1.00	0.93		1.00	0.90			0.99			
Flt Protected		0.95	1.00		0.95	1.00			1.00			
Satd. Flow (prot)		1659	1591		1633	1544			3259			
Flt Permitted		0.73	1.00		0.69	1.00			0.93			
Satd. Flow (perm)		1282	1591		1187	1544			3037			
Peak-hour factor, PHF	0.92	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.92	0.96
Adj. Flow (vph)	1	134	56	47	16	11	24	33	774	62	1	11
RTOR Reduction (vph)	0	0	38	0	0	19	0	0	6	0	0	0
Lane Group Flow (vph)	0	135	65	0	16	16	0	0	863	0	0	0
Confl. Peds. (#/hr)		16		22	22		16	11		16		16
Confl. Bikes (#/hr)				12			12			10		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	6	0	0	0
Turn Type	Perm	Perm	NA		Perm	NA		Perm	NA		Perm	Perm
Protected Phases			8			4			6			
Permitted Phases	8	8			4			6			2	2
Actuated Green, G (s)		11.8	11.8		11.8	11.8			38.0			
Effective Green, g (s)		11.3	11.3		11.3	11.3			37.5			
Actuated g/C Ratio		0.20	0.20		0.20	0.20			0.66			
Clearance Time (s)		3.5	3.5		3.5	3.5			3.7			
Vehicle Extension (s)		2.5	2.5		2.5	2.5			2.5			
Lane Grp Cap (vph)		254	315		235	306			1998			
v/s Ratio Prot			0.04			0.01						
v/s Ratio Perm		c0.11			0.01				c0.28			
v/c Ratio		0.53	0.21		0.07	0.05			0.43			
Uniform Delay, d1		20.5	19.1		18.6	18.5			4.7			
Progression Factor		1.00	1.00		1.00	1.00			0.61			
Incremental Delay, d2		1.7	0.2		0.1	0.1			0.6			
Delay (s)		22.1	19.3		18.7	18.6			3.5			
Level of Service		C	B		B	B			A			
Approach Delay (s)			20.9			18.6			3.5			
Approach LOS			C			B			A			

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	439	45
Ideal Flow (vphpl)	1800	1800
Total Lost time (s)	4.2	4.2
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	0.97
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1720	1459
Flt Permitted	0.98	1.00
Satd. Flow (perm)	1685	1459
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	457	47
RTOR Reduction (vph)	0	7
Lane Group Flow (vph)	469	40
Confl. Peds. (#/hr)		11
Confl. Bikes (#/hr)		18
Bus Blockages (#/hr)	6	0
Turn Type	NA	Perm
Protected Phases	2	
Permitted Phases		2
Actuated Green, G (s)	38.0	38.0
Effective Green, g (s)	37.5	37.5
Actuated g/C Ratio	0.66	0.66
Clearance Time (s)	3.7	3.7
Vehicle Extension (s)	2.5	2.5
Lane Grp Cap (vph)	1108	959
v/s Ratio Prot		
v/s Ratio Perm	0.28	0.03
v/c Ratio	0.42	0.04
Uniform Delay, d1	4.6	3.4
Progression Factor	0.73	0.67
Incremental Delay, d2	0.9	0.1
Delay (s)	4.3	2.4
Level of Service	A	A
Approach Delay (s)	4.1	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Sign Control		Stop				Stop			Stop			
Volume (vph)	0	0	0	1	19	0	10	0	310	14	1	17
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
Hourly flow rate (vph)	0	0	0	0	21	0	11	0	337	15	0	18

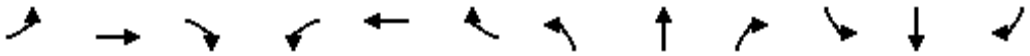
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	32	352	180
Volume Left (vph)	0	21	0	18
Volume Right (vph)	0	11	15	0
Hadj (s)	0.00	-0.04	0.01	0.05
Departure Headway (s)	5.1	5.0	4.2	4.4
Degree Utilization, x	0.00	0.04	0.41	0.22
Capacity (veh/h)	636	642	847	795
Control Delay (s)	8.1	8.2	10.0	8.6
Approach Delay (s)	0.0	8.2	10.0	8.6
Approach LOS	A	A	B	A

Intersection Summary				
Delay	9.5			
Level of Service	A			
Intersection Capacity Utilization	35.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	SBT	SBR
Lane Configurations		
Sign Control	Stop	
Volume (vph)	149	0
Peak Hour Factor	0.92	0.92
Hourly flow rate (vph)	162	0

Direction, Lane #



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	16	5	28	16	71	7	593	19	55	438	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.96		1.00	0.88		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1657	1676		1640	1501		1659	1754		1662	1717	
Flt Permitted	0.68	1.00		0.74	1.00		0.46	1.00		0.35	1.00	
Satd. Flow (perm)	1188	1676		1270	1501		802	1754		605	1717	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	42	25	8	38	22	96	8	666	21	61	487	8
RTOR Reduction (vph)	0	7	0	0	82	0	0	1	0	0	1	0
Lane Group Flow (vph)	42	26	0	38	36	0	8	686	0	61	494	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	8.6	8.6		8.6	8.6		41.2	41.2		41.2	41.2	
Effective Green, g (s)	8.1	8.1		8.1	8.1		40.7	40.7		40.7	40.7	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.71	0.71		0.71	0.71	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	168	238		180	213		572	1252		431	1225	
v/s Ratio Prot		0.02			0.02			c0.39			0.29	
v/s Ratio Perm	c0.04			0.03			0.01			0.10		
v/c Ratio	0.25	0.11		0.21	0.17		0.01	0.55		0.14	0.40	
Uniform Delay, d1	21.7	21.3		21.6	21.5		2.4	3.8		2.6	3.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.68	1.07	
Incremental Delay, d2	0.3	0.1		0.2	0.1		0.0	1.7		0.7	0.9	
Delay (s)	22.0	21.4		21.8	21.6		2.4	5.6		2.4	4.5	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		21.7			21.7			5.5			4.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	3	0	301	0	1	196	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	0	0	0	0	3	0	327	0	1	213	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	546	542	213	542	542	327	213			327		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	546	542	213	542	542	327	213			327		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	446	447	827	451	447	714	1357			1232		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	3	327	214
Volume Left	0	0	0	1
Volume Right	0	3	0	0
cSH	1700	714	1357	1232
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	10.1	0.0	0.0
Lane LOS	A	B		A
Approach Delay (s)	0.0	10.1	0.0	0.0
Approach LOS	A	B		

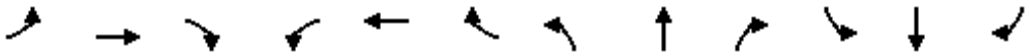
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	31	17	285	34	23	175
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	18	310	37	25	190

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	52	347	215
Volume Left (vph)	34	0	25
Volume Right (vph)	18	37	0
Hadj (s)	-0.05	-0.03	0.06
Departure Headway (s)	5.1	4.2	4.4
Degree Utilization, x	0.07	0.41	0.27
Capacity (veh/h)	634	831	783
Control Delay (s)	8.5	10.1	9.1
Approach Delay (s)	8.5	10.1	9.1
Approach LOS	A	B	A

Intersection Summary			
Delay	9.6		
Level of Service	A		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	34	12	27	25	46	8	536	24	50	413	6
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
Hourly flow rate (vph)	35	37	13	29	27	50	9	583	26	54	449	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	85	107	617	510
Volume Left (vph)	35	29	9	54
Volume Right (vph)	13	50	26	7
Hadj (s)	0.02	-0.19	0.01	0.05
Departure Headway (s)	7.2	6.9	5.4	5.6
Degree Utilization, x	0.17	0.21	0.93	0.79
Capacity (veh/h)	461	480	652	627
Control Delay (s)	11.7	11.7	42.9	26.6
Approach Delay (s)	11.7	11.7	42.9	26.6
Approach LOS	B	B	E	D

Intersection Summary				
Delay	32.1			
Level of Service	D			
Intersection Capacity Utilization	71.4%	ICU Level of Service	C	
Analysis Period (min)	15			

Intersection Sign configuration not allowed in HCM analysis.



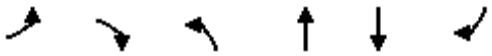
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (veh/h)	0	24	2	3	2	23	0	7	0	6	0	0
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	26	2	0	2	25	0	8	0	7	0	0
Pedestrians		7				5			8			
Lane Width (ft)		12.0				12.0			12.0			
Walking Speed (ft/s)		4.0				4.0			4.0			
Percent Blockage		1				0			1			
Right turn flare (veh)												
Median type		None				None						
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked				0.00								
vC, conflicting volume	25			0	36			72	65	40	68	66
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			0	36			72	65	40	68	66
tC, single (s)	4.1			0.0	4.1			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	2.2			0.0	2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			0	100			99	100	99	100	100
cM capacity (veh/h)	1589			0	1564			903	820	1020	909	818

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	28	27	14	0
Volume Left	0	2	8	0
Volume Right	2	0	7	0
cSH	1589	1564	953	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	0.6	8.8	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.6	8.8	0.0
Approach LOS			A	A

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	17.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	SBR
Lane Configurations	
Volume (veh/h)	0
Sign Control	
Grade	
Peak Hour Factor	0.92
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	32
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	32
tC, single (s)	6.2
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	1036
Direction, Lane #	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	39	5	2	286	177	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	5	2	311	192	25
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	534	211	221			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	534	211	221			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	99	100			
cM capacity (veh/h)	500	825	1343			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	48	313	217
Volume Left	42	2	0
Volume Right	5	0	25
cSH	523	1343	1700
Volume to Capacity	0.09	0.00	0.13
Queue Length 95th (ft)	8	0	0
Control Delay (s)	12.6	0.1	0.0
Lane LOS	B	A	
Approach Delay (s)	12.6	0.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

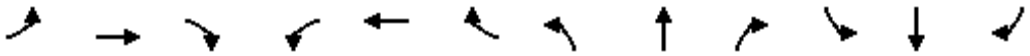
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (veh/h)	1	7	1	5	55	3	6	0	14	113	12	17
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	8	1	0	60	3	7	0	15	123	13	18
Pedestrians		4				2			2			10
Lane Width (ft)		12.0				12.0			12.0			12.0
Walking Speed (ft/s)		4.0				4.0			4.0			4.0
Percent Blockage		0				0			0			1
Right turn flare (veh)												
Median type		None				None						
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked				0.00								
vC, conflicting volume	20			0	11			152	152	12	279	149
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			0	11			152	152	12	279	149
tC, single (s)	4.1			0.0	4.1			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	2.2			0.0	2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			0	96			100	98	88	98	97
cM capacity (veh/h)	1583			0	1606			767	705	1065	559	707

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	70	138	32
Volume Left	1	60	0	13
Volume Right	1	7	123	0
cSH	1583	1606	1008	637
Volume to Capacity	0.00	0.04	0.14	0.05
Queue Length 95th (ft)	0	3	12	4
Control Delay (s)	0.8	6.3	9.1	10.9
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	6.3	9.1	10.9
Approach LOS			A	B

Intersection Summary			
Average Delay	8.3		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		



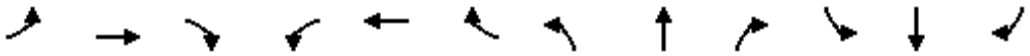
Movement	SBR
Lane Configurations	
Volume (veh/h)	0
Sign Control	
Grade	
Peak Hour Factor	0.92
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	21
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	21
tC, single (s)	6.2
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	1045
Direction, Lane #	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	124	19	12	63	11	5	1	23	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	3	135	21	13	68	12	5	1	25	5	0	1
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	97			161			265	281	158	302	286	97
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	97			161			265	281	158	302	286	97
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	100	97	99	100	100
cM capacity (veh/h)	1475			1410			664	608	878	604	605	940

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	159	93	32	7
Volume Left	3	13	5	5
Volume Right	21	12	25	1
cSH	1475	1410	820	643
Volume to Capacity	0.00	0.01	0.04	0.01
Queue Length 95th (ft)	0	1	3	1
Control Delay (s)	0.2	1.1	9.6	10.7
Lane LOS	A	A	A	B
Approach Delay (s)	0.2	1.1	9.6	10.7
Approach LOS			A	B

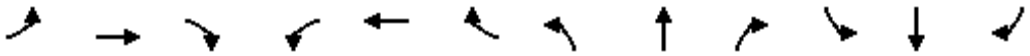
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	24.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	79	64	22	34	48	13	17	180	40	39	165	19
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
Hourly flow rate (vph)	86	70	24	37	52	14	18	196	43	42	179	21

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	179	103	258	242
Volume Left (vph)	86	37	18	42
Volume Right (vph)	24	14	43	21
Hadj (s)	0.05	0.02	-0.05	0.02
Departure Headway (s)	5.4	5.5	5.0	5.1
Degree Utilization, x	0.27	0.16	0.36	0.34
Capacity (veh/h)	605	579	677	662
Control Delay (s)	10.4	9.6	10.8	10.7
Approach Delay (s)	10.4	9.6	10.8	10.7
Approach LOS	B	A	B	B

Intersection Summary				
Delay	10.5			
Level of Service	B			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	109	28	29	48	127	10	400	22	60	368	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1680			1530	1252	1676	1745		1676	1739	
Flt Permitted		0.93			0.86	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1575			1337	1252	1676	1745		1676	1739	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	39	131	34	33	55	144	10	417	23	71	433	35
RTOR Reduction (vph)	0	14	0	0	0	116	0	2	0	0	3	0
Lane Group Flow (vph)	0	190	0	0	88	28	10	438	0	71	465	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.9			11.9	11.9	1.6	29.4		5.2	33.0	
Effective Green, g (s)		11.4			11.4	11.4	1.1	29.9		4.7	33.5	
Actuated g/C Ratio		0.20			0.20	0.20	0.02	0.52		0.08	0.58	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		309			262	246	31	899		135	1004	
v/s Ratio Prot							0.01	0.25		c0.04	c0.27	
v/s Ratio Perm		c0.12			0.07	0.02						
v/c Ratio		0.61			0.34	0.12	0.32	0.49		0.53	0.46	
Uniform Delay, d1		21.3			20.0	19.2	28.1	9.1		25.6	7.1	
Progression Factor		1.00			1.00	1.00	1.29	1.04		1.00	1.00	
Incremental Delay, d2		2.5			0.3	0.1	5.5	1.7		3.7	1.5	
Delay (s)		23.8			20.3	19.2	41.6	11.2		29.2	8.6	
Level of Service		C			C	B	D	B		C	A	
Approach Delay (s)		23.8			19.6			11.8			11.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	9	19	464	175	156	420	41	267	176	124	41	171
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	16	16	12	12
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0
Lane Util. Factor		1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00
Frpb, ped/bikes		1.00	0.96		1.00	1.00	0.93	1.00	0.98			0.99
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Frt		1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99
Flt Protected		0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99
Satd. Flow (prot)		1676	3031		1676	3353	1402	1676	1843			1534
Flt Permitted		0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99
Satd. Flow (perm)		1676	3031		1676	3353	1402	1676	1843			1534
Peak-hour factor, PHF	0.92	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97
Adj. Flow (vph)	10	21	510	192	164	442	43	322	212	149	42	176
RTOR Reduction (vph)	0	0	30	0	0	0	25	0	22	0	0	2
Lane Group Flow (vph)	0	31	672	0	164	442	18	322	339	0	0	232
Confl. Peds. (#/hr)		16		48	48		16	32		7	7	
Confl. Bikes (#/hr)				15			7			22		
Bus Blockages (#/hr)	0	0	8	0	0	0	0	0	0	0	0	0
Parking (#/hr)												2
Turn Type	Prot	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA
Protected Phases	1	1	6		5	2		7	7		8	8
Permitted Phases							2					
Actuated Green, G (s)		4.9	37.7		14.5	47.3	47.3	24.9	24.9			22.4
Effective Green, g (s)		5.4	38.7		15.0	48.3	48.3	24.4	24.4			21.9
Actuated g/C Ratio		0.05	0.33		0.13	0.42	0.42	0.21	0.21			0.19
Clearance Time (s)		4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5
Vehicle Extension (s)		2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5
Lane Grp Cap (vph)		78	1011		216	1396	583	352	387			289
v/s Ratio Prot		0.02	c0.22		c0.10	0.13		c0.19	0.18			c0.15
v/s Ratio Perm							0.01					
v/c Ratio		0.40	0.66		0.76	0.32	0.03	0.91	0.88			0.80
Uniform Delay, d1		53.7	33.1		48.8	22.8	20.0	44.8	44.3			45.0
Progression Factor		1.00	1.00		1.50	0.52	0.19	1.00	1.00			1.00
Incremental Delay, d2		2.4	3.5		13.1	0.6	0.1	27.4	19.2			14.3
Delay (s)		56.1	36.5		86.0	12.4	4.0	72.2	63.5			59.3
Level of Service		E	D		F	B	A	E	E			E
Approach Delay (s)			37.4			30.5			67.6			59.3
Approach LOS			D			C			E			E

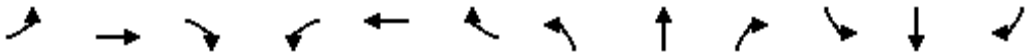
Intersection Summary			
HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Volume (vph)	16
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	16
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	32
Confl. Bikes (#/hr)	29
Bus Blockages (#/hr)	0
Parking (#/hr)	2
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	538	62	105	493	139	68	249	78	89	298	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3222		1676	3353	1364	1676	1765	1440	1676	1736	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3222		1676	3353	1364	1676	1765	1440	1676	1736	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	572	66	107	503	142	71	259	81	94	314	29
RTOR Reduction (vph)	0	6	0	0	0	71	0	0	64	0	3	0
Lane Group Flow (vph)	46	632	0	107	503	71	71	259	17	94	340	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	49.1		12.3	53.0	53.0	8.2	25.4	25.4	12.5	29.7	
Effective Green, g (s)	7.9	49.1		11.8	53.0	53.0	7.7	24.9	24.9	12.0	29.2	
Actuated g/C Ratio	0.07	0.42		0.10	0.46	0.46	0.07	0.21	0.21	0.10	0.25	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1363		170	1531	623	111	378	309	173	436	
v/s Ratio Prot	0.03	c0.20		c0.06	0.15		0.04	0.15		c0.06	c0.20	
v/s Ratio Perm						0.05			0.01			
v/c Ratio	0.40	0.46		0.63	0.33	0.11	0.64	0.69	0.06	0.54	0.78	
Uniform Delay, d1	51.8	24.0		50.0	20.1	18.1	52.8	41.9	36.2	49.4	40.4	
Progression Factor	0.69	0.58		1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.97	
Incremental Delay, d2	1.2	0.8		6.2	0.6	0.4	10.1	4.7	0.1	2.5	7.7	
Delay (s)	37.2	14.7		56.2	20.7	18.4	62.9	46.6	36.3	50.8	46.9	
Level of Service	D	B		E	C	B	E	D	D	D	D	
Approach Delay (s)		16.2			25.3			47.4			47.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

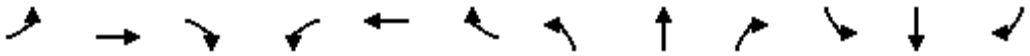
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	1	22	620	79	1	67	658	50	175	112	269	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.2			4.0	4.2			4.0	3.5	
Lane Util. Factor		1.00	0.95			1.00	0.95			1.00	1.00	
Frpb, ped/bikes		1.00	0.98			1.00	1.00			1.00	0.96	
Flpb, ped/bikes		1.00	1.00			1.00	1.00			1.00	1.00	
Frt		1.00	0.98			1.00	0.99			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.97	1.00	
Satd. Flow (prot)		1676	3106			1676	3170			1712	1446	
Flt Permitted		0.95	1.00			0.95	1.00			0.97	1.00	
Satd. Flow (perm)		1676	3106			1676	3170			1712	1446	
Peak-hour factor, PHF	0.92	0.98	0.98	0.98	0.92	0.97	0.97	0.97	0.83	0.83	0.83	0.85
Adj. Flow (vph)	1	22	633	81	1	69	678	52	211	135	324	88
RTOR Reduction (vph)	0	0	7	0	0	0	4	0	0	0	207	0
Lane Group Flow (vph)	0	23	707	0	0	70	726	0	0	346	117	0
Confl. Peds. (#/hr)		12		41		41		12	23		13	13
Confl. Bikes (#/hr)				24				16			8	
Bus Blockages (#/hr)	0	0	20	20	0	0	20	20	0	0	0	0
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Split	NA	Perm	Split
Protected Phases	1	1	6		5	5	2		7	7		8
Permitted Phases											7	
Actuated Green, G (s)		4.0	45.0			8.9	49.9			26.0	26.0	
Effective Green, g (s)		3.5	45.0			8.4	49.9			25.5	26.0	
Actuated g/C Ratio		0.03	0.39			0.07	0.43			0.22	0.22	
Clearance Time (s)		3.5	4.2			3.5	4.2			3.5	3.5	
Vehicle Extension (s)		2.5	3.0			2.5	3.0			2.5	2.5	
Lane Grp Cap (vph)		50	1204			121	1363			376	324	
v/s Ratio Prot		0.01	c0.23			c0.04	0.23			c0.20		
v/s Ratio Perm											0.08	
v/c Ratio		0.46	0.59			0.58	0.53			0.92	0.36	
Uniform Delay, d1		55.3	28.1			52.1	24.4			44.3	38.0	
Progression Factor		1.00	1.00			1.14	0.37			1.00	1.00	
Incremental Delay, d2		4.8	2.1			3.4	0.9			27.3	0.5	
Delay (s)		60.1	30.2			62.8	10.1			71.6	38.5	
Level of Service		E	C			E	B			E	D	
Approach Delay (s)			31.2				14.7			55.6		
Approach LOS			C				B			E		

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	117	8
Ideal Flow (vphpl)	1800	1800
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	0.98	
Satd. Flow (prot)	1720	
Flt Permitted	0.98	
Satd. Flow (perm)	1720	
Peak-hour factor, PHF	0.85	0.85
Adj. Flow (vph)	138	9
RTOR Reduction (vph)	2	0
Lane Group Flow (vph)	233	0
Confl. Peds. (#/hr)		23
Confl. Bikes (#/hr)		6
Bus Blockages (#/hr)	0	0
Turn Type	NA	
Protected Phases	8	
Permitted Phases		
Actuated Green, G (s)	21.4	
Effective Green, g (s)	20.9	
Actuated g/C Ratio	0.18	
Clearance Time (s)	3.5	
Vehicle Extension (s)	2.5	
Lane Grp Cap (vph)	309	
v/s Ratio Prot	c0.14	
v/s Ratio Perm		
v/c Ratio	0.76	
Uniform Delay, d1	45.1	
Progression Factor	1.00	
Incremental Delay, d2	9.6	
Delay (s)	54.7	
Level of Service	D	
Approach Delay (s)	54.7	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	556	205	51	398	157	288	770	29	175	761	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	3080		1676	3114		3252	3244		1676	3212	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	3080		1676	3114		3252	3244		1676	3212	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	579	214	61	474	187	303	811	31	188	818	97
RTOR Reduction (vph)	0	33	0	0	36	0	0	2	0	0	8	0
Lane Group Flow (vph)	220	760	0	61	625	0	303	840	0	188	907	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.6	36.1		8.8	26.3		16.0	41.1		16.8	40.9	
Effective Green, g (s)	18.6	36.1		8.8	26.3		17.0	42.1		16.8	41.9	
Actuated g/C Ratio	0.16	0.31		0.08	0.23		0.15	0.36		0.14	0.36	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	268	958		127	706		476	1177		242	1160	
v/s Ratio Prot	0.13	c0.25		0.04	c0.20		0.09	c0.26		0.11	c0.28	
v/s Ratio Perm												
v/c Ratio	0.82	0.79		0.48	0.88		0.64	0.71		0.78	0.78	
Uniform Delay, d1	47.1	36.5		51.4	43.4		46.6	31.8		47.8	33.0	
Progression Factor	0.70	0.60		1.00	1.00		1.00	1.00		1.07	0.56	
Incremental Delay, d2	14.4	3.7		1.0	12.4		2.1	3.7		13.0	4.9	
Delay (s)	47.4	25.5		52.5	55.8		48.6	35.5		64.2	23.3	
Level of Service	D	C		D	E		D	D		E	C	
Approach Delay (s)		30.3			55.5			39.0			30.2	
Approach LOS		C			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

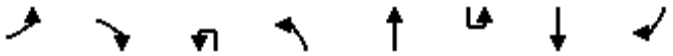
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	219	10	123	5	3	10	3	60	1038	11	3	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0			3.0	3.0			
Lane Util. Factor		1.00	1.00		1.00			1.00	0.95			
Frpb, ped/bikes		1.00	0.91		0.96			1.00	1.00			
Flpb, ped/bikes		0.95	1.00		0.99			0.96	1.00			
Frt		1.00	0.85		0.93			1.00	1.00			
Flt Protected		0.95	1.00		0.99			0.95	1.00			
Satd. Flow (prot)		1607	1360		1537			1612	3339			
Flt Permitted		0.72	1.00		0.90			0.26	1.00			
Satd. Flow (perm)		1215	1360		1409			434	3339			
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.90	0.93	0.93	0.93	0.90	0.98
Adj. Flow (vph)	270	12	152	13	8	26	3	65	1116	12	3	2
RTOR Reduction (vph)	0	0	75	0	19	0	0	0	1	0	0	0
Lane Group Flow (vph)	0	282	77	0	28	0	0	68	1127	0	0	0
Confl. Peds. (#/hr)	38		57	57		38		74		68		68
Confl. Bikes (#/hr)			5							22		
Turn Type	Perm	NA	Perm	Perm	NA		Perm	Perm	NA		Perm	Perm
Protected Phases		4			8				2			
Permitted Phases	4		4	8			2	2			6	6
Actuated Green, G (s)		29.5	29.5		29.0			79.5	79.5			
Effective Green, g (s)		29.5	29.5		29.5			80.5	80.5			
Actuated g/C Ratio		0.25	0.25		0.25			0.69	0.69			
Clearance Time (s)		3.0	3.0		3.5			4.0	4.0			
Vehicle Extension (s)		2.0	2.0		2.0			2.0	2.0			
Lane Grp Cap (vph)		308	345		358			301	2317			
v/s Ratio Prot									c0.34			
v/s Ratio Perm		c0.23	0.06		0.02			0.16				
v/c Ratio		0.92	0.22		0.08			0.23	0.49			
Uniform Delay, d1		42.0	34.2		32.9			6.4	8.2			
Progression Factor		1.00	1.00		1.00			0.50	0.51			
Incremental Delay, d2		29.8	0.1		0.0			1.1	0.5			
Delay (s)		71.8	34.3		32.9			4.4	4.6			
Level of Service		E	C		C			A	A			
Approach Delay (s)		58.7			32.9				4.6			
Approach LOS		E			C				A			

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	872	71
Ideal Flow (vphpl)	1800	1800
Total Lost time (s)	3.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.98	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	3260	
Flt Permitted	0.95	
Satd. Flow (perm)	3098	
Peak-hour factor, PHF	0.98	0.98
Adj. Flow (vph)	890	72
RTOR Reduction (vph)	5	0
Lane Group Flow (vph)	962	0
Confl. Peds. (#/hr)		74
Confl. Bikes (#/hr)		21
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	79.5	
Effective Green, g (s)	80.5	
Actuated g/C Ratio	0.69	
Clearance Time (s)	4.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2149	
v/s Ratio Prot		
v/s Ratio Perm	0.31	
v/c Ratio	0.45	
Uniform Delay, d1	7.9	
Progression Factor	2.07	
Incremental Delay, d2	0.6	
Delay (s)	16.9	
Level of Service	B	
Approach Delay (s)	16.9	
Approach LOS	B	

Intersection Summary



Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations								
Volume (vph)	55	90	25	59	1162	1	945	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			3.0	3.0		3.0	
Lane Util. Factor	1.00			1.00	0.95		0.95	
Frpb, ped/bikes	0.99			1.00	1.00		0.99	
Flpb, ped/bikes	1.00			0.96	1.00		1.00	
Frt	0.92			1.00	1.00		1.00	
Flt Protected	0.98			0.95	1.00		1.00	
Satd. Flow (prot)	1568			1612	3279		3320	
Flt Permitted	0.98			0.26	1.00		0.95	
Satd. Flow (perm)	1568			444	3279		3169	
Peak-hour factor, PHF	0.88	0.88	0.90	0.94	0.94	0.90	0.98	0.98
Adj. Flow (vph)	62	102	28	63	1236	1	964	26
RTOR Reduction (vph)	58	0	0	0	0	0	1	0
Lane Group Flow (vph)	106	0	0	91	1236	0	990	0
Confl. Peds. (#/hr)	33			62				62
Confl. Bikes (#/hr)		6						21
Bus Blockages (#/hr)	0	0	0	0	11	0	0	0
Turn Type	Prot		Perm	Perm	NA	Perm	NA	
Protected Phases	4				2		6	
Permitted Phases			2	2		6		
Actuated Green, G (s)	21.4			87.6	87.6		87.6	
Effective Green, g (s)	21.9			88.1	88.1		88.1	
Actuated g/C Ratio	0.19			0.76	0.76		0.76	
Clearance Time (s)	3.5			3.5	3.5		3.5	
Vehicle Extension (s)	2.0			4.0	4.0		4.0	
Lane Grp Cap (vph)	296			337	2490		2406	
v/s Ratio Prot	c0.07				c0.38			
v/s Ratio Perm				0.21			0.31	
v/c Ratio	0.36			0.27	0.50		0.41	
Uniform Delay, d1	40.9			4.2	5.4		4.9	
Progression Factor	1.00			0.47	0.57		1.00	
Incremental Delay, d2	0.3			1.7	0.6		0.5	
Delay (s)	41.2			3.7	3.7		5.4	
Level of Service	D			A	A		A	
Approach Delay (s)	41.2				3.7		5.4	
Approach LOS	D				A		A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	33	20	71	9	14	9	1	31	1189	20	7	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0			3.0	3.0			3.0
Lane Util. Factor		1.00	1.00		1.00			1.00	0.95			1.00
Frpb, ped/bikes		1.00	0.95		1.00			1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00		0.99			1.00	1.00			1.00
Frt		1.00	0.85		0.96			1.00	1.00			1.00
Flt Protected		0.97	1.00		0.99			0.95	1.00			0.95
Satd. Flow (prot)		1711	1423		1658			1676	3335			1676
Flt Permitted		0.82	1.00		0.93			0.95	1.00			0.95
Satd. Flow (perm)		1452	1423		1566			1676	3335			1676
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.90	0.91	0.91	0.91	0.90	0.96
Adj. Flow (vph)	40	24	87	14	22	14	1	34	1307	22	8	20
RTOR Reduction (vph)	0	0	73	0	12	0	0	0	1	0	0	0
Lane Group Flow (vph)	0	64	14	0	38	0	0	35	1328	0	0	28
Confl. Peds. (#/hr)			17	17				26		42		42
Confl. Bikes (#/hr)			15			4				34		
Turn Type	Perm	NA	Perm	Perm	NA		Prot	Prot	NA		Prot	Prot
Protected Phases		4			8		5	5	2		1	1
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.0	18.0		18.0			9.0	80.9			6.6
Effective Green, g (s)		18.5	18.5		18.5			9.0	81.9			6.6
Actuated g/C Ratio		0.16	0.16		0.16			0.08	0.71			0.06
Clearance Time (s)		3.5	3.5		3.5			3.0	4.0			3.0
Vehicle Extension (s)		2.0	2.0		2.0			2.0	4.0			2.0
Lane Grp Cap (vph)		231	226		249			130	2354			95
v/s Ratio Prot								0.02	c0.40			0.02
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.28	0.06		0.15			0.27	0.56			0.29
Uniform Delay, d1		42.9	41.4		42.0			50.4	8.3			52.5
Progression Factor		1.00	1.00		1.00			1.00	1.00			1.00
Incremental Delay, d2		0.2	0.0		0.1			0.4	1.0			0.6
Delay (s)		43.1	41.4		42.1			50.8	9.3			53.1
Level of Service		D	D		D			D	A			D
Approach Delay (s)		42.1			42.1				10.4			
Approach LOS		D			D				B			

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	945	26
Ideal Flow (vphpl)	1800	1800
Total Lost time (s)	3.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3332	
Flt Permitted	1.00	
Satd. Flow (perm)	3332	
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	984	27
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	1010	0
Confl. Peds. (#/hr)		26
Confl. Bikes (#/hr)		28
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	78.5	
Effective Green, g (s)	79.5	
Actuated g/C Ratio	0.69	
Clearance Time (s)	4.0	
Vehicle Extension (s)	4.0	
Lane Grp Cap (vph)	2283	
v/s Ratio Prot	c0.30	
v/s Ratio Perm		
v/c Ratio	0.44	
Uniform Delay, d1	8.2	
Progression Factor	1.00	
Incremental Delay, d2	0.6	
Delay (s)	8.9	
Level of Service	A	
Approach Delay (s)	10.1	
Approach LOS	B	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	6	102	253	153	0	354	1098	0	0	0	725	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0			4.0	4.0				4.0	
Lane Util. Factor		1.00	0.95			0.91	0.91				*0.75	
Frpb, ped/bikes		1.00	0.98			0.96	1.00				1.00	
Flpb, ped/bikes		1.00	1.00			1.00	1.00				1.00	
Frt		1.00	0.94			0.92	0.85				1.00	
Flt Protected		0.95	1.00			1.00	1.00				0.95	
Satd. Flow (prot)		1676	3093			2841	1365				2515	
Flt Permitted		0.95	1.00			1.00	1.00				0.95	
Satd. Flow (perm)		1676	3093			2841	1365				2515	
Peak-hour factor, PHF	0.92	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92
Adj. Flow (vph)	7	106	264	159	0	361	1120	0	0	0	788	0
RTOR Reduction (vph)	0	0	66	0	0	174	417	0	0	0	0	0
Lane Group Flow (vph)	0	113	357	0	0	635	255	0	0	0	788	0
Confl. Peds. (#/hr)		29		40	40		29					
Confl. Bikes (#/hr)				7			21					
Turn Type	Prot	Prot	NA			NA	custom				Prot	
Protected Phases	5	5	2			6	6 7				4	
Permitted Phases												
Actuated Green, G (s)		16.5	63.3			43.3	43.3				42.2	
Effective Green, g (s)		16.0	63.3			43.3	43.3				42.7	
Actuated g/C Ratio		0.14	0.56			0.38	0.38				0.37	
Clearance Time (s)		3.5	4.0			4.0					4.5	
Vehicle Extension (s)		2.0	4.0			4.0					2.5	
Lane Grp Cap (vph)		235	1717			1079	518				942	
v/s Ratio Prot		c0.07	0.12			c0.22	0.19				c0.31	
v/s Ratio Perm												
v/c Ratio		0.48	0.21			0.59	0.49				0.84	
Uniform Delay, d1		45.2	12.7			28.2	27.0				32.5	
Progression Factor		1.00	1.00			0.93	3.62				1.00	
Incremental Delay, d2		0.6	0.3			2.0	0.6				6.4	
Delay (s)		45.7	13.0			28.3	98.3				38.9	
Level of Service		D	B			C	F				D	
Approach Delay (s)			19.9			60.0			0.0			36.1
Approach LOS			B			E			A			D

Intersection Summary			
HCM 2000 Control Delay	45.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	161
Ideal Flow (vphpl)	1800
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.95
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1429
Flt Permitted	1.00
Satd. Flow (perm)	1429
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	175
RTOR Reduction (vph)	109
Lane Group Flow (vph)	66
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	24
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	42.2
Effective Green, g (s)	42.7
Actuated g/C Ratio	0.37
Clearance Time (s)	4.5
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	535
v/s Ratio Prot	
v/s Ratio Perm	0.05
v/c Ratio	0.12
Uniform Delay, d1	23.4
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	23.4
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	1	85	903	0	0	1011	400	452	58	807	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0			4.0	4.0	4.0	4.0	4.0		
Lane Util. Factor		1.00	0.91			0.91	1.00	0.95	0.91	0.95		
Frpb, ped/bikes		1.00	1.00			1.00	0.94	1.00	1.00	1.00		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	0.88	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	1.00	1.00		
Satd. Flow (prot)		1676	4818			4818	1403	1593	1412	1425		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	1.00	1.00		
Satd. Flow (perm)		1676	4818			4818	1403	1593	1412	1425		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90
Adj. Flow (vph)	1	92	982	0	0	1099	435	466	60	832	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	216	0	96	44	0	0
Lane Group Flow (vph)	0	93	982	0	0	1099	219	419	377	422	0	0
Confl. Peds. (#/hr)		14		48	48		14					
Confl. Bikes (#/hr)				35			22					
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	custom		
Protected Phases	5	5	2			6		4	4	4 1		
Permitted Phases							6					
Actuated Green, G (s)		10.5	62.7			57.4	57.4	34.6	34.6	43.3		
Effective Green, g (s)		10.0	62.7			57.4	57.4	34.6	34.6	43.3		
Actuated g/C Ratio		0.09	0.55			0.50	0.50	0.30	0.30	0.38		
Clearance Time (s)		3.5	4.0			4.0	4.0	4.0	4.0			
Vehicle Extension (s)		2.0	4.0			4.0	4.0	3.0	3.0			
Lane Grp Cap (vph)		147	2649			2425	706	483	428	541		
v/s Ratio Prot		c0.06	0.20			c0.23		0.26	c0.27	c0.30		
v/s Ratio Perm							0.16					
v/c Ratio		0.63	0.37			0.45	0.31	0.87	0.88	0.78		
Uniform Delay, d1		50.2	14.5			18.2	16.7	37.5	37.7	31.2		
Progression Factor		1.39	0.27			0.89	1.41	1.00	1.00	1.00		
Incremental Delay, d2		5.4	0.3			0.5	1.0	15.1	18.6	7.0		
Delay (s)		75.4	4.3			16.7	24.5	52.6	56.3	38.2		
Level of Service		E	A			B	C	D	E	D		
Approach Delay (s)			10.4			18.9			49.0			0.0
Approach LOS			B			B			D			A

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



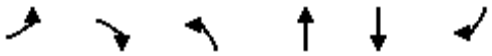
Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1800
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	840	36	1	229	130	10	214
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0			4.2	4.2		4.2
Lane Util. Factor	0.97			0.95	1.00		0.95
Frpb, ped/bikes	1.00			1.00	0.95		1.00
Flpb, ped/bikes	1.00			1.00	1.00		1.00
Frt	0.99			1.00	0.85		1.00
Flt Protected	0.95			1.00	1.00		1.00
Satd. Flow (prot)	3234			3352	1427		3342
Flt Permitted	0.95			0.95	1.00		0.94
Satd. Flow (perm)	3234			3201	1427		3147
Peak-hour factor, PHF	0.97	0.97	0.92	0.87	0.87	0.85	0.85
Adj. Flow (vph)	866	37	1	263	149	12	252
RTOR Reduction (vph)	4	0	0	0	62	0	0
Lane Group Flow (vph)	899	0	0	264	87	0	264
Confl. Peds. (#/hr)		30			13	13	
Confl. Bikes (#/hr)		8			3		
Turn Type	Prot		Perm	NA	Perm	Perm	NA
Protected Phases	4			2			6
Permitted Phases			2		2	6	
Actuated Green, G (s)	40.0			66.8	66.8		66.8
Effective Green, g (s)	39.5			66.3	66.3		66.3
Actuated g/C Ratio	0.35			0.58	0.58		0.58
Clearance Time (s)	3.5			3.7	3.7		3.7
Vehicle Extension (s)	2.5			3.0	3.0		3.0
Lane Grp Cap (vph)	1120			1861	829		1830
v/s Ratio Prot	c0.28						
v/s Ratio Perm				0.08	0.06		c0.08
v/c Ratio	0.80			0.14	0.10		0.14
Uniform Delay, d1	33.7			10.9	10.6		10.9
Progression Factor	0.30			0.21	0.00		1.00
Incremental Delay, d2	3.6			0.1	0.2		0.2
Delay (s)	13.8			2.5	0.2		11.1
Level of Service	B			A	A		B
Approach Delay (s)	13.8			1.7			11.1
Approach LOS	B			A			B

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

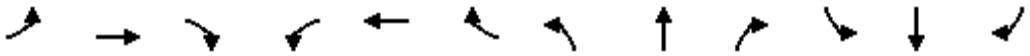


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	113	35	678	504	204	191
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	143	44	699	520	227	212
RTOR Reduction (vph)	0	19	0	0	0	185
Lane Group Flow (vph)	143	25	699	520	227	27
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	15.1	65.1	46.5	91.9	41.9	15.1
Effective Green, g (s)	14.6	64.6	46.0	91.4	41.4	14.6
Actuated g/C Ratio	0.13	0.57	0.40	0.80	0.36	0.13
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	214	850	1312	1415	640	192
v/s Ratio Prot	c0.09	0.02	c0.21	c0.29	0.13	0.02
v/s Ratio Perm						
v/c Ratio	0.67	0.03	0.53	0.37	0.35	0.14
Uniform Delay, d1	47.4	10.9	25.8	3.2	26.5	44.1
Progression Factor	1.41	4.22	0.55	0.13	1.00	1.00
Incremental Delay, d2	7.6	0.0	1.2	0.6	1.5	0.3
Delay (s)	74.7	45.9	15.3	1.0	28.1	44.5
Level of Service	E	D	B	A	C	D
Approach Delay (s)	67.9			9.2	36.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

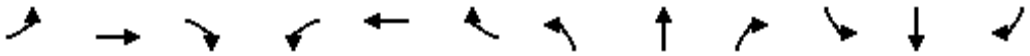
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	425	1005	289	441	115	205	24	104	141	201	693
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.93	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2830	1365	1676	3353	1470	1593	1613	1444		1729	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2830	1365	1676	3353	1470	1593	1613	1444		1729	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	278	429	1015	357	544	142	220	26	112	144	205	707
RTOR Reduction (vph)	0	132	63	0	0	54	0	0	99	0	0	93
Lane Group Flow (vph)	278	652	597	357	544	88	123	123	13	0	349	614
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	906	592	249	1014	444	181	183	164		455	1169
v/s Ratio Prot	0.09	0.23	c0.44	c0.21	0.16		0.08	0.08			c0.20	0.23
v/s Ratio Perm						0.06			0.01			
v/c Ratio	0.48	0.72	1.01	1.43	0.54	0.20	0.68	0.67	0.08		0.77	0.53
Uniform Delay, d1	41.9	34.2	32.2	48.5	33.1	29.5	48.5	48.5	45.1		38.8	23.0
Progression Factor	0.95	0.69	0.65	0.72	0.59	0.46	1.00	1.00	1.00		0.58	0.27
Incremental Delay, d2	2.3	4.1	35.7	213.9	1.8	0.9	8.9	8.5	0.1		10.8	1.5
Delay (s)	42.3	27.6	56.8	248.7	21.2	14.4	57.4	57.0	45.3		33.2	7.7
Level of Service	D	C	E	F	C	B	E	E	D		C	A
Approach Delay (s)		41.1			98.2			53.4			16.2	
Approach LOS		D			F			D			B	

Intersection Summary			
HCM 2000 Control Delay	50.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	232	891	60	0	168	0	937	53	5	246	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3314			3348	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			0.93	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3314			3128	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	242	928	62	0	175	0	976	55	6	283	0
RTOR Reduction (vph)	0	0	607	0	0	159	0	3	0	0	0	0
Lane Group Flow (vph)	126	242	321	62	0	16	0	1028	0	0	289	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA		Perm	NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3				6		
Actuated Green, G (s)	15.4	15.4	40.4	10.7		10.7		53.1			28.3	
Effective Green, g (s)	14.4	14.4	39.4	10.2		10.2		52.6			27.8	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	192	405	777	149		131		1529			762	
v/s Ratio Prot	c0.08	0.08	0.14	c0.04				c0.31				
v/s Ratio Perm						0.01					0.09	
v/c Ratio	0.66	0.60	0.41	0.42		0.12		0.67			0.38	
Uniform Delay, d1	47.4	47.1	28.5	49.1		47.8		24.0			35.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.45			0.53	
Incremental Delay, d2	7.0	2.0	0.3	1.4		0.3		2.1			1.4	
Delay (s)	54.5	49.0	28.7	50.5		48.1		12.8			20.6	
Level of Service	D	D	C	D		D		B			C	
Approach Delay (s)		35.0			48.7			12.8			20.6	
Approach LOS		D			D			B			C	

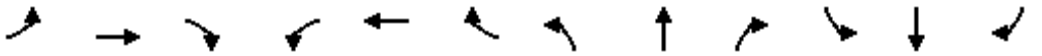
Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	103	1	161	15	832	130	213	963	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2350	1458		1676	3353	1376	1676	3309	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1828	1458		1676	3353	1376	1676	3309	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	121	1	189	16	904	141	227	1024	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	47	0	1	0
Lane Group Flow (vph)	0	28	1	121	28	0	16	904	94	227	1049	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.4	16.4		4.2	57.9	57.9	19.7	73.4	
Effective Green, g (s)		4.0	4.0	16.4	16.4		3.7	58.4	58.4	19.2	73.9	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	262	209		54	1717	704	282	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.27		c0.14	0.32	
v/s Ratio Perm			0.00	c0.07					0.07			
v/c Ratio		0.47	0.02	0.46	0.13		0.30	0.53	0.13	0.80	0.49	
Uniform Delay, d1		54.0	53.1	44.8	42.6		53.9	18.6	14.6	45.6	10.3	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.96	1.17	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.2	0.4	12.1	0.7	
Delay (s)		56.2	53.2	45.2	42.7		55.0	19.7	15.0	56.0	12.7	
Level of Service		E	D	D	D		D	B	B	E	B	
Approach Delay (s)		55.1			43.7			19.6			20.4	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	429	139	57	544	27	174	146	40	28	174	118
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3209		1676	3322		1676	1697		1666	1765	1478
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.63	1.00	1.00
Satd. Flow (perm)	1676	3209		1676	3322		1676	1697		1107	1765	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	466	151	62	591	29	189	159	43	30	189	128
RTOR Reduction (vph)	0	29	0	0	3	0	0	7	0	0	0	69
Lane Group Flow (vph)	87	588	0	62	617	0	189	195	0	30	189	59
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	12.0	30.2		10.0	28.2		18.1	52.3		40.7	40.5	52.5
Effective Green, g (s)	12.0	30.2		10.0	28.2		18.1	52.3		40.7	40.5	52.5
Actuated g/C Ratio	0.11	0.26		0.09	0.25		0.16	0.46		0.36	0.36	0.46
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	176	850		147	821		266	778		426	627	680
v/s Ratio Prot	0.05	c0.18		0.04	c0.19		c0.11	0.11		0.00	c0.11	0.01
v/s Ratio Perm										0.02		0.03
v/c Ratio	0.49	0.69		0.42	0.75		0.71	0.25		0.07	0.30	0.09
Uniform Delay, d1	48.1	37.7		49.3	39.7		45.5	18.9		24.2	26.5	17.3
Progression Factor	0.80	1.06		1.00	1.00		0.98	1.13		1.00	1.00	1.00
Incremental Delay, d2	1.6	1.8		2.0	3.9		8.6	0.8		0.1	1.2	0.1
Delay (s)	40.2	41.9		51.2	43.6		52.9	22.0		24.3	27.8	17.3
Level of Service	D	D		D	D		D	C		C	C	B
Approach Delay (s)		41.7			44.3			37.0			23.6	
Approach LOS		D			D			D			C	

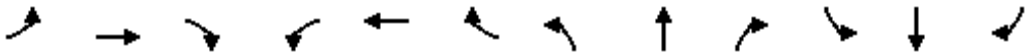
Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	475	0	0	607	0	24
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	516	0	0	660	0	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			516		846	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			516		846	258
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			1046		301	741

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	258	258	330	330	26
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	26
cSH	1700	1700	1700	1700	741
Volume to Capacity	0.15	0.15	0.19	0.19	0.04
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	10.0
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.0
Approach LOS					B

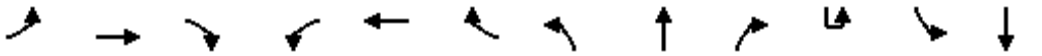
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	23	0	9	0	55	23	4	36	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
Hourly flow rate (vph)	1	0	0	25	0	10	0	60	25	4	39	0

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	25	10	0	85	43
Volume Left (vph)	1	25	0	0	0	4
Volume Right (vph)	0	0	10	0	25	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.17	0.05
Departure Headway (s)	5.1	5.3	4.1	4.6	4.5	4.7
Degree Utilization, x	0.00	0.04	0.01	0.00	0.10	0.06
Capacity (veh/h)	685	647	833	780	791	749
Control Delay (s)	8.1	7.4	6.0	6.4	6.8	8.0
Approach Delay (s)	8.1	7.0		6.8		8.0
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.2			
Level of Service	A			
Intersection Capacity Utilization	15.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	28	4	7	4	6	10	9	316	13	1	9	345
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7				3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95				1.00
Frpb, ped/bikes	1.00	0.96		1.00	0.98			1.00				1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00				1.00
Frt	1.00	0.90		1.00	0.91			0.99				1.00
Flt Protected	0.95	1.00		0.95	1.00			1.00				1.00
Satd. Flow (prot)	1676	1521		1672	1573			3325				1762
Flt Permitted	0.75	1.00		0.75	1.00			0.95				0.99
Satd. Flow (perm)	1316	1521		1320	1573			3153				1747
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	4	8	4	7	11	10	343	14	1	10	375
RTOR Reduction (vph)	0	7	0	0	10	0	0	2	0	0	0	0
Lane Group Flow (vph)	30	5	0	4	8	0	0	365	0	0	0	386
Confl. Peds. (#/hr)			2	2					1		1	
Confl. Bikes (#/hr)			12			9			22			
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	Perm	NA
Protected Phases		8			4			6				2
Permitted Phases	8			4			6			2	2	
Actuated Green, G (s)	6.2	6.2		6.2	6.2			43.6				43.6
Effective Green, g (s)	6.2	6.2		6.2	6.2			43.6				43.6
Actuated g/C Ratio	0.11	0.11		0.11	0.11			0.76				0.76
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7				3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5				2.5
Lane Grp Cap (vph)	143	165		143	171			2411				1336
v/s Ratio Prot		0.00			0.01							
v/s Ratio Perm	c0.02			0.00				0.12				c0.22
v/c Ratio	0.21	0.03		0.03	0.05			0.15				0.29
Uniform Delay, d1	23.2	22.7		22.7	22.8			1.8				2.0
Progression Factor	1.00	1.00		1.00	1.00			0.38				0.90
Incremental Delay, d2	0.5	0.1		0.1	0.1			0.1				0.5
Delay (s)	23.7	22.8		22.8	22.8			0.8				2.3
Level of Service	C	C		C	C			A				A
Approach Delay (s)		23.4			22.8			0.8				2.3
Approach LOS		C			C			A				A

Intersection Summary			
HCM 2000 Control Delay	3.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	20
Ideal Flow (vphpl)	1800
Total Lost time (s)	3.7
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1474
Flt Permitted	1.00
Satd. Flow (perm)	1474
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	22
RTOR Reduction (vph)	3
Lane Group Flow (vph)	19
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	19
Turn Type	Perm
Protected Phases	
Permitted Phases	2
Actuated Green, G (s)	43.6
Effective Green, g (s)	43.6
Actuated g/C Ratio	0.76
Clearance Time (s)	3.7
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	1127
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.02
Uniform Delay, d1	1.6
Progression Factor	0.89
Incremental Delay, d2	0.0
Delay (s)	1.4
Level of Service	A
Approach Delay (s)	
Approach LOS	

Intersection Summary

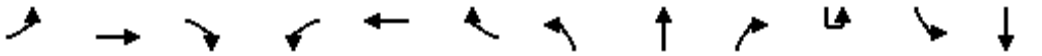
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Sign Control		Stop			Stop				Stop			
Volume (vph)	0	0	0	1	0	4	1	0	74	7	1	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1	0	4	0	0	80	8	0	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	5	88	68
Volume Left (vph)	0	1	0	4
Volume Right (vph)	0	4	8	0
Hadj (s)	0.00	-0.41	-0.02	0.05
Departure Headway (s)	4.2	3.8	4.0	4.0
Degree Utilization, x	0.00	0.01	0.10	0.08
Capacity (veh/h)	824	900	894	882
Control Delay (s)	7.2	6.8	7.4	7.4
Approach Delay (s)	0.0	6.8	7.4	7.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.4			
Level of Service	A			
Intersection Capacity Utilization	16.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	SBT	SBR
Lane Configurations		
Sign Control	Stop	
Volume (vph)	59	0
Peak Hour Factor	0.92	0.92
Hourly flow rate (vph)	64	0

Direction, Lane #



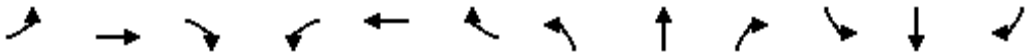
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	9	3	1	9	1	16	3	309	17	1	37	315
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.96		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.96		1.00	0.86		1.00	0.99			1.00	1.00
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)	1674	1687		1669	1450		1669	1748			1668	1764
Flt Permitted	0.75	1.00		0.76	1.00		0.55	1.00			0.55	1.00
Satd. Flow (perm)	1314	1687		1327	1450		975	1748			964	1764
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	3	1	10	1	17	3	336	18	1	40	342
RTOR Reduction (vph)	0	1	0	0	15	0	0	2	0	0	0	0
Lane Group Flow (vph)	10	3	0	10	3	0	3	352	0	0	41	343
Confl. Peds. (#/hr)	1		3	3		1	5		5		5	
Confl. Bikes (#/hr)			1			6			8			
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	Perm	NA
Protected Phases		8			4			6				2
Permitted Phases	8			4			6			2	2	
Actuated Green, G (s)	5.4	5.4		5.4	5.4		44.4	44.4			44.4	44.4
Effective Green, g (s)	5.4	5.4		5.4	5.4		44.4	44.4			44.4	44.4
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.78	0.78			0.78	0.78
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7			3.7	3.7
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	124	159		125	137		759	1361			750	1374
v/s Ratio Prot		0.00			0.00			c0.20				0.19
v/s Ratio Perm	c0.01			0.01			0.00				0.04	
v/c Ratio	0.08	0.02		0.08	0.02		0.00	0.26			0.05	0.25
Uniform Delay, d1	23.5	23.4		23.5	23.4		1.4	1.7			1.5	1.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.62	2.08
Incremental Delay, d2	0.1	0.0		0.1	0.0		0.0	0.5			0.1	0.4
Delay (s)	23.6	23.4		23.6	23.4		1.4	2.2			2.5	4.0
Level of Service	C	C		C	C		A	A			A	A
Approach Delay (s)		23.6			23.5			2.2				3.9
Approach LOS		C			C			A				A

Intersection Summary			
HCM 2000 Control Delay	4.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	1
Ideal Flow (vphpl)	1800
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	1
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	5
Confl. Bikes (#/hr)	7
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	0	0	0	0	82	1	1	62	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
Hourly flow rate (vph)	0	0	0	0	0	0	0	89	1	1	67	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	0	90	68
Volume Left (vph)	0	0	0	1
Volume Right (vph)	0	0	1	0
Hadj (s)	0.00	0.00	0.03	0.04
Departure Headway (s)	4.2	4.2	4.0	4.0
Degree Utilization, x	0.00	0.00	0.10	0.08
Capacity (veh/h)	824	824	887	888
Control Delay (s)	7.2	7.2	7.4	7.4
Approach Delay (s)	0.0	0.0	7.4	7.4
Approach LOS	A	A	A	A

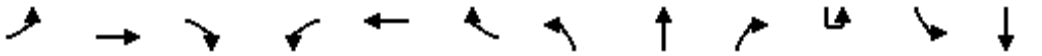
Intersection Summary				
Delay	7.4			
Level of Service	A			
Intersection Capacity Utilization	16.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Sign Control	Stop			Stop			Stop
Volume (vph)	11	2	1	81	26	3	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	2	0	88	28	3	66

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	14	116	70
Volume Left (vph)	12	0	3
Volume Right (vph)	2	28	0
Hadj (s)	0.11	-0.11	0.04
Departure Headway (s)	4.4	3.9	4.1
Degree Utilization, x	0.02	0.13	0.08
Capacity (veh/h)	781	908	870
Control Delay (s)	7.5	7.4	7.4
Approach Delay (s)	7.5	7.4	7.4
Approach LOS	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	17.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Sign Control		Stop			Stop			Stop				Stop
Volume (vph)	19	10	1	15	6	26	4	286	15	1	27	299
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
Hourly flow rate (vph)	21	11	1	16	7	28	4	311	16	0	29	325

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	33	51	332	362
Volume Left (vph)	21	16	4	29
Volume Right (vph)	1	28	16	8
Hadj (s)	0.14	-0.23	0.01	0.04
Departure Headway (s)	5.7	5.3	4.5	4.5
Degree Utilization, x	0.05	0.08	0.42	0.46
Capacity (veh/h)	548	590	768	768
Control Delay (s)	9.0	8.7	10.8	11.3
Approach Delay (s)	9.0	8.7	10.8	11.3
Approach LOS	A	A	B	B

Intersection Summary			
Delay	10.8		
Level of Service	B		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SBR
Lane Configurations	
Sign Control	
Volume (vph)	7
Peak Hour Factor	0.92
Hourly flow rate (vph)	8

Direction, Lane #

Intersection Sign configuration not allowed in HCM analysis.



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (veh/h)	1	0	16	1	4	11	0	3	0	5	0	0
Sign Control			Free			Free			Stop			Stop
Grade			0%			0%			0%			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
Hourly flow rate (vph)	0	0	17	1	4	12	0	3	0	5	0	0
Pedestrians			5			10			9			
Lane Width (ft)			12.0			12.0			12.0			
Walking Speed (ft/s)			4.0			4.0			4.0			
Percent Blockage			0			1			1			
Right turn flare (veh)												
Median type			None			None						
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked	0.00											
vC, conflicting volume	0	12			27			53	48	37	54	48
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	12			27			53	48	37	54	48
tC, single (s)	0.0	4.1			4.1			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	0.0	2.2			2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	0	100			100			100	100	99	100	100
cM capacity (veh/h)	0	1607			1574			928	835	1019	924	835

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	16	9	0
Volume Left	0	4	3	0
Volume Right	1	0	5	0
cSH	1607	1574	983	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	2.0	8.7	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.0	8.7	0.0
Approach LOS			A	A

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SBR
Lane Configurations	
Volume (veh/h)	0
Sign Control	
Grade	
Peak Hour Factor	0.92
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	17
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	17
tC, single (s)	6.2
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	1057
Direction, Lane #	



Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (veh/h)	18	7	1	2	85	55	16
Sign Control	Stop				Free	Free	
Grade	0%				0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	8	0	2	92	60	17
Pedestrians	8				5	3	
Lane Width (ft)	12.0				12.0	12.0	
Walking Speed (ft/s)	4.0				4.0	4.0	
Percent Blockage	1				0	0	
Right turn flare (veh)							
Median type					None	None	
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked			0.00				
vC, conflicting volume	176	81	0	85			
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	176	81	0	85			
tC, single (s)	6.4	6.2	0.0	4.1			
tC, 2 stage (s)							
tF (s)	3.5	3.3	0.0	2.2			
p0 queue free %	98	99	0	100			
cM capacity (veh/h)	805	968	0	1501			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	95	77
Volume Left	20	2	0
Volume Right	8	0	17
cSH	845	1501	1700
Volume to Capacity	0.03	0.00	0.05
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.4	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	0.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

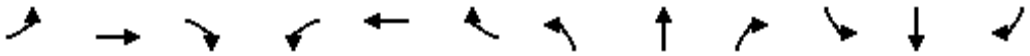
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (veh/h)	0	2	1	4	28	2	13	0	8	25	11	8
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	1	0	30	2	14	0	9	27	12	9
Pedestrians		3							2			5
Lane Width (ft)		12.0							12.0			12.0
Walking Speed (ft/s)		4.0							4.0			4.0
Percent Blockage		0							0			0
Right turn flare (veh)												
Median type		None				None						
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked				0.00								
vC, conflicting volume	21			0	5			82	87	5	109	80
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			0	5			82	87	5	109	80
tC, single (s)	4.1			0.0	4.1			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	2.2			0.0	2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			0	98			100	99	97	99	99
cM capacity (veh/h)	1588			0	1613			877	783	1077	821	790

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	47	36	21
Volume Left	0	30	0	12
Volume Right	1	14	27	0
cSH	1588	1613	987	808
Volume to Capacity	0.00	0.02	0.04	0.03
Queue Length 95th (ft)	0	1	3	2
Control Delay (s)	0.0	4.8	8.8	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.8	8.8	9.6
Approach LOS			A	A

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SBR
Lane Configurations	
Volume (veh/h)	0
Sign Control	
Grade	
Peak Hour Factor	0.92
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	17
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	17
tC, single (s)	6.2
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	1054
Direction, Lane #	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	35	11	8	43	3	2	2	10	4	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	38	12	9	47	3	2	2	11	4	0	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	60			54			118	125	54	138	130	61
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	60			54			118	125	54	138	130	61
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	99	100	100
cM capacity (veh/h)	1531			1546			841	752	1005	801	748	993

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	59	15	5
Volume Left	0	9	2	4
Volume Right	12	3	11	1
cSH	1531	1546	934	833
Volume to Capacity	0.00	0.01	0.02	0.01
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	1.1	8.9	9.4
Lane LOS		A	A	A
Approach Delay (s)	0.0	1.1	8.9	9.4
Approach LOS			A	A

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Sign Control		Stop				Stop				Stop		
Volume (vph)	7	31	18	2	30	31	4	1	14	74	36	10
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
Hourly flow rate (vph)	8	34	20	0	33	34	4	0	15	80	39	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	61	71	135	63
Volume Left (vph)	8	33	15	11
Volume Right (vph)	20	4	39	13
Hadj (s)	-0.13	0.09	-0.12	-0.06
Departure Headway (s)	4.3	4.5	4.2	4.3
Degree Utilization, x	0.07	0.09	0.16	0.08
Capacity (veh/h)	797	754	833	805
Control Delay (s)	7.6	7.9	7.9	7.6
Approach Delay (s)	7.6	7.9	7.9	7.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.8		
Level of Service	A		
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SBT	SBR
Lane Configurations		
Sign Control	Stop	
Volume (vph)	36	12
Peak Hour Factor	0.92	0.92
Hourly flow rate (vph)	39	13

Direction, Lane #



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	27	48	22	24	46	55	1	14	218	8	28	274
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5		3.5	4.5		3.5	4.5
Lane Util. Factor		1.00			1.00	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes		0.99			1.00	0.97		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00			1.00	1.00		0.99	1.00		1.00	1.00
Frt		0.97			1.00	0.85		1.00	0.99		1.00	0.99
Flt Protected		0.99			0.98	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1668			1728	1453		1666	1752		1676	1740
Flt Permitted		0.90			0.92	1.00		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1525			1609	1453		1753	1752		1676	1740
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	52	24	26	50	60	1	15	237	9	30	298
RTOR Reduction (vph)	0	20	0	0	0	51	0	0	2	0	0	3
Lane Group Flow (vph)	0	85	0	0	76	9	0	16	244	0	30	318
Confl. Peds. (#/hr)	4		9	9		4		7		14	14	
Confl. Bikes (#/hr)			3			2				5		
Turn Type	Perm	NA		Perm	NA	Perm	custom	Prot	NA		Prot	NA
Protected Phases		4			8			1	6		5	2
Permitted Phases	4			8		8	1					
Actuated Green, G (s)		8.6			8.6	8.6		1.8	34.7		3.2	36.1
Effective Green, g (s)		8.6			8.6	8.6		1.8	34.7		3.2	36.1
Actuated g/C Ratio		0.15			0.15	0.15		0.03	0.60		0.06	0.62
Clearance Time (s)		3.5			3.5	3.5		3.5	4.5		3.5	4.5
Vehicle Extension (s)		2.0			2.0	2.0		3.0	2.0		3.0	2.0
Lane Grp Cap (vph)		226			238	215		54	1048		92	1083
v/s Ratio Prot									0.14		c0.02	c0.18
v/s Ratio Perm		c0.06			0.05	0.01		0.01				
v/c Ratio		0.37			0.32	0.04		0.30	0.23		0.33	0.29
Uniform Delay, d1		22.3			22.1	21.2		27.5	5.4		26.4	5.1
Progression Factor		1.00			1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.4			0.3	0.0		3.1	0.5		2.1	0.7
Delay (s)		22.7			22.4	21.2		30.5	6.0		28.4	5.8
Level of Service		C			C	C		C	A		C	A
Approach Delay (s)		22.7			21.9				7.5			7.7
Approach LOS		C			C				A			A

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	21
Ideal Flow (vphpl)	1800
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	23
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Confl. Bikes (#/hr)	29
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	9	22	666	241	206	577	15	259	82	201	13	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	12	16	16	12	12
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0
Lane Util. Factor		1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00
Frpb, ped/bikes		1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Frt		1.00	0.96		1.00	1.00	0.85	1.00	0.89			0.97
Flt Protected		0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99
Satd. Flow (prot)		1676	2999		1676	3353	1336	1676	1700			1469
Flt Permitted		0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99
Satd. Flow (perm)		1676	2999		1676	3353	1336	1676	1700			1469
Peak-hour factor, PHF	0.92	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83
Adj. Flow (vph)	10	23	709	256	226	634	16	282	89	218	16	66
RTOR Reduction (vph)	0	0	27	0	0	0	9	0	77	0	0	11
Lane Group Flow (vph)	0	33	939	0	226	634	7	282	230	0	0	99
Confl. Peds. (#/hr)		30		62	62		30	41		22	22	
Confl. Bikes (#/hr)				24			17			27		
Bus Blockages (#/hr)	0	0	8	0	0	0	0	0	0	0	0	0
Parking (#/hr)												2
Turn Type	Prot	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA
Protected Phases	1	1	6		5	2		7	7		8	8
Permitted Phases							2					
Actuated Green, G (s)		5.3	39.5		19.0	53.2	53.2	24.1	24.1			20.9
Effective Green, g (s)		5.8	40.5		19.5	54.2	54.2	23.6	23.6			20.4
Actuated g/C Ratio		0.05	0.34		0.16	0.45	0.45	0.20	0.20			0.17
Clearance Time (s)		4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5
Vehicle Extension (s)		2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5
Lane Grp Cap (vph)		81	1012		272	1514	603	329	334			249
v/s Ratio Prot		0.02	c0.31		c0.13	0.19		c0.17	0.14			c0.07
v/s Ratio Perm							0.01					
v/c Ratio		0.41	0.93		0.83	0.42	0.01	0.86	0.69			0.40
Uniform Delay, d1		55.4	38.3		48.7	22.2	18.1	46.6	44.8			44.3
Progression Factor		1.00	1.00		1.35	0.48	1.00	1.00	1.00			1.00
Incremental Delay, d2		2.4	15.4		17.5	0.8	0.0	19.0	5.3			0.8
Delay (s)		57.9	53.8		83.1	11.4	18.2	65.6	50.1			45.1
Level of Service		E	D		F	B	B	E	D			D
Approach Delay (s)			53.9			30.0			57.5			45.1
Approach LOS			D			C			E			D

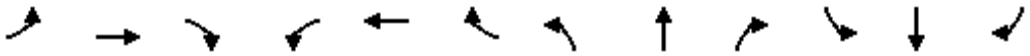
Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Volume (vph)	23
Ideal Flow (vphpl)	1800
Lane Width	12
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.83
Adj. Flow (vph)	28
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	41
Confl. Bikes (#/hr)	27
Bus Blockages (#/hr)	0
Parking (#/hr)	2
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	726	97	175	641	68	80	119	123	49	209	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.90	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3194		1676	3353	1273	1676	1765	1449	1676	1678	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3194		1676	3353	1273	1676	1765	1449	1676	1678	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	756	101	182	668	71	85	127	131	55	235	83
RTOR Reduction (vph)	0	8	0	0	0	36	0	0	102	0	11	0
Lane Group Flow (vph)	61	849	0	182	668	35	85	127	29	55	307	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	50.6		16.9	59.1	59.1	9.8	26.7	26.7	9.1	26.0	
Effective Green, g (s)	7.9	50.6		16.4	59.1	59.1	9.3	26.2	26.2	8.6	25.5	
Actuated g/C Ratio	0.07	0.42		0.14	0.49	0.49	0.08	0.22	0.22	0.07	0.21	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1346		229	1651	626	129	385	316	120	356	
v/s Ratio Prot	0.04	c0.27		c0.11	0.20		c0.05	0.07		0.03	c0.18	
v/s Ratio Perm						0.03			0.02			
v/c Ratio	0.55	0.63		0.79	0.40	0.06	0.66	0.33	0.09	0.46	0.86	
Uniform Delay, d1	54.3	27.3		50.2	19.3	15.9	53.8	39.5	37.4	53.5	45.6	
Progression Factor	0.59	0.45		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.4	1.1		16.6	0.7	0.2	10.4	0.4	0.1	2.0	18.7	
Delay (s)	34.5	13.4		66.8	20.0	16.1	64.2	39.9	37.5	55.5	64.2	
Level of Service	C	B		E	C	B	E	D	D	E	E	
Approach Delay (s)		14.8			29.0			45.0			62.9	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	4	9	858	80	1	117	854	48	138	73	137	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.2			4.0	4.2			4.0	3.5	
Lane Util. Factor		1.00	0.95			1.00	0.95			1.00	1.00	
Frpb, ped/bikes		1.00	0.99			1.00	1.00			1.00	0.96	
Flpb, ped/bikes		1.00	1.00			1.00	1.00			1.00	1.00	
Frt		1.00	0.99			1.00	0.99			1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00			0.97	1.00	
Satd. Flow (prot)		1676	3132			1676	3179			1709	1433	
Flt Permitted		0.95	1.00			0.95	1.00			0.97	1.00	
Satd. Flow (perm)		1676	3132			1676	3179			1709	1433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68
Adj. Flow (vph)	4	10	933	87	1	121	880	49	170	90	169	31
RTOR Reduction (vph)	0	0	5	0	0	0	2	0	0	0	138	0
Lane Group Flow (vph)	0	14	1015	0	0	122	927	0	0	260	31	0
Confl. Peds. (#/hr)		20		42		42		20	24		19	19
Confl. Bikes (#/hr)				24				26			7	
Bus Blockages (#/hr)	0	0	20	20	0	0	20	20	0	0	0	0
Turn Type	Prot	Prot	NA		Prot	Prot	NA		Split	NA	Perm	Split
Protected Phases	1	1	6		5	5	2		7	7		8
Permitted Phases											7	
Actuated Green, G (s)		4.0	51.9			13.0	60.9			22.3	22.3	
Effective Green, g (s)		3.5	51.9			12.5	60.9			21.8	22.3	
Actuated g/C Ratio		0.03	0.43			0.10	0.51			0.18	0.19	
Clearance Time (s)		3.5	4.2			3.5	4.2			3.5	3.5	
Vehicle Extension (s)		2.5	3.0			2.5	3.0			2.5	2.5	
Lane Grp Cap (vph)		48	1354			174	1613			310	266	
v/s Ratio Prot		0.01	c0.32			c0.07	0.29			c0.15		
v/s Ratio Perm											0.02	
v/c Ratio		0.29	0.75			0.70	0.57			0.84	0.12	
Uniform Delay, d1		57.0	28.6			51.9	20.5			47.4	40.7	
Progression Factor		1.00	1.00			1.13	0.49			1.00	1.00	
Incremental Delay, d2		2.5	3.9			7.0	0.9			17.4	0.1	
Delay (s)		59.5	32.5			65.5	11.1			64.8	40.8	
Level of Service		E	C			E	B			E	D	
Approach Delay (s)			32.8				17.4			55.3		
Approach LOS			C				B			E		

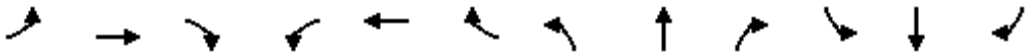
Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	48	19
Ideal Flow (vphpl)	1800	1800
Total Lost time (s)	4.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Frt	0.97	
Flt Protected	0.99	
Satd. Flow (prot)	1676	
Flt Permitted	0.99	
Satd. Flow (perm)	1676	
Peak-hour factor, PHF	0.68	0.68
Adj. Flow (vph)	71	28
RTOR Reduction (vph)	9	0
Lane Group Flow (vph)	121	0
Confl. Peds. (#/hr)		24
Confl. Bikes (#/hr)		4
Bus Blockages (#/hr)	0	0
Turn Type	NA	
Protected Phases	8	
Permitted Phases		
Actuated Green, G (s)	18.1	
Effective Green, g (s)	17.6	
Actuated g/C Ratio	0.15	
Clearance Time (s)	3.5	
Vehicle Extension (s)	2.5	
Lane Grp Cap (vph)	245	
v/s Ratio Prot	c0.07	
v/s Ratio Perm		
v/c Ratio	0.49	
Uniform Delay, d1	47.1	
Progression Factor	1.00	
Incremental Delay, d2	1.1	
Delay (s)	48.2	
Level of Service	D	
Approach Delay (s)	48.2	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	539	327	49	382	130	454	517	30	126	616	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	0.98		1.00	0.99		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	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2957		1676	3165		3252	3231		1676	3103	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2957		1676	3165		3252	3231		1676	3103	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	592	359	59	460	157	510	581	34	135	662	197
RTOR Reduction (vph)	0	77	0	0	30	0	0	3	0	0	22	0
Lane Group Flow (vph)	160	874	0	59	587	0	510	612	0	135	837	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.2	37.9		8.8	26.5		21.0	45.9		14.2	38.1	
Effective Green, g (s)	20.2	37.9		8.8	26.5		22.0	46.9		14.2	39.1	
Actuated g/C Ratio	0.17	0.32		0.07	0.22		0.18	0.39		0.12	0.33	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	282	933		122	698		596	1262		198	1011	
v/s Ratio Prot	0.10	c0.30		0.04	c0.19		c0.16	0.19		0.08	c0.27	
v/s Ratio Perm												
v/c Ratio	0.57	0.94		0.48	0.84		0.86	0.48		0.68	0.83	
Uniform Delay, d1	45.9	39.9		53.4	44.7		47.5	27.5		50.7	37.3	
Progression Factor	0.52	0.39		1.00	1.00		1.00	1.00		0.92	0.92	
Incremental Delay, d2	1.1	12.7		1.1	8.6		11.2	1.3		8.1	7.4	
Delay (s)	24.8	28.5		54.5	53.4		58.6	28.8		54.6	41.7	
Level of Service	C	C		D	D		E	C		D	D	
Approach Delay (s)		27.9			53.5			42.3			43.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	99	0	91	8	2	1	12	82	757	5	6	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0			3.0	3.0			
Lane Util. Factor		1.00	1.00		1.00			1.00	0.95			
Frpb, ped/bikes		1.00	0.94		1.00			1.00	1.00			
Flpb, ped/bikes		0.99	1.00		0.97			0.96	1.00			
Frt		1.00	0.85		0.99			1.00	1.00			
Flt Protected		0.95	1.00		0.96			0.95	1.00			
Satd. Flow (prot)		1653	1410		1632			1609	3346			
Flt Permitted		0.80	1.00		0.82			0.28	1.00			
Satd. Flow (perm)		1387	1410		1384			470	3346			
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.90	0.92	0.92	0.92	0.90	0.94
Adj. Flow (vph)	104	0	96	17	4	2	13	89	823	5	7	1
RTOR Reduction (vph)	0	0	82	0	2	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	104	14	0	21	0	0	102	828	0	0	0
Confl. Peds. (#/hr)	10		32	32		10		66		58		58
Confl. Bikes (#/hr)			2							14		
Turn Type	Perm	NA	Perm	Perm	NA		Perm	Perm	NA		Perm	Perm
Protected Phases		4			8				2			
Permitted Phases	4		4	8			2	2			6	6
Actuated Green, G (s)		17.3	17.3		16.8			95.7	95.7			
Effective Green, g (s)		17.3	17.3		17.3			96.7	96.7			
Actuated g/C Ratio		0.14	0.14		0.14			0.81	0.81			
Clearance Time (s)		3.0	3.0		3.5			4.0	4.0			
Vehicle Extension (s)		2.0	2.0		2.0			2.0	2.0			
Lane Grp Cap (vph)		199	203		199			378	2696			
v/s Ratio Prot									0.25			
v/s Ratio Perm		c0.07	0.01		0.02			0.22				
v/c Ratio		0.52	0.07		0.11			0.27	0.31			
Uniform Delay, d1		47.5	44.4		44.6			2.9	3.0			
Progression Factor		1.00	1.00		1.00			0.55	0.58			
Incremental Delay, d2		1.1	0.1		0.1			1.5	0.3			
Delay (s)		48.7	44.4		44.7			3.1	2.0			
Level of Service		D	D		D			A	A			
Approach Delay (s)		46.6			44.7				2.1			
Approach LOS		D			D				A			

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	826	73
Ideal Flow (vphpl)	1800	1800
Total Lost time (s)	3.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.98	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	3255	
Flt Permitted	0.95	
Satd. Flow (perm)	3088	
Peak-hour factor, PHF	0.94	0.94
Adj. Flow (vph)	879	78
RTOR Reduction (vph)	3	0
Lane Group Flow (vph)	962	0
Confl. Peds. (#/hr)		66
Confl. Bikes (#/hr)		18
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	95.7	
Effective Green, g (s)	96.7	
Actuated g/C Ratio	0.81	
Clearance Time (s)	4.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	2488	
v/s Ratio Prot		
v/s Ratio Perm	c0.31	
v/c Ratio	0.39	
Uniform Delay, d1	3.3	
Progression Factor	1.00	
Incremental Delay, d2	0.5	
Delay (s)	3.7	
Level of Service	A	
Approach Delay (s)	3.7	
Approach LOS	A	

Intersection Summary



Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (vph)	19	44	29	33	800	883	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0			3.0	3.0	3.0	
Lane Util. Factor	1.00			1.00	0.95	0.95	
Frpb, ped/bikes	0.99			1.00	1.00	1.00	
Flpb, ped/bikes	1.00			0.97	1.00	1.00	
Frt	0.91			1.00	1.00	1.00	
Flt Protected	0.99			0.95	1.00	1.00	
Satd. Flow (prot)	1560			1632	3279	3336	
Flt Permitted	0.99			0.28	1.00	1.00	
Satd. Flow (perm)	1560			477	3279	3336	
Peak-hour factor, PHF	0.76	0.76	0.90	0.93	0.93	0.96	0.96
Adj. Flow (vph)	25	58	32	35	860	920	16
RTOR Reduction (vph)	46	0	0	0	0	1	0
Lane Group Flow (vph)	37	0	0	67	860	935	0
Confl. Peds. (#/hr)	40			43			43
Confl. Bikes (#/hr)		1					16
Bus Blockages (#/hr)	0	0	0	0	11	0	0
Turn Type	Prot		Perm	Perm	NA	NA	
Protected Phases	4				2	6	
Permitted Phases			2	2			
Actuated Green, G (s)	19.4			73.6	73.6	73.6	
Effective Green, g (s)	19.9			74.1	74.1	74.1	
Actuated g/C Ratio	0.20			0.74	0.74	0.74	
Clearance Time (s)	3.5			3.5	3.5	3.5	
Vehicle Extension (s)	2.0			4.0	4.0	4.0	
Lane Grp Cap (vph)	310			353	2429	2471	
v/s Ratio Prot	c0.02				0.26	c0.28	
v/s Ratio Perm				0.14			
v/c Ratio	0.12			0.19	0.35	0.38	
Uniform Delay, d1	32.9			3.9	4.5	4.7	
Progression Factor	1.00			1.00	1.00	1.00	
Incremental Delay, d2	0.1			1.2	0.4	0.4	
Delay (s)	32.9			5.1	5.0	5.1	
Level of Service	C			A	A	A	
Approach Delay (s)	32.9				5.0	5.1	
Approach LOS	C				A	A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Volume (vph)	1	17	5	29	13	4	11	1	13	785	8	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)			3.0	3.0		3.0			3.0	3.0		
Lane Util. Factor			1.00	1.00		1.00			1.00	0.95		
Frpb, ped/bikes			1.00	0.97		0.99			1.00	1.00		
Flpb, ped/bikes			1.00	1.00		1.00			1.00	1.00		
Frt			1.00	0.85		0.95			1.00	1.00		
Flt Protected			0.96	1.00		0.98			0.95	1.00		
Satd. Flow (prot)			1697	1461		1611			1676	3345		
Flt Permitted			0.81	1.00		0.89			0.95	1.00		
Satd. Flow (perm)			1434	1461		1464			1676	3345		
Peak-hour factor, PHF	0.90	0.78	0.78	0.78	0.78	0.78	0.78	0.90	0.95	0.95	0.95	0.90
Adj. Flow (vph)	1	22	6	37	17	5	14	1	14	826	8	9
RTOR Reduction (vph)	0	0	0	32	0	12	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	29	5	0	24	0	0	15	834	0	0
Confl. Peds. (#/hr)				11	11				11		24	
Confl. Bikes (#/hr)				2			6				13	
Turn Type	Perm	Perm	NA	Perm	Perm	NA		Prot	Prot	NA		Prot
Protected Phases			4			8		5	5	2		1
Permitted Phases	4	4		4	8							
Actuated Green, G (s)			12.0	12.0		12.0			2.4	70.9		
Effective Green, g (s)			12.5	12.5		12.5			2.4	71.9		
Actuated g/C Ratio			0.12	0.12		0.12			0.02	0.72		
Clearance Time (s)			3.5	3.5		3.5			3.0	4.0		
Vehicle Extension (s)			2.0	2.0		2.0			2.0	4.0		
Lane Grp Cap (vph)			179	182		183			40	2405		
v/s Ratio Prot									0.01	c0.25		
v/s Ratio Perm			c0.02	0.00		0.02						
v/c Ratio			0.16	0.03		0.13			0.38	0.35		
Uniform Delay, d1			39.1	38.4		38.9			48.1	5.3		
Progression Factor			1.00	1.00		1.00			1.00	1.00		
Incremental Delay, d2			0.2	0.0		0.1			2.1	0.4		
Delay (s)			39.2	38.4		39.0			50.2	5.7		
Level of Service			D	D		D			D	A		
Approach Delay (s)			38.8			39.0				6.4		
Approach LOS			D			D				A		

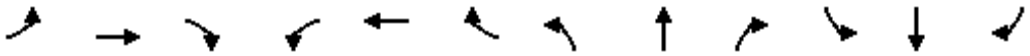
Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	22	889	8
Ideal Flow (vphpl)	1800	1800	1800
Total Lost time (s)	3.0	3.0	
Lane Util. Factor	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	
Frt	1.00	1.00	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1676	3347	
Flt Permitted	0.95	1.00	
Satd. Flow (perm)	1676	3347	
Peak-hour factor, PHF	0.92	0.92	0.92
Adj. Flow (vph)	24	966	9
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	33	975	0
Confl. Peds. (#/hr)	24		11
Confl. Bikes (#/hr)			22
Turn Type	Prot	NA	
Protected Phases	1	6	
Permitted Phases			
Actuated Green, G (s)	6.6	75.1	
Effective Green, g (s)	6.6	76.1	
Actuated g/C Ratio	0.07	0.76	
Clearance Time (s)	3.0	4.0	
Vehicle Extension (s)	2.0	4.0	
Lane Grp Cap (vph)	110	2547	
v/s Ratio Prot	0.02	c0.29	
v/s Ratio Perm			
v/c Ratio	0.30	0.38	
Uniform Delay, d1	44.5	4.0	
Progression Factor	1.00	1.00	
Incremental Delay, d2	0.6	0.4	
Delay (s)	45.1	4.5	
Level of Service	D	A	
Approach Delay (s)		5.8	
Approach LOS		A	

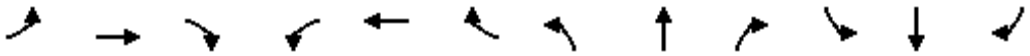
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	99	5	27	5	88	47	10	82	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
Hourly flow rate (vph)	1	1	1	108	5	29	5	96	51	11	89	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	110	32	5	147	101
Volume Left (vph)	1	108	0	5	0	11
Volume Right (vph)	1	0	29	0	51	1
Hadj (s)	-0.10	0.52	-0.61	0.53	-0.21	0.05
Departure Headway (s)	5.2	5.7	4.5	5.5	4.8	5.1
Degree Utilization, x	0.00	0.17	0.04	0.01	0.20	0.14
Capacity (veh/h)	638	605	751	627	725	672
Control Delay (s)	8.3	8.6	6.5	7.4	7.7	9.0
Approach Delay (s)	8.3	8.2		7.7		9.0
Approach LOS	A	A		A		A

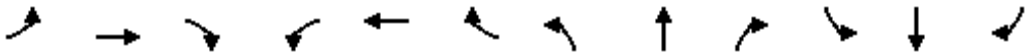
Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	32.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	23	0	7	0	133	34	11	162	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
Hourly flow rate (vph)	0	0	0	25	0	8	0	145	37	12	176	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	33	182	188
Volume Left (vph)	0	25	0	12
Volume Right (vph)	0	8	37	0
Hadj (s)	0.00	0.05	-0.09	0.05
Departure Headway (s)	4.7	4.7	4.1	4.2
Degree Utilization, x	0.00	0.04	0.21	0.22
Capacity (veh/h)	703	696	861	842
Control Delay (s)	7.7	7.9	8.1	8.4
Approach Delay (s)	0.0	7.9	8.1	8.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	30.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	48	0	21	0	0	3	26	142	0	0	109	51
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	52	0	23	0	0	3	28	154	0	0	118	55
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	361	357	146	380	385	155	174			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	361	357	146	380	385	155	174			154		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	100	97	100	100	100	98			100		
cM capacity (veh/h)	583	558	901	555	538	890	1403			1426		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	75	3	183	174
Volume Left	52	0	28	0
Volume Right	23	3	0	55
cSH	653	890	1403	1426
Volume to Capacity	0.11	0.00	0.02	0.00
Queue Length 95th (ft)	10	0	2	0
Control Delay (s)	11.2	9.1	1.3	0.0
Lane LOS	B	A	A	
Approach Delay (s)	11.2	9.1	1.3	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	39.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	21	29	142	30	17	117
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	32	154	33	18	127

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	54	187	146
Volume Left (vph)	23	0	18
Volume Right (vph)	32	33	0
Hadj (s)	-0.23	-0.07	0.06
Departure Headway (s)	4.4	4.1	4.3
Degree Utilization, x	0.07	0.21	0.17
Capacity (veh/h)	754	854	825
Control Delay (s)	7.7	8.2	8.2
Approach Delay (s)	7.7	8.2	8.2
Approach LOS	A	A	A

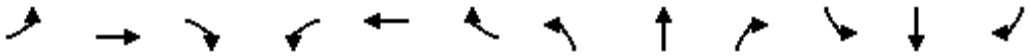
Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	15	2	5	13	11	19
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	2	5	14	12	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57	12			20	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57	12			20	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			99	
cM capacity (veh/h)	943	1068			1597	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	18	20	33
Volume Left	16	0	12
Volume Right	2	14	0
cSH	956	1700	1597
Volume to Capacity	0.02	0.01	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	8.8	0.0	2.7
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	2.7
Approach LOS	A		

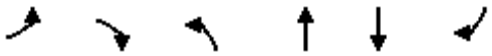
Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	19	3	20	16	5	2	15	7	8	23	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	21	3	22	17	5	2	16	8	9	25	2
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	23			29			113	98	27	106	97	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	23			29			113	98	27	106	97	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	98	99	99	97	100
cM capacity (veh/h)	1592			1578			824	777	1044	841	778	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	26	45	26	36
Volume Left	2	22	2	9
Volume Right	3	5	8	2
cSH	1592	1578	844	805
Volume to Capacity	0.00	0.01	0.03	0.04
Queue Length 95th (ft)	0	1	2	3
Control Delay (s)	0.6	3.6	9.4	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.6	3.6	9.4	9.7
Approach LOS			A	A

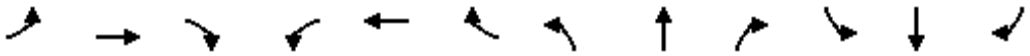
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	18.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	24	30	19	151	106	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	33	21	164	115	33
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	358	154	166			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	358	154	166			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	96	99			
cM capacity (veh/h)	620	876	1391			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	59	185	148
Volume Left	26	21	0
Volume Right	33	0	33
cSH	740	1391	1700
Volume to Capacity	0.08	0.01	0.09
Queue Length 95th (ft)	6	1	0
Control Delay (s)	10.3	1.0	0.0
Lane LOS	B	A	
Approach Delay (s)	10.3	1.0	0.0
Approach LOS	B		

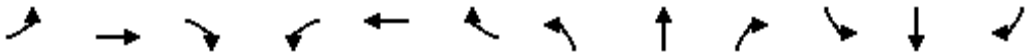
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	52	24	21	39	48	33	157	39	29	72	13
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
Hourly flow rate (vph)	16	57	26	23	42	52	36	171	42	32	78	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	99	117	249	124
Volume Left (vph)	16	23	36	32
Volume Right (vph)	26	52	42	14
Hadj (s)	-0.09	-0.19	-0.04	0.02
Departure Headway (s)	4.9	4.7	4.6	4.8
Degree Utilization, x	0.13	0.15	0.32	0.16
Capacity (veh/h)	673	696	753	706
Control Delay (s)	8.6	8.6	9.6	8.7
Approach Delay (s)	8.6	8.6	9.6	8.7
Approach LOS	A	A	A	A

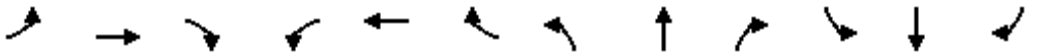
Intersection Summary			
Delay	9.1		
Level of Service	A		
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	166	65	106	202	77	77	127	54	26	72	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3114		1676	3353	1441	1676	1872			1526	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3114		1676	3353	1441	1676	1872			1526	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	30	182	71	112	213	81	93	153	65	27	74	9
RTOR Reduction (vph)	0	32	0	0	0	40	0	16	0	0	4	0
Lane Group Flow (vph)	30	221	0	112	213	41	93	202	0	0	106	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	41.5		10.5	47.0	47.0	13.9	13.9			12.6	
Effective Green, g (s)	5.5	42.5		11.0	48.0	48.0	13.4	13.4			12.1	
Actuated g/C Ratio	0.06	0.45		0.12	0.51	0.51	0.14	0.14			0.13	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	97	1393		194	1694	728	236	264			194	
v/s Ratio Prot	0.02	c0.07		c0.07	0.06		0.06	c0.11			c0.07	
v/s Ratio Perm						0.03						
v/c Ratio	0.31	0.16		0.58	0.13	0.06	0.39	0.76			0.54	
Uniform Delay, d1	42.9	15.6		39.8	12.4	12.0	37.1	39.3			38.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.3	0.2		3.4	0.2	0.1	0.8	11.8			2.5	
Delay (s)	44.3	15.9		43.2	12.6	12.1	37.9	51.1			41.3	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		18.9			20.9			47.2			41.3	
Approach LOS		B			C			D			D	

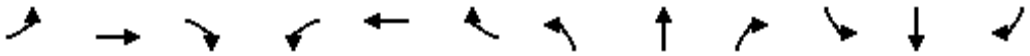
Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	414	399	0	445	1275	0	0	0	602	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3006			2859	1283				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3006			2859	1283				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	431	416	0	464	1328	0	0	0	654	0	273
RTOR Reduction (vph)	0	140	0	0	172	447	0	0	0	0	0	192
Lane Group Flow (vph)	95	707	0	0	823	350	0	0	0	654	0	81
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	72.0			50.0	50.0				33.5		33.5
Effective Green, g (s)	18.0	72.0			50.0	50.0				34.0		34.0
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1898			1253	562				750		430
v/s Ratio Prot	0.06	c0.24			c0.29					c0.26		
v/s Ratio Perm						0.27						0.06
v/c Ratio	0.36	0.37			0.66	0.62				0.87		0.19
Uniform Delay, d1	42.9	10.1			25.2	24.7				37.9		29.8
Progression Factor	1.00	1.00			0.50	4.63				1.00		1.00
Incremental Delay, d2	0.3	0.6			1.7	3.3				10.8		0.2
Delay (s)	43.2	10.7			14.4	117.8				48.8		29.9
Level of Service	D	B			B	F				D		C
Approach Delay (s)		14.0			60.4			0.0			43.2	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	44.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



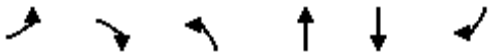
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	871	0	0	1230	342	491	289	687	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1517	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1517	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	907	0	0	1281	356	540	318	755	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	16	20	0	0	0
Lane Group Flow (vph)	153	907	0	0	1281	147	486	545	546	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	545	750			
v/s Ratio Prot	c0.09	0.19			c0.27		0.31	c0.36	0.38			
v/s Ratio Perm						0.11						
v/c Ratio	0.58	0.47			0.71	0.28	0.85	1.00	0.73			
Uniform Delay, d1	44.5	25.0			30.1	24.8	33.7	36.5	20.7			
Progression Factor	0.77	0.48			0.70	0.42	1.00	1.00	1.00			
Incremental Delay, d2	7.0	0.6			1.8	1.1	11.3	38.2	3.5			
Delay (s)	41.2	12.5			22.9	11.5	45.0	74.7	24.3			
Level of Service	D	B			C	B	D	E	C			
Approach Delay (s)		16.7			20.4			48.1			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



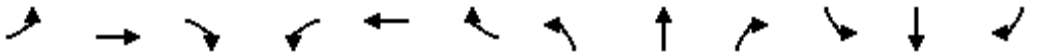
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	499	46	282	73	18	380
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3213		3353	1455		3345
Flt Permitted	0.96		1.00	1.00		0.93
Satd. Flow (perm)	3213		3353	1455		3128
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	561	52	303	78	19	409
RTOR Reduction (vph)	6	0	0	41	0	0
Lane Group Flow (vph)	607	0	303	37	0	428
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1465		1582	686		1476
v/s Ratio Prot	c0.19		0.09			
v/s Ratio Perm				0.03		c0.14
v/c Ratio	0.41		0.19	0.05		0.29
Uniform Delay, d1	20.8		17.5	16.3		18.4
Progression Factor	0.49		0.18	0.01		1.00
Incremental Delay, d2	0.9		0.2	0.1		0.5
Delay (s)	11.0		3.3	0.4		18.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		2.7			18.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



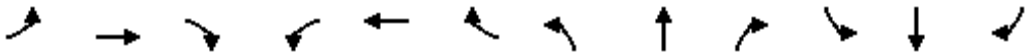
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	38	396	386	122	131
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	69	47	430	420	139	149
RTOR Reduction (vph)	0	10	0	0	0	134
Lane Group Flow (vph)	69	37	430	420	139	15
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	12.2	89.9	74.2	94.8	17.1	12.2
Effective Green, g (s)	11.7	89.4	73.7	94.3	16.6	11.7
Actuated g/C Ratio	0.10	0.78	0.65	0.83	0.15	0.10
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	172	1176	2102	1459	257	153
v/s Ratio Prot	c0.04	0.02	0.13	c0.24	c0.08	0.01
v/s Ratio Perm						
v/c Ratio	0.40	0.03	0.20	0.29	0.54	0.10
Uniform Delay, d1	47.9	2.7	8.2	2.2	45.2	46.4
Progression Factor	1.47	3.44	0.16	0.13	1.00	1.00
Incremental Delay, d2	1.5	0.0	0.2	0.5	2.3	0.3
Delay (s)	71.9	9.4	1.5	0.8	47.5	46.7
Level of Service	E	A	A	A	D	D
Approach Delay (s)	46.6			1.2	47.1	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



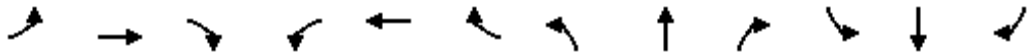
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	285	658	617	227	770	98	140	37	103	147	159	588
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3062	1365	1676	3353	1480	1593	1629	1479		1723	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3062	1365	1676	3353	1480	1593	1629	1479		1723	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	328	756	709	236	802	102	156	41	114	163	177	653
RTOR Reduction (vph)	0	26	118	0	0	52	0	0	101	0	0	84
Lane Group Flow (vph)	328	985	336	236	802	50	98	99	13	0	340	569
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	988	592	249	1102	486	177	181	164		453	1106
v/s Ratio Prot	0.10	c0.32	c0.25	c0.14	0.24		0.06	0.06			c0.20	0.22
v/s Ratio Perm						0.03			0.01			
v/c Ratio	0.65	1.00	0.57	0.95	0.73	0.10	0.55	0.55	0.08		0.75	0.51
Uniform Delay, d1	45.2	38.5	24.2	48.1	33.7	26.6	48.0	47.9	45.4		38.6	24.5
Progression Factor	0.97	0.69	0.41	0.79	0.70	0.53	1.00	1.00	1.00		0.86	0.33
Incremental Delay, d2	5.2	25.2	0.8	37.8	3.6	0.4	3.0	2.7	0.1		10.4	1.6
Delay (s)	49.0	51.8	10.9	75.6	27.1	14.5	50.9	50.6	45.5		43.6	9.7
Level of Service	D	D	B	E	C	B	D	D	D		D	A
Approach Delay (s)		40.9			36.0			48.9			21.3	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



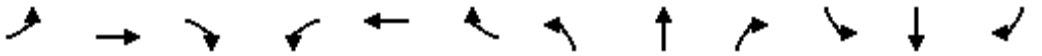
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	103	599	39	0	84	0	645	28	0	161	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	0.99	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3188	2250	1676		1463		3326			3353	
Flt Permitted	0.95	0.99	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3188	2250	1676		1463		3326			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	117	681	48	0	102	0	701	30	0	187	0
RTOR Reduction (vph)	0	0	468	0	0	93	0	2	0	0	0	0
Lane Group Flow (vph)	65	137	213	48	0	9	0	729	0	0	187	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.6	11.6	36.6	10.3		10.3		55.7			30.9	
Effective Green, g (s)	10.6	10.6	35.6	9.8		9.8		55.2			30.4	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.27	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	141	296	702	144		125		1610			894	
v/s Ratio Prot	0.04	c0.04	0.09	c0.03				c0.22			0.06	
v/s Ratio Perm						0.01						
v/c Ratio	0.46	0.46	0.30	0.33		0.07		0.45			0.21	
Uniform Delay, d1	49.0	49.0	29.8	49.0		47.9		19.4			32.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.51	
Incremental Delay, d2	1.7	0.8	0.2	1.0		0.2		0.9			0.5	
Delay (s)	50.7	49.8	30.0	50.0		48.1		20.3			17.1	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.6			48.7			20.3			17.1	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	75	2	79	10	581	101	92	667	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3305	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3305	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	97	3	103	10	593	103	96	695	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	59	0	4	0
Lane Group Flow (vph)	0	29	1	97	24	0	10	593	44	96	729	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.9	31.9	8.5	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.4	32.4	8.0	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1448	624	178	1723	
v/s Ratio Prot		c0.02			0.02		0.01	0.18		c0.06	c0.22	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.25	0.08		0.34	0.41	0.07	0.54	0.42	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	14.7	12.5	31.8	11.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	0.9	0.2	1.6	0.8	
Delay (s)		35.8	34.2	25.3	24.4		39.0	15.6	12.7	33.3	11.8	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			15.5			14.3	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	532	203	82	405	50	364	402	59	122	260	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3170		1676	3267		1676	1720		1664	1765	1450
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.49	1.00	1.00
Satd. Flow (perm)	1676	3170		1676	3267		1676	1720		861	1765	1450
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	149	611	233	85	422	52	375	414	61	134	286	201
RTOR Reduction (vph)	0	36	0	0	8	0	0	4	0	0	0	74
Lane Group Flow (vph)	149	808	0	85	466	0	375	471	0	134	286	127
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	15.5	33.6		8.7	26.8		28.2	46.0		28.5	28.3	43.8
Effective Green, g (s)	15.0	34.1		8.2	27.3		27.7	45.5		28.0	27.8	42.8
Actuated g/C Ratio	0.13	0.30		0.07	0.24		0.24	0.40		0.25	0.24	0.38
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	220	948		120	782		407	686		281	430	544
v/s Ratio Prot	0.09	c0.25		0.05	c0.14		c0.22	c0.27		0.04	c0.16	0.03
v/s Ratio Perm										0.08		0.06
v/c Ratio	0.68	0.85		0.71	0.60		0.92	0.69		0.48	0.67	0.23
Uniform Delay, d1	47.2	37.6		51.7	38.5		42.1	28.3		38.4	38.9	24.4
Progression Factor	0.56	0.67		1.00	1.00		1.01	1.14		1.00	1.00	1.00
Incremental Delay, d2	3.5	3.4		17.4	1.2		24.8	5.2		1.3	7.9	0.2
Delay (s)	29.9	28.4		69.1	39.7		67.3	37.5		39.7	46.8	24.6
Level of Service	C	C		E	D		E	D		D	D	C
Approach Delay (s)		28.6			44.2			50.6			38.1	
Approach LOS		C			D			D			D	

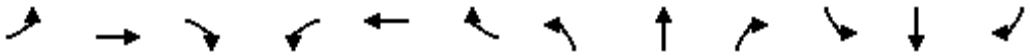
Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	716	0	0	475	0	106
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	778	0	0	516	0	115
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			778		1036	389
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			778		1036	389
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	81
cM capacity (veh/h)			834		227	610

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	389	389	258	258	115
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	115
cSH	1700	1700	1700	1700	610
Volume to Capacity	0.23	0.23	0.15	0.15	0.19
Queue Length 95th (ft)	0	0	0	0	17
Control Delay (s)	0.0	0.0	0.0	0.0	12.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.3
Approach LOS					B

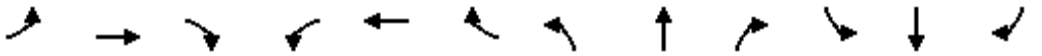
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	74	0	27	1	255	121	20	108	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
Hourly flow rate (vph)	1	1	5	80	0	29	1	277	132	22	117	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	80	29	1	409	140
Volume Left (vph)	1	80	0	1	0	22
Volume Right (vph)	5	0	29	0	132	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.19	0.06
Departure Headway (s)	5.7	6.4	5.2	5.5	4.8	5.4
Degree Utilization, x	0.01	0.14	0.04	0.00	0.55	0.21
Capacity (veh/h)	558	517	629	632	734	641
Control Delay (s)	8.8	9.3	7.2	7.3	12.2	9.8
Approach Delay (s)	8.8	8.7		12.2		9.8
Approach LOS	A	A		B		A

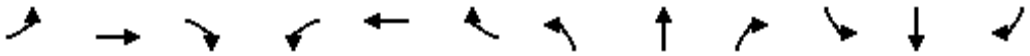
Intersection Summary				
Delay	11.1			
Level of Service	B			
Intersection Capacity Utilization	41.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	54	37	12	8	18	28	668	53	11	467	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.97	1.00			1.00			1.00	1.00
Frt	1.00	0.94		1.00	0.90			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1659	1609		1634	1545			3260			1720	1459
Flt Permitted	0.73	1.00		0.68	1.00			0.93			0.98	1.00
Satd. Flow (perm)	1282	1609		1175	1545			3035			1690	1459
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	165	68	47	16	11	24	33	786	62	11	486	67
RTOR Reduction (vph)	0	37	0	0	19	0	0	6	0	0	0	9
Lane Group Flow (vph)	165	78	0	16	16	0	0	875	0	0	497	58
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	12.4	12.4		12.4	12.4			37.4			37.4	37.4
Effective Green, g (s)	11.9	11.9		11.9	11.9			36.9			36.9	36.9
Actuated g/C Ratio	0.21	0.21		0.21	0.21			0.65			0.65	0.65
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	267	335		245	322			1964			1094	944
v/s Ratio Prot		0.05			0.01							
v/s Ratio Perm	c0.13			0.01				0.29			c0.29	0.04
v/c Ratio	0.62	0.23		0.07	0.05			0.45			0.45	0.06
Uniform Delay, d1	20.5	18.8		18.1	18.0			5.0			5.0	3.7
Progression Factor	1.00	1.00		1.00	1.00			0.65			0.76	0.70
Incremental Delay, d2	3.6	0.3		0.1	0.0			0.7			1.0	0.1
Delay (s)	24.1	19.0		18.2	18.1			3.9			4.8	2.7
Level of Service	C	B		B	B			A			A	A
Approach Delay (s)		22.0			18.1			3.9			4.5	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	44	0	10	0	363	25	17	181	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
Hourly flow rate (vph)	0	0	0	48	0	11	0	395	27	18	197	0

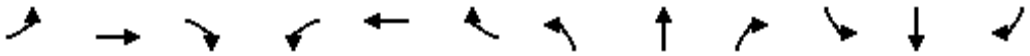
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	59	422	215
Volume Left (vph)	0	48	0	18
Volume Right (vph)	0	11	27	0
Hadj (s)	0.00	0.09	0.00	0.05
Departure Headway (s)	5.4	5.4	4.3	4.6
Degree Utilization, x	0.00	0.09	0.50	0.27
Capacity (veh/h)	588	594	821	762
Control Delay (s)	8.4	8.9	11.6	9.3
Approach Delay (s)	0.0	8.9	11.6	9.3
Approach LOS	A	A	B	A

Intersection Summary				
Delay		10.6		
Level of Service		B		
Intersection Capacity Utilization		37.8%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	20	5	28	21	71	7	596	19	55	445	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.88		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1657	1689		1641	1514		1660	1754		1662	1702	
Flt Permitted	0.68	1.00		0.73	1.00		0.44	1.00		0.34	1.00	
Satd. Flow (perm)	1182	1689		1264	1514		768	1754		599	1702	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	53	31	8	38	28	96	8	670	21	61	494	31
RTOR Reduction (vph)	0	7	0	0	82	0	0	1	0	0	2	0
Lane Group Flow (vph)	53	32	0	38	42	0	8	690	0	61	523	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	8.7	8.7		8.7	8.7		41.1	41.1		41.1	41.1	
Effective Green, g (s)	8.2	8.2		8.2	8.2		40.6	40.6		40.6	40.6	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.71	0.71		0.71	0.71	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	170	242		181	217		547	1249		426	1212	
v/s Ratio Prot		0.02			0.03			c0.39			0.31	
v/s Ratio Perm	c0.04			0.03			0.01			0.10		
v/c Ratio	0.31	0.13		0.21	0.19		0.01	0.55		0.14	0.43	
Uniform Delay, d1	21.9	21.3		21.5	21.5		2.4	3.9		2.6	3.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.57	0.97	
Incremental Delay, d2	0.4	0.1		0.2	0.2		0.0	1.8		0.7	1.1	
Delay (s)	22.3	21.4		21.8	21.6		2.4	5.7		2.2	4.4	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		21.9			21.7			5.6			4.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	0	30	0	0	3	28	303	0	1	197	57
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	67	0	33	0	0	3	30	329	0	1	214	62
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	641	638	245	670	668	329	276			329		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	641	638	245	670	668	329	276			329		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	100	96	100	100	100	98			100		
cM capacity (veh/h)	379	385	794	349	370	712	1287			1230		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	100	3	360	277
Volume Left	67	0	30	1
Volume Right	33	3	0	62
cSH	457	712	1287	1230
Volume to Capacity	0.22	0.00	0.02	0.00
Queue Length 95th (ft)	21	0	2	0
Control Delay (s)	15.1	10.1	0.9	0.0
Lane LOS	C	B	A	A
Approach Delay (s)	15.1	10.1	0.9	0.0
Approach LOS	C	B		

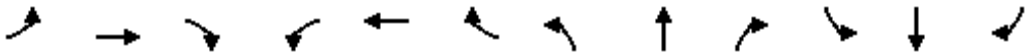
Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	55.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	35	27	305	36	32	197
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	29	332	39	35	214

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	67	371	249
Volume Left (vph)	38	0	35
Volume Right (vph)	29	39	0
Hadj (s)	-0.11	-0.03	0.06
Departure Headway (s)	5.1	4.3	4.5
Degree Utilization, x	0.10	0.45	0.31
Capacity (veh/h)	622	814	767
Control Delay (s)	8.7	10.8	9.6
Approach Delay (s)	8.7	10.8	9.6
Approach LOS	A	B	A

Intersection Summary			
Delay	10.1		
Level of Service	B		
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	34	43	13	27	35	46	10	537	24	50	417	9
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
Hourly flow rate (vph)	37	47	14	29	38	50	11	584	26	54	453	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	98	117	621	517
Volume Left (vph)	37	29	11	54
Volume Right (vph)	14	50	26	10
Hadj (s)	0.02	-0.17	0.01	0.04
Departure Headway (s)	7.4	7.1	5.6	5.8
Degree Utilization, x	0.20	0.23	0.96	0.83
Capacity (veh/h)	457	473	638	611
Control Delay (s)	12.3	12.3	50.6	30.6
Approach Delay (s)	12.3	12.3	50.6	30.6
Approach LOS	B	B	F	D

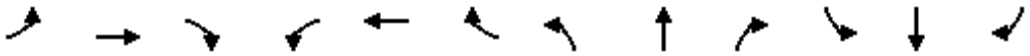
Intersection Summary				
Delay	36.8			
Level of Service	E			
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	30	7	22	22	6	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	8	24	24	7	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	59	36			48	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	59	36			48	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	99			100	
cM capacity (veh/h)	944	1037			1559	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	40	48	16
Volume Left	33	0	7
Volume Right	8	24	0
cSH	961	1700	1559
Volume to Capacity	0.04	0.03	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.9	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	2.9
Approach LOS	A		

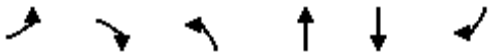
Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	16.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	30	2	7	28	7	9	24	8	8	22	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	33	2	8	30	8	10	26	9	9	24	3
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	38			43			118	99	47	114	97	41
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	38			43			118	99	47	114	97	41
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	97	99	99	97	100
cM capacity (veh/h)	1572			1556			817	781	1012	822	783	1024

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	37	46	45	36
Volume Left	2	8	10	9
Volume Right	2	8	9	3
cSH	1572	1556	825	810
Volume to Capacity	0.00	0.00	0.05	0.04
Queue Length 95th (ft)	0	0	4	3
Control Delay (s)	0.4	1.3	9.6	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.4	1.3	9.6	9.7
Approach LOS			A	A

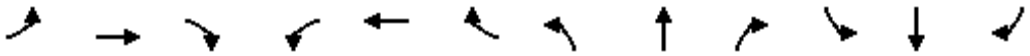
Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	43	22	28	304	198	28
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	24	30	330	215	30
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	636	236	250			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	636	236	250			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	97	98			
cM capacity (veh/h)	427	799	1312			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	71	361	246
Volume Left	47	30	0
Volume Right	24	0	30
cSH	507	1312	1700
Volume to Capacity	0.14	0.02	0.14
Queue Length 95th (ft)	12	2	0
Control Delay (s)	13.3	0.9	0.0
Lane LOS	B	A	
Approach Delay (s)	13.3	0.9	0.0
Approach LOS	B		

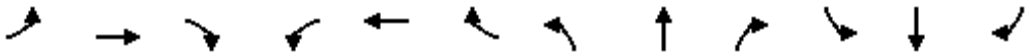
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	58	3	27	0	19	117	21	21	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	63	3	29	0	21	127	23	23	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	43			11			172	181	12	304	167	32
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	43			11			172	181	12	304	167	32
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			100	97	88	96	97	100
cM capacity (veh/h)	1553			1606			739	678	1065	531	690	1030

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	96	148	46
Volume Left	1	63	0	23
Volume Right	1	29	127	0
cSH	1553	1606	986	600
Volume to Capacity	0.00	0.04	0.15	0.08
Queue Length 95th (ft)	0	3	13	6
Control Delay (s)	0.8	4.9	9.3	11.5
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	4.9	9.3	11.5
Approach LOS			A	B

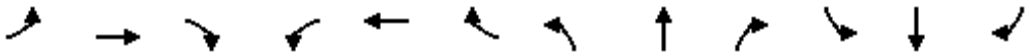
Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	132	20	12	78	28	11	8	23	19	10	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	8	143	22	13	85	30	12	9	25	21	11	4
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	132			171			317	334	167	349	330	123
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	132			171			317	334	167	349	330	123
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	98	97	96	98	100
cM capacity (veh/h)	1432			1399			601	567	867	555	570	910

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	173	128	46	36
Volume Left	8	13	12	21
Volume Right	22	30	25	4
cSH	1432	1399	713	588
Volume to Capacity	0.01	0.01	0.06	0.06
Queue Length 95th (ft)	0	1	5	5
Control Delay (s)	0.4	0.8	10.4	11.5
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	0.8	10.4	11.5
Approach LOS			B	B

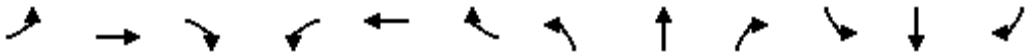
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	79	74	33	34	61	33	36	205	40	60	182	19
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
Hourly flow rate (vph)	86	80	36	37	66	36	39	223	43	65	198	21

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	202	139	305	284
Volume Left (vph)	86	37	39	65
Volume Right (vph)	36	36	43	21
Hadj (s)	0.01	-0.07	-0.03	0.04
Departure Headway (s)	5.8	5.9	5.4	5.5
Degree Utilization, x	0.33	0.23	0.46	0.43
Capacity (veh/h)	558	537	623	615
Control Delay (s)	11.6	10.6	12.8	12.5
Approach Delay (s)	11.6	10.6	12.8	12.5
Approach LOS	B	B	B	B

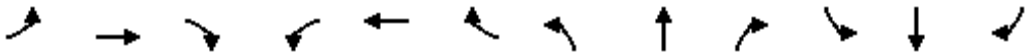
Intersection Summary				
Delay	12.1			
Level of Service	B			
Intersection Capacity Utilization	49.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	124	43	29	66	127	20	402	22	60	369	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667			1538	1253	1676	1745		1676	1736	
Flt Permitted		0.93			0.86	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1571			1342	1253	1676	1745		1676	1736	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	40	149	52	33	75	144	21	419	23	71	434	40
RTOR Reduction (vph)	0	20	0	0	0	114	0	2	0	0	4	0
Lane Group Flow (vph)	0	221	0	0	108	30	21	440	0	71	470	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		12.6			12.6	12.6	1.6	28.7		5.2	32.3	
Effective Green, g (s)		12.1			12.1	12.1	1.1	29.2		4.7	32.8	
Actuated g/C Ratio		0.21			0.21	0.21	0.02	0.50		0.08	0.57	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		327			279	261	31	878		135	981	
v/s Ratio Prot							0.01	0.25		c0.04	c0.27	
v/s Ratio Perm		c0.14			0.08	0.02						
v/c Ratio		0.68			0.39	0.12	0.68	0.50		0.53	0.48	
Uniform Delay, d1		21.1			19.8	18.6	28.3	9.6		25.6	7.5	
Progression Factor		1.00			1.00	1.00	1.26	1.02		1.00	1.00	
Incremental Delay, d2		4.3			0.3	0.1	42.4	1.9		3.7	1.7	
Delay (s)		25.5			20.1	18.7	78.1	11.6		29.2	9.2	
Level of Service		C			C	B	E	B		C	A	
Approach Delay (s)		25.5			19.3			14.6			11.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

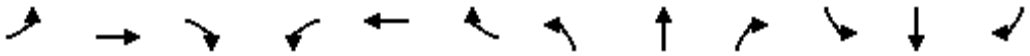
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	464	175	156	433	50	267	188	124	56	182	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3031		1676	3353	1401	1676	1849			1530	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3031		1676	3353	1401	1676	1849			1530	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	46	510	192	164	456	53	322	227	149	58	188	19
RTOR Reduction (vph)	0	30	0	0	0	32	0	21	0	0	2	0
Lane Group Flow (vph)	46	672	0	164	456	21	322	355	0	0	263	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	6.7	36.4		14.4	44.1	44.1	24.9	24.9			23.8	
Effective Green, g (s)	7.2	37.4		14.9	45.1	45.1	24.4	24.4			23.3	
Actuated g/C Ratio	0.06	0.32		0.13	0.39	0.39	0.21	0.21			0.20	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	104	977		215	1303	544	352	388			307	
v/s Ratio Prot	0.03	c0.22		c0.10	0.14		0.19	c0.19			c0.17	
v/s Ratio Perm						0.01						
v/c Ratio	0.44	0.69		0.76	0.35	0.04	0.91	0.92			0.86	
Uniform Delay, d1	52.5	34.2		48.8	25.1	22.0	44.8	44.8			44.7	
Progression Factor	1.00	1.00		1.51	0.51	0.15	1.00	1.00			1.00	
Incremental Delay, d2	2.2	3.9		13.6	0.7	0.1	27.4	25.8			19.9	
Delay (s)	54.6	38.1		87.5	13.6	3.4	72.2	70.6			64.6	
Level of Service	D	D		F	B	A	E	E			E	
Approach Delay (s)		39.2			30.8			71.3			64.6	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	49.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	551	64	105	513	148	69	252	78	103	300	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3221		1676	3353	1364	1676	1765	1439	1676	1737	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3221		1676	3353	1364	1676	1765	1439	1676	1737	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	586	68	107	523	151	72	262	81	108	316	29
RTOR Reduction (vph)	0	6	0	0	0	73	0	0	64	0	3	0
Lane Group Flow (vph)	46	648	0	107	523	78	72	262	17	108	342	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	49.0		12.3	52.9	52.9	8.2	24.8	24.8	13.2	29.8	
Effective Green, g (s)	7.9	49.0		11.8	52.9	52.9	7.7	24.3	24.3	12.7	29.3	
Actuated g/C Ratio	0.07	0.42		0.10	0.46	0.46	0.07	0.21	0.21	0.11	0.25	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1360		170	1529	622	111	369	301	183	438	
v/s Ratio Prot	0.03	c0.20		c0.06	0.16		0.04	0.15		c0.06	c0.20	
v/s Ratio Perm						0.06			0.01			
v/c Ratio	0.40	0.48		0.63	0.34	0.13	0.65	0.71	0.06	0.59	0.78	
Uniform Delay, d1	51.8	24.2		50.0	20.3	18.2	52.8	42.6	36.7	49.2	40.4	
Progression Factor	0.70	0.59		1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.96	
Incremental Delay, d2	1.1	0.8		6.2	0.6	0.4	11.0	5.9	0.1	3.9	7.8	
Delay (s)	37.3	15.2		56.2	20.9	18.6	63.8	48.5	36.7	52.2	46.6	
Level of Service	D	B		E	C	B	E	D	D	D	D	
Approach Delay (s)		16.6			25.3			48.8			47.9	
Approach LOS		B			C			D			D	

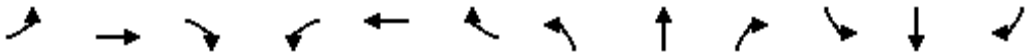
Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	647	79	67	687	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3110		1676	3172			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3110		1676	3172			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	660	81	69	708	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	7	0	0	4	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	734	0	69	756	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1206		121	1364			376	324		309	
v/s Ratio Prot	0.01	c0.24		c0.04	0.24			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.61		0.57	0.55			0.92	0.36		0.76	
Uniform Delay, d1	55.3	28.4		52.1	24.7			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.15	0.37			1.00	1.00		1.00	
Incremental Delay, d2	4.4	2.3		3.1	0.9			27.3	0.5		9.6	
Delay (s)	59.7	30.7		62.9	10.0			71.6	38.5		54.7	
Level of Service	E	C		E	A			E	D		D	
Approach Delay (s)		31.6			14.4			55.6			54.7	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

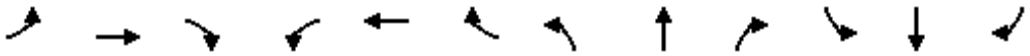
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	576	212	51	418	162	296	787	29	179	777	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	3081		1676	3117		3252	3245		1676	3213	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	3081		1676	3117		3252	3245		1676	3213	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	600	221	61	498	193	312	828	31	192	835	97
RTOR Reduction (vph)	0	33	0	0	35	0	0	2	0	0	8	0
Lane Group Flow (vph)	220	788	0	61	656	0	312	857	0	192	924	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.6	36.4		8.8	26.6		16.0	40.7		16.9	40.6	
Effective Green, g (s)	18.6	36.4		8.8	26.6		17.0	41.7		16.9	41.6	
Actuated g/C Ratio	0.16	0.31		0.08	0.23		0.15	0.36		0.15	0.36	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	268	966		127	714		476	1166		244	1152	
v/s Ratio Prot	0.13	c0.26		0.04	c0.21		0.10	c0.26		0.11	c0.29	
v/s Ratio Perm												
v/c Ratio	0.82	0.82		0.48	0.92		0.66	0.74		0.79	0.80	
Uniform Delay, d1	47.1	36.7		51.4	43.6		46.7	32.3		47.8	33.5	
Progression Factor	0.69	0.59		1.00	1.00		1.00	1.00		1.07	0.57	
Incremental Delay, d2	14.3	4.3		1.0	16.4		2.5	4.1		13.9	5.5	
Delay (s)	46.6	25.8		52.5	60.0		49.2	36.5		65.0	24.6	
Level of Service	D	C		D	E		D	D		E	C	
Approach Delay (s)		30.2			59.4			39.9			31.5	
Approach LOS		C			E			D			C	

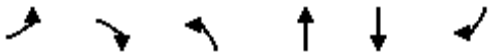
Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	10	137	5	3	10	75	1045	11	2	878	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.98	
Flpb, ped/bikes		0.95	1.00		0.99		0.96	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1613	3339			3256	
Flt Permitted		0.72	1.00		0.90		0.25	1.00			0.95	
Satd. Flow (perm)		1215	1360		1408		430	3339			3106	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	273	12	169	13	8	26	81	1124	12	2	896	76
RTOR Reduction (vph)	0	0	102	0	19	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	285	67	0	28	0	81	1135	0	0	969	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.7	29.7		29.2		79.3	79.3			79.3	
Effective Green, g (s)		29.7	29.7		29.7		80.3	80.3			80.3	
Actuated g/C Ratio		0.26	0.26		0.26		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		311	348		360		297	2311			2150	
v/s Ratio Prot								c0.34				
v/s Ratio Perm		c0.23	0.05		0.02		0.19				0.31	
v/c Ratio		0.92	0.19		0.08		0.27	0.49			0.45	
Uniform Delay, d1		41.9	33.8		32.7		6.8	8.3			8.0	
Progression Factor		1.00	1.00		1.00		0.50	0.50			2.05	
Incremental Delay, d2		29.7	0.1		0.0		1.4	0.5			0.6	
Delay (s)		71.7	33.9		32.8		4.8	4.7			17.0	
Level of Service		E	C		C		A	A			B	
Approach Delay (s)		57.6			32.8			4.7			17.0	
Approach LOS		E			C			A			B	

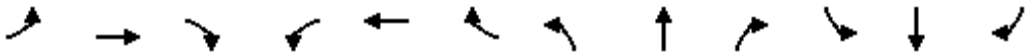
Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	96	91	1164	948	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.96	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1566		1612	3279	3319	
Flt Permitted	0.98		0.26	1.00	1.00	
Satd. Flow (perm)	1566		442	3279	3319	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	64	109	97	1238	967	27
RTOR Reduction (vph)	59	0	0	0	1	0
Lane Group Flow (vph)	114	0	97	1238	993	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	295		335	2490	2520	
v/s Ratio Prot	c0.07			c0.38	0.30	
v/s Ratio Perm			0.22			
v/c Ratio	0.39		0.29	0.50	0.39	
Uniform Delay, d1	41.2		4.3	5.4	4.8	
Progression Factor	1.00		0.48	0.55	1.00	
Incremental Delay, d2	0.3		1.8	0.6	0.5	
Delay (s)	41.5		3.9	3.6	5.3	
Level of Service	D		A	A	A	
Approach Delay (s)	41.5			3.6	5.3	
Approach LOS	D			A	A	

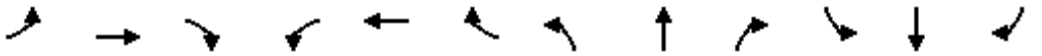
Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



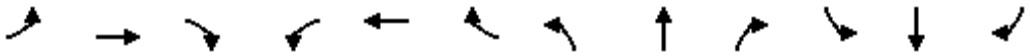
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	22	71	9	15	9	31	1191	20	19	949	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1712	1423		1660		1676	3335		1676	3329	
Flt Permitted		0.82	1.00		0.93		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1449	1423		1568		1676	3335		1676	3329	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	43	27	87	14	23	14	34	1309	22	20	989	31
RTOR Reduction (vph)	0	0	73	0	12	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	70	14	0	39	0	34	1330	0	20	1019	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.0	18.0		18.0		9.6	83.1		4.4	77.9	
Effective Green, g (s)		18.5	18.5		18.5		9.6	84.1		4.4	78.9	
Actuated g/C Ratio		0.16	0.16		0.16		0.08	0.72		0.04	0.68	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		231	226		250		138	2417		63	2264	
v/s Ratio Prot							0.02	c0.40		0.01	c0.31	
v/s Ratio Perm		c0.05	0.01		0.03							
v/c Ratio		0.30	0.06		0.16		0.25	0.55		0.32	0.45	
Uniform Delay, d1		43.1	41.4		42.0		49.8	7.3		54.3	8.5	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3	0.0		0.1		0.3	0.9		1.1	0.6	
Delay (s)		43.3	41.4		42.1		50.2	8.2		55.4	9.2	
Level of Service		D	D		D		D	A		E	A	
Approach Delay (s)		42.3			42.1			9.3			10.1	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



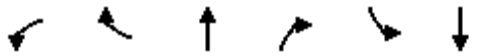
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	258	153	0	359	1131	0	0	0	739	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.94			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3095			2838	1365				2515		1429
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3095			2838	1365				2515		1429
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	269	159	0	366	1154	0	0	0	803	0	175
RTOR Reduction (vph)	0	65	0	0	178	433	0	0	0	0	0	109
Lane Group Flow (vph)	106	363	0	0	650	259	0	0	0	803	0	66
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	62.7			42.7	42.7				42.8		42.8
Effective Green, g (s)	16.0	62.7			42.7	42.7				43.3		43.3
Actuated g/C Ratio	0.14	0.55			0.37	0.37				0.38		0.38
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1702			1063	511				955		542
v/s Ratio Prot	c0.06	0.12			c0.23	0.19				c0.32		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.21			0.61	0.51				0.84		0.12
Uniform Delay, d1	45.0	13.1			28.9	27.5				32.2		23.0
Progression Factor	1.00	1.00			0.92	3.65				1.00		1.00
Incremental Delay, d2	0.5	0.3			2.2	0.7				6.7		0.1
Delay (s)	45.5	13.4			28.9	101.1				38.9		23.1
Level of Service	D	B			C	F				D		C
Approach Delay (s)		19.7			61.7			0.0			36.0	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



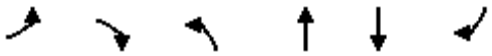
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	922	0	0	1049	407	452	58	842	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.94	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1403	1593	1410	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1403	1593	1410	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1002	0	0	1140	442	466	60	868	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	217	0	93	41	0	0	0
Lane Group Flow (vph)	92	1002	0	0	1140	225	419	405	436	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	61.8			58.1	58.1	35.5	35.5	44.2			
Effective Green, g (s)	8.4	61.8			58.1	58.1	35.5	35.5	44.2			
Actuated g/C Ratio	0.07	0.54			0.51	0.51	0.31	0.31	0.39			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2611			2455	715	496	439	552			
v/s Ratio Prot	0.05	c0.21			c0.24		0.26	c0.29	c0.31			
v/s Ratio Perm						0.16						
v/c Ratio	0.75	0.38			0.46	0.32	0.84	0.92	0.79			
Uniform Delay, d1	51.8	15.1			18.0	16.3	36.7	37.9	30.8			
Progression Factor	1.40	0.28			0.87	1.27	1.00	1.00	1.00			
Incremental Delay, d2	16.3	0.4			0.5	1.0	12.5	24.9	7.4			
Delay (s)	88.6	4.6			16.1	21.8	49.1	62.8	38.2			
Level of Service	F	A			B	C	D	E	D			
Approach Delay (s)		11.6			17.7			50.3			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



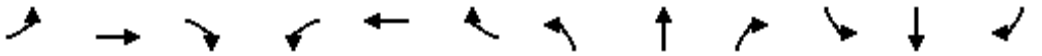
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	854	36	229	130	10	214
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3235		3353	1427		3342
Flt Permitted	0.95		1.00	1.00		0.94
Satd. Flow (perm)	3235		3353	1427		3147
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	880	37	263	149	12	252
RTOR Reduction (vph)	4	0	0	63	0	0
Lane Group Flow (vph)	913	0	263	86	0	264
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	40.6		66.2	66.2		66.2
Effective Green, g (s)	40.1		65.7	65.7		65.7
Actuated g/C Ratio	0.35		0.58	0.58		0.58
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1137		1932	822		1813
v/s Ratio Prot	c0.28		0.08			
v/s Ratio Perm				0.06		c0.08
v/c Ratio	0.80		0.14	0.10		0.15
Uniform Delay, d1	33.4		11.1	10.9		11.2
Progression Factor	0.29		0.23	0.00		1.00
Incremental Delay, d2	3.6		0.1	0.2		0.2
Delay (s)	13.4		2.7	0.2		11.3
Level of Service	B		A	A		B
Approach Delay (s)	13.4		1.8			11.3
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



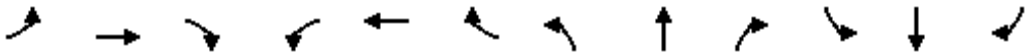
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	113	35	692	511	204	191
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	143	44	713	527	227	212
RTOR Reduction (vph)	0	19	0	0	0	185
Lane Group Flow (vph)	143	25	713	527	227	27
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	15.1	65.1	46.5	91.9	41.9	15.1
Effective Green, g (s)	14.6	64.6	46.0	91.4	41.4	14.6
Actuated g/C Ratio	0.13	0.57	0.40	0.80	0.36	0.13
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	214	850	1312	1415	640	192
v/s Ratio Prot	c0.09	0.02	c0.22	c0.30	0.13	0.02
v/s Ratio Perm						
v/c Ratio	0.67	0.03	0.54	0.37	0.35	0.14
Uniform Delay, d1	47.4	10.9	26.0	3.2	26.5	44.1
Progression Factor	1.41	4.20	0.54	0.13	1.00	1.00
Incremental Delay, d2	7.6	0.0	1.2	0.6	1.5	0.3
Delay (s)	74.5	45.7	15.3	1.0	28.1	44.5
Level of Service	E	D	B	A	C	D
Approach Delay (s)	67.8			9.2	36.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



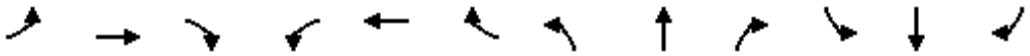
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	457	1027	289	472	115	205	24	104	141	201	707
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.93	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2841	1365	1676	3353	1470	1593	1613	1444		1729	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2841	1365	1676	3353	1470	1593	1613	1444		1729	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	278	462	1037	357	583	142	220	26	112	144	205	721
RTOR Reduction (vph)	0	124	63	0	0	54	0	0	99	0	0	82
Lane Group Flow (vph)	278	701	611	357	583	88	123	123	13	0	349	639
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	909	592	249	1014	444	181	183	164		455	1169
v/s Ratio Prot	0.09	0.25	c0.45	c0.21	0.17		0.08	0.08			c0.20	0.24
v/s Ratio Perm						0.06			0.01			
v/c Ratio	0.48	0.77	1.03	1.43	0.57	0.20	0.68	0.67	0.08		0.77	0.55
Uniform Delay, d1	41.9	35.0	32.2	48.5	33.6	29.5	48.5	48.5	45.1		38.8	23.3
Progression Factor	0.95	0.71	0.66	0.71	0.59	0.48	1.00	1.00	1.00		0.59	0.29
Incremental Delay, d2	2.2	5.1	41.8	213.8	2.0	0.9	8.9	8.5	0.1		10.8	1.7
Delay (s)	42.0	29.8	63.2	248.3	21.9	14.9	57.4	57.0	45.3		33.7	8.5
Level of Service	D	C	E	F	C	B	E	E	D		C	A
Approach Delay (s)		44.4			95.7			53.4			16.7	
Approach LOS		D			F			D			B	

Intersection Summary			
HCM 2000 Control Delay	51.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



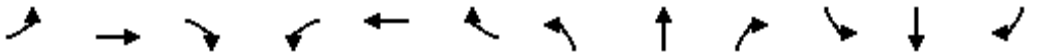
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	232	913	60	0	168	0	958	53	0	246	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3315			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3315			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	242	951	62	0	175	0	998	55	0	283	0
RTOR Reduction (vph)	0	0	622	0	0	159	0	3	0	0	0	0
Lane Group Flow (vph)	126	242	329	62	0	16	0	1050	0	0	283	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.4	15.4	40.4	10.7		10.7		53.1			28.3	
Effective Green, g (s)	14.4	14.4	39.4	10.2		10.2		52.6			27.8	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	192	405	777	149		131		1529			817	
v/s Ratio Prot	c0.08	0.08	0.15	c0.04				c0.32			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.66	0.60	0.42	0.42		0.12		0.69			0.35	
Uniform Delay, d1	47.4	47.1	28.6	49.1		47.8		24.2			35.6	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.44			0.52	
Incremental Delay, d2	7.0	2.0	0.3	1.4		0.3		2.2			1.1	
Delay (s)	54.5	49.0	28.9	50.5		48.1		12.9			19.6	
Level of Service	D	D	C	D		D		B			B	
Approach Delay (s)		35.0			48.7			12.9			19.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	103	1	161	15	853	130	213	985	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2350	1458		1676	3353	1376	1676	3310	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1828	1458		1676	3353	1376	1676	3310	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	121	1	189	16	927	141	227	1048	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	46	0	1	0
Lane Group Flow (vph)	0	28	1	121	28	0	16	927	95	227	1073	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.4	16.4		4.2	57.9	57.9	19.7	73.4	
Effective Green, g (s)		4.0	4.0	16.4	16.4		3.7	58.4	58.4	19.2	73.9	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	262	209		54	1717	704	282	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.28		c0.14	0.32	
v/s Ratio Perm			0.00	c0.07					0.07			
v/c Ratio		0.47	0.02	0.46	0.13		0.30	0.54	0.14	0.80	0.50	
Uniform Delay, d1		54.0	53.1	44.8	42.6		53.9	18.7	14.6	45.6	10.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.97	1.18	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.2	0.4	12.1	0.7	
Delay (s)		56.2	53.2	45.2	42.7		55.0	20.0	15.0	56.1	12.9	
Level of Service		E	D	D	D		D	B	B	E	B	
Approach Delay (s)		55.1			43.7			19.8			20.5	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	429	171	66	544	27	205	155	41	28	183	118
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3185		1676	3322		1676	1698		1666	1765	1478
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.62	1.00	1.00
Satd. Flow (perm)	1676	3185		1676	3322		1676	1698		1096	1765	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	466	186	72	591	29	223	168	45	30	199	128
RTOR Reduction (vph)	0	39	0	0	3	0	0	7	0	0	0	72
Lane Group Flow (vph)	87	613	0	72	617	0	223	206	0	30	199	56
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	12.0	31.1		9.0	28.1		20.4	52.4		38.5	38.3	50.3
Effective Green, g (s)	12.0	31.1		9.0	28.1		20.4	52.4		38.5	38.3	50.3
Actuated g/C Ratio	0.11	0.27		0.08	0.25		0.18	0.46		0.34	0.34	0.44
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	176	868		132	818		299	780		401	592	652
v/s Ratio Prot	0.05	c0.19		0.04	c0.19		c0.13	0.12		0.00	c0.11	0.01
v/s Ratio Perm										0.02		0.03
v/c Ratio	0.49	0.71		0.55	0.75		0.75	0.26		0.07	0.34	0.09
Uniform Delay, d1	48.1	37.3		50.5	39.8		44.3	18.9		25.7	28.3	18.5
Progression Factor	0.77	1.05		1.00	1.00		0.99	1.12		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.8		4.5	4.0		9.7	0.8		0.1	1.5	0.1
Delay (s)	38.7	41.0		55.1	43.7		53.6	21.9		25.8	29.9	18.6
Level of Service	D	D		E	D		D	C		C	C	B
Approach Delay (s)		40.8			44.9			38.2			25.5	
Approach LOS		D			D			D			C	

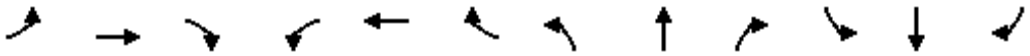
Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	476	0	0	616	0	31
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	517	0	0	670	0	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			517		852	259
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			517		852	259
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			1045		299	740

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	259	259	335	335	34
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	34
cSH	1700	1700	1700	1700	740
Volume to Capacity	0.15	0.15	0.20	0.20	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	10.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.1
Approach LOS					B

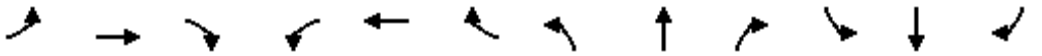
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	48	0	9	0	68	53	4	50	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
Hourly flow rate (vph)	1	0	0	52	0	10	0	74	58	4	54	0

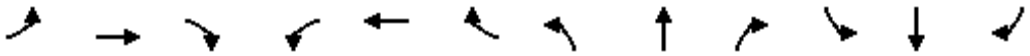
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	52	10	0	132	59
Volume Left (vph)	1	52	0	0	0	4
Volume Right (vph)	0	0	10	0	58	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.27	0.05
Departure Headway (s)	5.3	5.5	4.3	4.7	4.4	4.9
Degree Utilization, x	0.00	0.08	0.01	0.00	0.16	0.08
Capacity (veh/h)	651	624	795	762	789	726
Control Delay (s)	8.3	7.8	6.1	6.5	7.1	8.3
Approach Delay (s)	8.3	7.5		7.1		8.3
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	17.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	11	7	4	6	10	9	333	13	9	370	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98			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	0.94		1.00	0.91			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1676	1623		1672	1578			3326			1763	1473
Flt Permitted	0.75	1.00		0.74	1.00			0.95			0.99	1.00
Satd. Flow (perm)	1316	1623		1310	1578			3153			1750	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	12	8	4	7	11	10	362	14	10	402	49
RTOR Reduction (vph)	0	7	0	0	9	0	0	2	0	0	0	6
Lane Group Flow (vph)	55	13	0	4	9	0	0	384	0	0	412	43
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	189	233		188	227			2301			1277	1075
v/s Ratio Prot		0.01			0.01							
v/s Ratio Perm	c0.04			0.00				0.12			c0.24	0.03
v/c Ratio	0.29	0.06		0.02	0.04			0.17			0.32	0.04
Uniform Delay, d1	21.8	21.1		21.0	21.0			2.4			2.7	2.1
Progression Factor	1.00	1.00		1.00	1.00			0.56			1.01	1.00
Incremental Delay, d2	0.6	0.1		0.0	0.0			0.2			0.6	0.1
Delay (s)	22.4	21.1		21.0	21.1			1.5			3.4	2.2
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		22.1			21.0			1.5			3.2	
Approach LOS		C			C			A			A	

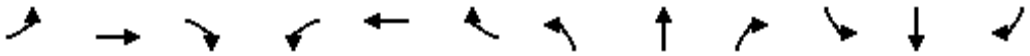
Intersection Summary			
HCM 2000 Control Delay	4.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	24	0	4	0	117	24	4	98	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
Hourly flow rate (vph)	0	0	0	26	0	4	0	127	26	4	107	0

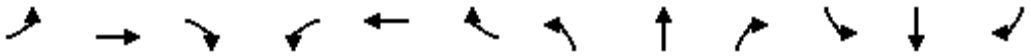
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	30	153	111
Volume Left (vph)	0	26	0	4
Volume Right (vph)	0	4	26	0
Hadj (s)	0.00	0.12	-0.07	0.04
Departure Headway (s)	4.5	4.6	4.0	4.2
Degree Utilization, x	0.00	0.04	0.17	0.13
Capacity (veh/h)	762	732	877	850
Control Delay (s)	7.5	7.8	7.8	7.8
Approach Delay (s)	0.0	7.8	7.8	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.8		
Level of Service	A		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	7	1	9	5	16	3	314	17	37	321	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1730		1669	1506		1669	1749		1668	1746	
Flt Permitted	0.74	1.00		0.75	1.00		0.54	1.00		0.55	1.00	
Satd. Flow (perm)	1309	1730		1321	1506		950	1749		960	1746	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	8	1	10	5	17	3	341	18	40	349	22
RTOR Reduction (vph)	0	1	0	0	15	0	0	2	0	0	2	0
Lane Group Flow (vph)	24	8	0	10	7	0	3	357	0	40	369	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	5.4	5.4		5.4	5.4		44.4	44.4		44.4	44.4	
Effective Green, g (s)	5.4	5.4		5.4	5.4		44.4	44.4		44.4	44.4	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.78	0.78		0.78	0.78	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	124	163		125	142		740	1362		747	1360	
v/s Ratio Prot		0.00			0.00			0.20			c0.21	
v/s Ratio Perm	c0.02			0.01			0.00			0.04		
v/c Ratio	0.19	0.05		0.08	0.05		0.00	0.26		0.05	0.27	
Uniform Delay, d1	23.8	23.5		23.5	23.5		1.4	1.8		1.5	1.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.40	1.96	
Incremental Delay, d2	0.3	0.0		0.1	0.0		0.0	0.5		0.1	0.5	
Delay (s)	24.1	23.5		23.6	23.5		1.4	2.2		2.2	3.9	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		23.9			23.5			2.2			3.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	0	19	0	0	0	22	84	1	1	63	61
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	63	0	21	0	0	0	24	91	1	1	68	66
Pedestrians					4			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	243	248	103	269	281	96	135			96		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	243	248	103	269	281	96	135			96		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	100	98	100	100	100	98			100		
cM capacity (veh/h)	699	641	952	655	615	957	1450			1492		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	84	0	116	136
Volume Left	63	0	24	1
Volume Right	21	0	1	66
cSH	748	1700	1450	1492
Volume to Capacity	0.11	0.00	0.02	0.00
Queue Length 95th (ft)	9	0	1	0
Control Delay (s)	10.4	0.0	1.7	0.1
Lane LOS	B	A	A	A
Approach Delay (s)	10.4	0.0	1.7	0.1
Approach LOS	B	A		

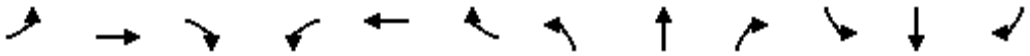
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	29.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	14	10	97	29	9	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	11	105	32	10	80

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	26	137	90
Volume Left (vph)	15	0	10
Volume Right (vph)	11	32	0
Hadj (s)	-0.10	-0.10	0.06
Departure Headway (s)	4.3	3.9	4.1
Degree Utilization, x	0.03	0.15	0.10
Capacity (veh/h)	796	893	855
Control Delay (s)	7.4	7.6	7.6
Approach Delay (s)	7.4	7.6	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	17	2	15	15	26	5	289	15	27	303	9
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
Hourly flow rate (vph)	23	18	2	16	16	28	5	314	16	29	329	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	43	61	336	368
Volume Left (vph)	23	16	5	29
Volume Right (vph)	2	28	16	10
Hadj (s)	0.11	-0.19	0.01	0.03
Departure Headway (s)	5.7	5.4	4.6	4.6
Degree Utilization, x	0.07	0.09	0.43	0.47
Capacity (veh/h)	543	577	752	753
Control Delay (s)	9.2	9.0	11.1	11.7
Approach Delay (s)	9.2	9.0	11.1	11.7
Approach LOS	A	A	B	B

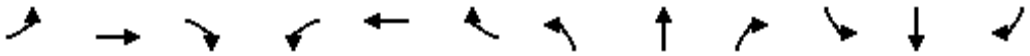
Intersection Summary			
Delay	11.1		
Level of Service	B		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	6	14	16	8	13
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	7	15	17	9	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	55	24			33	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55	24			33	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	947	1053			1579	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	33	23
Volume Left	15	0	9
Volume Right	7	17	0
cSH	976	1700	1579
Volume to Capacity	0.02	0.02	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.8	0.0	2.8
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	2.8
Approach LOS	A		

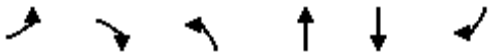
Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	23	2	11	14	5	6	20	5	6	20	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	25	2	12	15	5	7	22	5	7	22	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			36			93	80	45	94	78	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			36			93	80	45	94	78	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	97	99	99	97	100
cM capacity (veh/h)	1595			1563			852	798	1009	849	800	1050

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	27	33	34	28
Volume Left	0	12	7	7
Volume Right	2	5	5	0
cSH	1595	1563	837	811
Volume to Capacity	0.00	0.01	0.04	0.03
Queue Length 95th (ft)	0	1	3	3
Control Delay (s)	0.0	2.7	9.5	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.7	9.5	9.6
Approach LOS			A	A

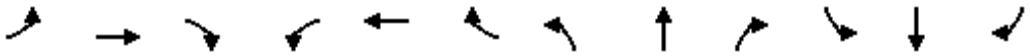
Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	23	24	23	99	68	19
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	26	25	108	74	21
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	253	97	103			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	253	97	103			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	717	949	1479			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	51	133	95
Volume Left	25	25	0
Volume Right	26	0	21
cSH	819	1479	1700
Volume to Capacity	0.06	0.02	0.06
Queue Length 95th (ft)	5	1	0
Control Delay (s)	9.7	1.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	1.5	0.0
Approach LOS	A		

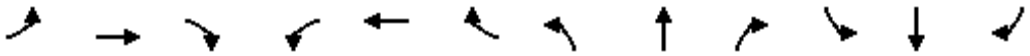
Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	27	0	8	25	24	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	29	0	9	27	26	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	37			5			90	102	5	117	88	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	37			5			90	102	5	117	88	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	97	99	100
cM capacity (veh/h)	1568			1613			867	769	1077	811	782	1044

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	62	36	35
Volume Left	0	30	0	26
Volume Right	1	29	27	0
cSH	1568	1613	981	804
Volume to Capacity	0.00	0.02	0.04	0.04
Queue Length 95th (ft)	0	1	3	3
Control Delay (s)	0.0	3.6	8.8	9.7
Lane LOS		A	A	A
Approach Delay (s)	0.0	3.6	8.8	9.7
Approach LOS			A	A

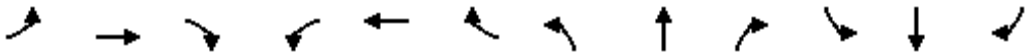
Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	45	14	8	53	20	6	7	10	15	16	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	49	15	9	58	22	7	8	11	16	17	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	89			68			159	167	67	173	164	81
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	89			68			159	167	67	173	164	81
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	99	99	98	98	100
cM capacity (veh/h)	1493			1528			776	713	989	754	716	968

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	64	88	25	35
Volume Left	0	9	7	16
Volume Right	15	22	11	1
cSH	1493	1528	831	740
Volume to Capacity	0.00	0.01	0.03	0.05
Queue Length 95th (ft)	0	0	2	4
Control Delay (s)	0.0	0.8	9.5	10.1
Lane LOS		A	A	B
Approach Delay (s)	0.0	0.8	9.5	10.1
Approach LOS			A	B

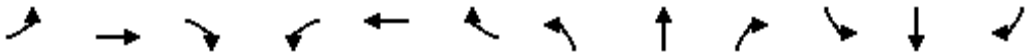
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	23.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	43	27	30	42	21	30	92	36	28	48	12
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
Hourly flow rate (vph)	8	47	29	33	46	23	33	100	39	30	52	13

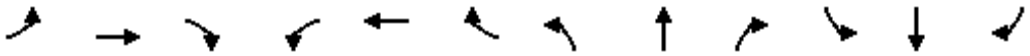
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	84	101	172	96
Volume Left (vph)	8	33	33	30
Volume Right (vph)	29	23	39	13
Hadj (s)	-0.16	-0.04	-0.06	0.02
Departure Headway (s)	4.5	4.6	4.4	4.6
Degree Utilization, x	0.10	0.13	0.21	0.12
Capacity (veh/h)	741	730	782	743
Control Delay (s)	8.0	8.3	8.5	8.2
Approach Delay (s)	8.0	8.3	8.5	8.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	30.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	62	35	24	61	55	23	219	8	28	275	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1657			1735	1453	1676	1752		1676	1736	
Flt Permitted		0.91			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1524			1613	1453	1676	1752		1676	1736	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	67	38	26	66	60	25	238	9	30	299	27
RTOR Reduction (vph)	0	30	0	0	0	51	0	2	0	0	3	0
Lane Group Flow (vph)	0	108	0	0	92	9	25	245	0	30	323	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.9			8.9	8.9	1.6	34.4		3.2	36.0	
Effective Green, g (s)		8.9			8.9	8.9	1.6	34.4		3.2	36.0	
Actuated g/C Ratio		0.15			0.15	0.15	0.03	0.59		0.06	0.62	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		233			247	222	46	1039		92	1077	
v/s Ratio Prot							c0.01	0.14		0.02	c0.19	
v/s Ratio Perm		c0.07			0.06	0.01						
v/c Ratio		0.47			0.37	0.04	0.54	0.24		0.33	0.30	
Uniform Delay, d1		22.4			22.0	20.9	27.8	5.6		26.4	5.1	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			0.3	0.0	12.5	0.5		2.1	0.7	
Delay (s)		22.9			22.4	20.9	40.3	6.1		28.4	5.8	
Level of Service		C			C	C	D	A		C	A	
Approach Delay (s)		22.9			21.8			9.3			7.7	
Approach LOS		C			C			A			A	

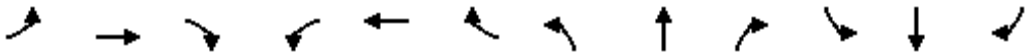
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	666	241	206	586	23	259	87	201	26	60	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.90			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	2999		1676	3353	1335	1676	1705			1473	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	2999		1676	3353	1335	1676	1705			1473	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	47	709	256	226	644	25	282	95	218	31	72	30
RTOR Reduction (vph)	0	27	0	0	0	14	0	72	0	0	9	0
Lane Group Flow (vph)	47	938	0	226	644	11	282	241	0	0	124	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	7.4	39.2		19.0	50.8	50.8	24.1	24.1			21.2	
Effective Green, g (s)	7.9	40.2		19.5	51.8	51.8	23.6	23.6			20.7	
Actuated g/C Ratio	0.07	0.34		0.16	0.43	0.43	0.20	0.20			0.17	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	110	1004		272	1447	576	329	335			254	
v/s Ratio Prot	0.03	c0.31		c0.13	0.19		c0.17	0.14			c0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.43	0.93		0.83	0.45	0.02	0.86	0.72			0.49	
Uniform Delay, d1	53.9	38.6		48.7	24.0	19.5	46.6	45.1			44.9	
Progression Factor	1.00	1.00		1.36	0.48	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.9	16.4		17.5	0.9	0.1	19.0	6.7			1.1	
Delay (s)	55.8	55.1		83.6	12.5	19.6	65.6	51.8			45.9	
Level of Service	E	E		F	B	B	E	D			D	
Approach Delay (s)		55.1			30.6			58.3			45.9	
Approach LOS		E			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

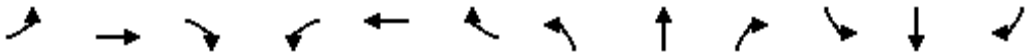
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	738	98	175	657	76	81	120	123	61	210	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.90	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3194		1676	3353	1273	1676	1765	1449	1676	1678	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3194		1676	3353	1273	1676	1765	1449	1676	1678	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	769	102	182	684	79	86	128	131	69	236	83
RTOR Reduction (vph)	0	8	0	0	0	40	0	0	103	0	11	0
Lane Group Flow (vph)	61	863	0	182	684	39	86	128	28	69	308	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	50.5		16.9	59.0	59.0	9.9	26.4	26.4	9.5	26.0	
Effective Green, g (s)	7.9	50.5		16.4	59.0	59.0	9.4	25.9	25.9	9.0	25.5	
Actuated g/C Ratio	0.07	0.42		0.14	0.49	0.49	0.08	0.22	0.22	0.08	0.21	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1344		229	1648	625	131	380	312	125	356	
v/s Ratio Prot	0.04	c0.27		c0.11	0.20		c0.05	0.07		0.04	c0.18	
v/s Ratio Perm						0.03			0.02			
v/c Ratio	0.55	0.64		0.79	0.42	0.06	0.66	0.34	0.09	0.55	0.87	
Uniform Delay, d1	54.3	27.6		50.2	19.5	16.0	53.7	39.8	37.6	53.6	45.6	
Progression Factor	0.60	0.46		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	1.2		16.6	0.8	0.2	10.1	0.4	0.1	4.2	19.0	
Delay (s)	35.2	14.0		66.8	20.3	16.2	63.8	40.2	37.7	57.7	64.6	
Level of Service	D	B		E	C	B	E	D	D	E	E	
Approach Delay (s)		15.4			28.9			45.1			63.3	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

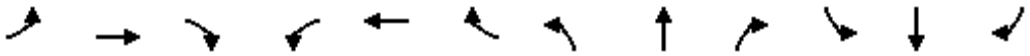
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	883	80	117	878	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3134		1676	3180			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3134		1676	3180			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	960	87	121	905	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1042	0	121	952	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1358		173	1666			310	266		245	
v/s Ratio Prot	0.01	c0.33		c0.07	0.30			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.77		0.70	0.57			0.84	0.12		0.49	
Uniform Delay, d1	58.9	28.9		52.0	19.4			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.41			1.00	1.00		1.00	
Incremental Delay, d2	13.6	4.2		6.4	0.8			17.4	0.1		1.1	
Delay (s)	72.5	33.1		65.2	8.7			64.8	40.8		48.2	
Level of Service	E	C		E	A			E	D		D	
Approach Delay (s)		33.5			15.1			55.3			48.2	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

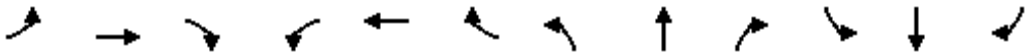
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	557	334	49	399	135	461	532	30	129	630	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	0.98		1.00	0.99		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	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2960		1676	3167		3252	3232		1676	3106	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2960		1676	3167		3252	3232		1676	3106	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	612	367	59	481	163	518	598	34	139	677	197
RTOR Reduction (vph)	0	75	0	0	30	0	0	3	0	0	22	0
Lane Group Flow (vph)	160	904	0	59	614	0	518	629	0	139	852	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.5	38.2		8.8	27.5		21.0	45.4		14.4	37.8	
Effective Green, g (s)	19.5	38.2		8.8	27.5		22.0	46.4		14.4	38.8	
Actuated g/C Ratio	0.16	0.32		0.07	0.23		0.18	0.39		0.12	0.32	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	272	942		122	725		596	1249		201	1004	
v/s Ratio Prot	0.10	c0.31		0.04	c0.19		c0.16	0.19		0.08	c0.27	
v/s Ratio Perm												
v/c Ratio	0.59	0.96		0.48	0.85		0.87	0.50		0.69	0.85	
Uniform Delay, d1	46.5	40.1		53.4	44.2		47.6	28.0		50.7	37.9	
Progression Factor	0.52	0.40		1.00	1.00		1.00	1.00		0.92	0.91	
Incremental Delay, d2	1.5	15.7		1.1	8.7		12.4	1.5		8.7	8.5	
Delay (s)	25.7	31.7		54.5	52.9		60.0	29.5		55.2	43.1	
Level of Service	C	C		D	D		E	C		E	D	
Approach Delay (s)		30.8			53.0			43.2			44.8	
Approach LOS		C			D			D			D	

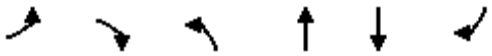
Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	0	103	8	2	1	107	764	5	1	831	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.96	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1609	3346			3255	
Flt Permitted		0.80	1.00		0.82		0.28	1.00			0.95	
Satd. Flow (perm)		1387	1410		1383		470	3346			3108	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	106	0	108	17	4	2	116	830	5	1	884	80
RTOR Reduction (vph)	0	0	92	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	106	16	0	21	0	116	835	0	0	962	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.4	17.4		16.9		95.6	95.6			95.6	
Effective Green, g (s)		17.4	17.4		17.4		96.6	96.6			96.6	
Actuated g/C Ratio		0.14	0.14		0.14		0.80	0.80			0.80	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		201	204		200		378	2693			2501	
v/s Ratio Prot								0.25				
v/s Ratio Perm		c0.08	0.01		0.02		0.25				c0.31	
v/c Ratio		0.53	0.08		0.11		0.31	0.31			0.38	
Uniform Delay, d1		47.5	44.4		44.5		3.0	3.0			3.3	
Progression Factor		1.00	1.00		1.00		0.54	0.57			1.00	
Incremental Delay, d2		1.2	0.1		0.1		1.8	0.3			0.4	
Delay (s)		48.6	44.4		44.6		3.4	2.0			3.8	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.5			44.6			2.2			3.8	
Approach LOS		D			D			A			A	

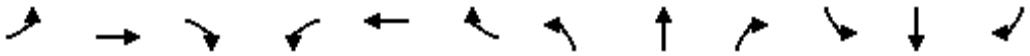
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	49	69	802	885	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1558		1632	3279	3335	
Flt Permitted	0.99		0.28	1.00	1.00	
Satd. Flow (perm)	1558		475	3279	3335	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	26	64	74	862	922	17
RTOR Reduction (vph)	51	0	0	0	1	0
Lane Group Flow (vph)	39	0	74	862	938	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	310		351	2429	2471	
v/s Ratio Prot	c0.02			0.26	c0.28	
v/s Ratio Perm			0.16			
v/c Ratio	0.12		0.21	0.35	0.38	
Uniform Delay, d1	32.9		4.0	4.6	4.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		1.4	0.4	0.4	
Delay (s)	33.0		5.3	5.0	5.1	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.0	5.1	
Approach LOS	C			A	A	

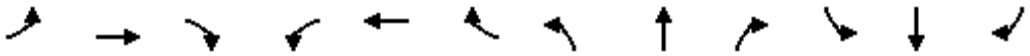
Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	6	29	13	5	11	13	788	8	22	892	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1700	1461		1615		1676	3345		1676	3345	
Flt Permitted		0.81	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1431	1461		1469		1676	3345		1676	3345	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	26	8	37	17	6	14	14	829	8	24	970	12
RTOR Reduction (vph)	0	0	32	0	12	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	34	5	0	25	0	14	837	0	24	982	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		2.4	73.1		4.4	75.1	
Effective Green, g (s)		12.5	12.5		12.5		2.4	74.1		4.4	76.1	
Actuated g/C Ratio		0.12	0.12		0.12		0.02	0.74		0.04	0.76	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		178	182		183		40	2478		73	2545	
v/s Ratio Prot							0.01	c0.25		0.01	c0.29	
v/s Ratio Perm		c0.02	0.00		0.02							
v/c Ratio		0.19	0.03		0.14		0.35	0.34		0.33	0.39	
Uniform Delay, d1		39.2	38.4		38.9		48.0	4.5		46.4	4.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2	0.0		0.1		1.9	0.4		1.0	0.4	
Delay (s)		39.4	38.4		39.1		50.0	4.8		47.3	4.5	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		38.9			39.1			5.6			5.5	
Approach LOS		D			D			A			A	

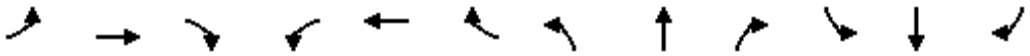
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	99	5	27	5	90	49	10	82	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
Hourly flow rate (vph)	1	1	1	108	5	29	5	98	53	11	89	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	110	32	5	151	101
Volume Left (vph)	1	108	0	5	0	11
Volume Right (vph)	1	0	29	0	53	1
Hadj (s)	-0.10	0.52	-0.61	0.53	-0.21	0.05
Departure Headway (s)	5.3	5.7	4.5	5.5	4.8	5.1
Degree Utilization, x	0.00	0.17	0.04	0.01	0.20	0.14
Capacity (veh/h)	636	604	749	627	725	672
Control Delay (s)	8.3	8.7	6.5	7.4	7.8	9.0
Approach Delay (s)	8.3	8.2		7.8		9.0
Approach LOS	A	A		A		A

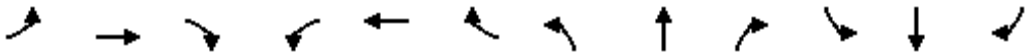
Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	32.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	24	0	7	0	136	39	11	163	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
Hourly flow rate (vph)	0	0	0	26	0	8	0	148	42	12	177	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	34	190	189
Volume Left (vph)	0	26	0	12
Volume Right (vph)	0	8	42	0
Hadj (s)	0.00	0.05	-0.10	0.05
Departure Headway (s)	4.8	4.8	4.1	4.2
Degree Utilization, x	0.00	0.04	0.22	0.22
Capacity (veh/h)	698	691	863	840
Control Delay (s)	7.8	8.0	8.2	8.4
Approach Delay (s)	0.0	8.0	8.2	8.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	30.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	0	27	0	0	3	28	139	0	0	109	53
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	64	0	29	0	0	3	30	151	0	0	118	58
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	364	359	147	389	388	152	176			151		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	364	359	147	389	388	152	176			151		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	100	97	100	100	100	98			100		
cM capacity (veh/h)	580	555	900	543	535	893	1400			1430		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	93	3	182	176
Volume Left	64	0	30	0
Volume Right	29	3	0	58
cSH	653	893	1400	1430
Volume to Capacity	0.14	0.00	0.02	0.00
Queue Length 95th (ft)	12	0	2	0
Control Delay (s)	11.4	9.0	1.4	0.0
Lane LOS	B	A	A	
Approach Delay (s)	11.4	9.0	1.4	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay			3.0	
Intersection Capacity Utilization			40.7%	ICU Level of Service
Analysis Period (min)			15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	20	30	140	28	18	122
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	33	152	30	20	133

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	54	183	152
Volume Left (vph)	22	0	20
Volume Right (vph)	33	30	0
Hadj (s)	-0.25	-0.07	0.06
Departure Headway (s)	4.4	4.1	4.3
Degree Utilization, x	0.07	0.21	0.18
Capacity (veh/h)	756	851	826
Control Delay (s)	7.7	8.2	8.2
Approach Delay (s)	7.7	8.2	8.2
Approach LOS	A	A	A

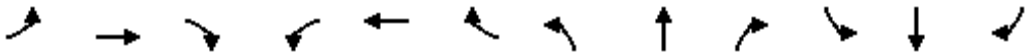
Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	16	0	0	13	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	0	0	14	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	7	7			14	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	7	7			14	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1014	1075			1604	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	14	0
Volume Left	17	0	0
Volume Right	0	14	0
cSH	1014	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

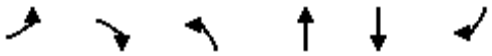
Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	8	2	20	15	6	1	17	7	11	33	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	9	2	22	16	7	1	18	8	12	36	3
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	23			16			106	85	15	94	83	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	23			16			106	85	15	94	83	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	98	99	99	95	100
cM capacity (veh/h)	1592			1595			823	789	1060	855	792	1052

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	13	45	27	51
Volume Left	2	22	1	12
Volume Right	2	7	8	3
cSH	1592	1595	852	819
Volume to Capacity	0.00	0.01	0.03	0.06
Queue Length 95th (ft)	0	1	2	5
Control Delay (s)	1.2	3.6	9.4	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	1.2	3.6	9.4	9.7
Approach LOS			A	A

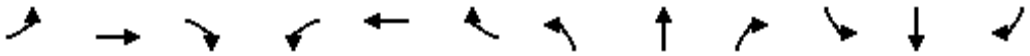
Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	28	19	152	111	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	30	21	165	121	32
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	364	158	170			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	364	158	170			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	99			
cM capacity (veh/h)	615	871	1386			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	51	186	152
Volume Left	21	21	0
Volume Right	30	0	32
cSH	745	1386	1700
Volume to Capacity	0.07	0.01	0.09
Queue Length 95th (ft)	6	1	0
Control Delay (s)	10.2	1.0	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	1.0	0.0
Approach LOS	B		

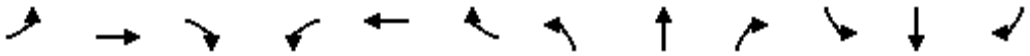
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	46	18	21	37	49	33	157	39	34	70	13
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
Hourly flow rate (vph)	16	50	20	23	40	53	36	171	42	37	76	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	86	116	249	127
Volume Left (vph)	16	23	36	37
Volume Right (vph)	20	53	42	14
Hadj (s)	-0.06	-0.20	-0.04	0.03
Departure Headway (s)	4.9	4.7	4.5	4.7
Degree Utilization, x	0.12	0.15	0.31	0.17
Capacity (veh/h)	669	699	760	713
Control Delay (s)	8.5	8.6	9.6	8.7
Approach Delay (s)	8.5	8.6	9.6	8.7
Approach LOS	A	A	A	A

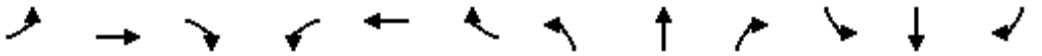
Intersection Summary			
Delay	9.0		
Level of Service	A		
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	166	65	106	202	77	77	127	54	22	70	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3114		1676	3353	1441	1676	1872			1532	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3114		1676	3353	1441	1676	1872			1532	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	30	182	71	112	213	81	93	153	65	23	72	7
RTOR Reduction (vph)	0	32	0	0	0	40	0	16	0	0	3	0
Lane Group Flow (vph)	30	221	0	112	213	41	93	202	0	0	99	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	41.7		10.5	47.2	47.2	13.9	13.9			12.4	
Effective Green, g (s)	5.5	42.7		11.0	48.2	48.2	13.4	13.4			11.9	
Actuated g/C Ratio	0.06	0.45		0.12	0.51	0.51	0.14	0.14			0.13	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	97	1399		194	1701	731	236	264			191	
v/s Ratio Prot	0.02	c0.07		c0.07	0.06		0.06	c0.11			c0.06	
v/s Ratio Perm						0.03						
v/c Ratio	0.31	0.16		0.58	0.13	0.06	0.39	0.76			0.52	
Uniform Delay, d1	42.9	15.5		39.8	12.3	11.9	37.1	39.3			38.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.3	0.2		3.4	0.2	0.1	0.8	11.8			1.8	
Delay (s)	44.3	15.7		43.2	12.5	12.0	37.9	51.1			40.6	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		18.8			20.8			47.2			40.6	
Approach LOS		B			C			D			D	

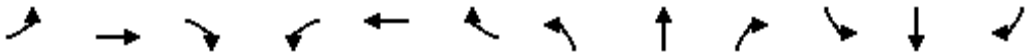
Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	414	399	0	445	1275	0	0	0	602	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3006			2859	1283				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3006			2859	1283				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	431	416	0	464	1328	0	0	0	654	0	273
RTOR Reduction (vph)	0	140	0	0	172	447	0	0	0	0	0	192
Lane Group Flow (vph)	95	707	0	0	823	350	0	0	0	654	0	81
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	72.0			50.0	50.0				33.5		33.5
Effective Green, g (s)	18.0	72.0			50.0	50.0				34.0		34.0
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1898			1253	562				750		430
v/s Ratio Prot	0.06	c0.24			c0.29					c0.26		
v/s Ratio Perm						0.27						0.06
v/c Ratio	0.36	0.37			0.66	0.62				0.87		0.19
Uniform Delay, d1	42.9	10.1			25.2	24.7				37.9		29.8
Progression Factor	1.00	1.00			0.50	4.63				1.00		1.00
Incremental Delay, d2	0.3	0.6			1.7	3.3				10.8		0.2
Delay (s)	43.2	10.7			14.4	117.8				48.8		29.9
Level of Service	D	B			B	F				D		C
Approach Delay (s)		14.0			60.4			0.0			43.2	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	44.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



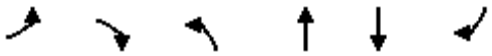
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	871	0	0	1230	342	491	289	687	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1517	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1517	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	907	0	0	1281	356	540	318	755	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	16	20	0	0	0
Lane Group Flow (vph)	153	907	0	0	1281	147	486	545	546	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	545	750			
v/s Ratio Prot	c0.09	0.19			c0.27		0.31	c0.36	0.38			
v/s Ratio Perm						0.11						
v/c Ratio	0.58	0.47			0.71	0.28	0.85	1.00	0.73			
Uniform Delay, d1	44.5	25.0			30.1	24.8	33.7	36.5	20.7			
Progression Factor	0.77	0.48			0.70	0.42	1.00	1.00	1.00			
Incremental Delay, d2	7.0	0.6			1.8	1.1	11.3	38.2	3.5			
Delay (s)	41.2	12.5			22.9	11.5	45.0	74.7	24.3			
Level of Service	D	B			C	B	D	E	C			
Approach Delay (s)		16.7			20.4			48.1			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



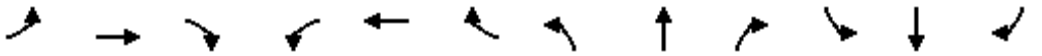
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	499	46	282	73	18	380
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3213		3353	1455		3345
Flt Permitted	0.96		1.00	1.00		0.93
Satd. Flow (perm)	3213		3353	1455		3128
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	561	52	303	78	19	409
RTOR Reduction (vph)	6	0	0	41	0	0
Lane Group Flow (vph)	607	0	303	37	0	428
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1465		1582	686		1476
v/s Ratio Prot	c0.19		0.09			
v/s Ratio Perm				0.03		c0.14
v/c Ratio	0.41		0.19	0.05		0.29
Uniform Delay, d1	20.8		17.5	16.3		18.4
Progression Factor	0.49		0.18	0.01		1.00
Incremental Delay, d2	0.9		0.2	0.1		0.5
Delay (s)	11.0		3.4	0.4		18.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		2.7			18.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



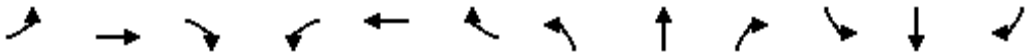
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	38	396	386	122	131
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	69	47	430	420	139	149
RTOR Reduction (vph)	0	10	0	0	0	134
Lane Group Flow (vph)	69	37	430	420	139	15
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	12.2	89.9	74.2	94.8	17.1	12.2
Effective Green, g (s)	11.7	89.4	73.7	94.3	16.6	11.7
Actuated g/C Ratio	0.10	0.78	0.65	0.83	0.15	0.10
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	172	1176	2102	1459	257	153
v/s Ratio Prot	c0.04	0.02	0.13	c0.24	c0.08	0.01
v/s Ratio Perm						
v/c Ratio	0.40	0.03	0.20	0.29	0.54	0.10
Uniform Delay, d1	47.9	2.7	8.2	2.2	45.2	46.4
Progression Factor	1.47	3.44	0.16	0.13	1.00	1.00
Incremental Delay, d2	1.5	0.0	0.2	0.5	2.3	0.3
Delay (s)	71.9	9.4	1.5	0.8	47.5	46.7
Level of Service	E	A	A	A	D	D
Approach Delay (s)	46.6			1.2	47.1	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



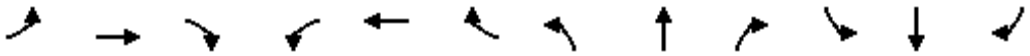
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	285	658	617	227	770	98	140	37	103	147	159	588
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3062	1365	1676	3353	1480	1593	1629	1479		1723	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3062	1365	1676	3353	1480	1593	1629	1479		1723	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	328	756	709	236	802	102	156	41	114	163	177	653
RTOR Reduction (vph)	0	26	118	0	0	52	0	0	101	0	0	84
Lane Group Flow (vph)	328	985	336	236	802	50	98	99	13	0	340	569
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	988	592	249	1102	486	177	181	164		453	1106
v/s Ratio Prot	0.10	c0.32	c0.25	c0.14	0.24		0.06	0.06			c0.20	0.22
v/s Ratio Perm						0.03			0.01			
v/c Ratio	0.65	1.00	0.57	0.95	0.73	0.10	0.55	0.55	0.08		0.75	0.51
Uniform Delay, d1	45.2	38.5	24.2	48.1	33.7	26.6	48.0	47.9	45.4		38.6	24.5
Progression Factor	0.97	0.69	0.41	0.79	0.70	0.53	1.00	1.00	1.00		0.86	0.33
Incremental Delay, d2	5.2	25.2	0.8	37.8	3.6	0.4	3.0	2.7	0.1		10.4	1.6
Delay (s)	49.0	51.8	10.9	75.6	27.1	14.5	50.9	50.6	45.5		43.6	9.7
Level of Service	D	D	B	E	C	B	D	D	D		D	A
Approach Delay (s)		40.9			36.0			48.9			21.3	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



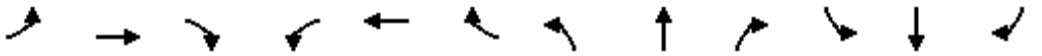
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	103	599	39	0	84	0	645	28	0	161	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	0.99	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3188	2250	1676		1463		3326			3353	
Flt Permitted	0.95	0.99	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3188	2250	1676		1463		3326			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	117	681	48	0	102	0	701	30	0	187	0
RTOR Reduction (vph)	0	0	468	0	0	93	0	2	0	0	0	0
Lane Group Flow (vph)	65	137	213	48	0	9	0	729	0	0	187	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.6	11.6	36.6	10.3		10.3		55.7			30.9	
Effective Green, g (s)	10.6	10.6	35.6	9.8		9.8		55.2			30.4	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.27	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	141	296	702	144		125		1610			894	
v/s Ratio Prot	0.04	c0.04	0.09	c0.03				c0.22			0.06	
v/s Ratio Perm						0.01						
v/c Ratio	0.46	0.46	0.30	0.33		0.07		0.45			0.21	
Uniform Delay, d1	49.0	49.0	29.8	49.0		47.9		19.4			32.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.51	
Incremental Delay, d2	1.7	0.8	0.2	1.0		0.2		0.9			0.5	
Delay (s)	50.7	49.8	30.0	50.0		48.1		20.3			17.1	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.6			48.7			20.3			17.1	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	75	2	79	10	581	101	92	667	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3305	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3305	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	97	3	103	10	593	103	96	695	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	59	0	4	0
Lane Group Flow (vph)	0	29	1	97	24	0	10	593	44	96	729	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.9	31.9	8.5	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.4	32.4	8.0	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1448	624	178	1723	
v/s Ratio Prot		c0.02			0.02		0.01	0.18		c0.06	c0.22	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.25	0.08		0.34	0.41	0.07	0.54	0.42	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	14.7	12.5	31.8	11.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	0.9	0.2	1.6	0.8	
Delay (s)		35.8	34.2	25.3	24.4		39.0	15.6	12.7	33.3	11.8	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			15.5			14.3	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	532	203	83	405	50	364	401	59	122	258	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3170		1676	3267		1676	1720		1664	1765	1450
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.49	1.00	1.00
Satd. Flow (perm)	1676	3170		1676	3267		1676	1720		862	1765	1450
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	149	611	233	86	422	52	375	413	61	134	284	201
RTOR Reduction (vph)	0	36	0	0	8	0	0	4	0	0	0	74
Lane Group Flow (vph)	149	808	0	86	466	0	375	470	0	134	284	127
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	15.5	33.6		8.7	26.8		28.2	46.0		28.5	28.3	43.8
Effective Green, g (s)	15.0	34.1		8.2	27.3		27.7	45.5		28.0	27.8	42.8
Actuated g/C Ratio	0.13	0.30		0.07	0.24		0.24	0.40		0.25	0.24	0.38
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	220	948		120	782		407	686		282	430	544
v/s Ratio Prot	0.09	c0.25		0.05	c0.14		c0.22	c0.27		0.04	c0.16	0.03
v/s Ratio Perm										0.08		0.06
v/c Ratio	0.68	0.85		0.72	0.60		0.92	0.68		0.48	0.66	0.23
Uniform Delay, d1	47.2	37.6		51.8	38.5		42.1	28.3		38.4	38.8	24.4
Progression Factor	0.56	0.67		1.00	1.00		1.01	1.14		1.00	1.00	1.00
Incremental Delay, d2	3.5	3.4		18.4	1.2		24.8	5.1		1.3	7.7	0.2
Delay (s)	29.9	28.4		70.1	39.7		67.4	37.4		39.7	46.6	24.6
Level of Service	C	C		E	D		E	D		D	D	C
Approach Delay (s)		28.6			44.4			50.7			38.0	
Approach LOS		C			D			D			D	

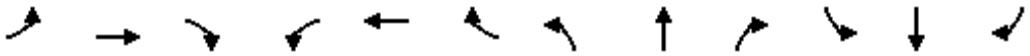
Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	716	0	0	476	0	107
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	778	0	0	517	0	116
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			778		1037	389
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			778		1037	389
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	81
cM capacity (veh/h)			834		227	610

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	389	389	259	259	116
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	116
cSH	1700	1700	1700	1700	610
Volume to Capacity	0.23	0.23	0.15	0.15	0.19
Queue Length 95th (ft)	0	0	0	0	17
Control Delay (s)	0.0	0.0	0.0	0.0	12.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.3
Approach LOS					B

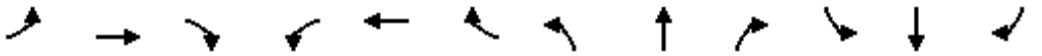
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	76	0	27	1	256	122	20	109	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
Hourly flow rate (vph)	1	1	5	83	0	29	1	278	133	22	118	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	83	29	1	411	141
Volume Left (vph)	1	83	0	1	0	22
Volume Right (vph)	5	0	29	0	133	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.19	0.06
Departure Headway (s)	5.7	6.4	5.2	5.5	4.8	5.4
Degree Utilization, x	0.01	0.15	0.04	0.00	0.55	0.21
Capacity (veh/h)	556	516	628	630	733	639
Control Delay (s)	8.8	9.3	7.2	7.4	12.3	9.9
Approach Delay (s)	8.8	8.8		12.3		9.9
Approach LOS	A	A		B		A

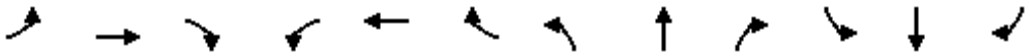
Intersection Summary				
Delay	11.2			
Level of Service	B			
Intersection Capacity Utilization	42.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	55	37	12	8	18	28	667	53	11	466	66
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.97	1.00			1.00			1.00	1.00
Frt	1.00	0.94		1.00	0.90			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1659	1612		1634	1545			3260			1720	1459
Flt Permitted	0.73	1.00		0.68	1.00			0.93			0.98	1.00
Satd. Flow (perm)	1282	1612		1173	1545			3035			1690	1459
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	165	70	47	16	11	24	33	785	62	11	485	69
RTOR Reduction (vph)	0	37	0	0	19	0	0	6	0	0	0	10
Lane Group Flow (vph)	165	80	0	16	16	0	0	874	0	0	496	59
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	12.4	12.4		12.4	12.4			37.4			37.4	37.4
Effective Green, g (s)	11.9	11.9		11.9	11.9			36.9			36.9	36.9
Actuated g/C Ratio	0.21	0.21		0.21	0.21			0.65			0.65	0.65
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	267	336		244	322			1964			1094	944
v/s Ratio Prot		0.05			0.01							
v/s Ratio Perm	c0.13			0.01				0.29			c0.29	0.04
v/c Ratio	0.62	0.24		0.07	0.05			0.45			0.45	0.06
Uniform Delay, d1	20.5	18.8		18.1	18.0			5.0			5.0	3.7
Progression Factor	1.00	1.00		1.00	1.00			0.66			0.76	0.71
Incremental Delay, d2	3.6	0.3		0.1	0.0			0.7			1.0	0.1
Delay (s)	24.1	19.0		18.2	18.1			4.0			4.8	2.7
Level of Service	C	B		B	B			A			A	A
Approach Delay (s)		22.0			18.1			4.0			4.5	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

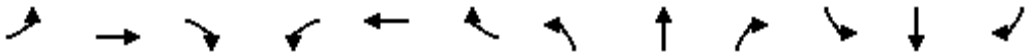
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	51	0	10	0	364	27	17	184	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
Hourly flow rate (vph)	0	0	0	55	0	11	0	396	29	18	200	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	66	425	218
Volume Left (vph)	0	55	0	18
Volume Right (vph)	0	11	29	0
Hadj (s)	0.00	0.10	-0.01	0.05
Departure Headway (s)	5.5	5.4	4.3	4.6
Degree Utilization, x	0.00	0.10	0.51	0.28
Capacity (veh/h)	582	590	816	756
Control Delay (s)	8.5	9.0	11.8	9.3
Approach Delay (s)	0.0	9.0	11.8	9.3
Approach LOS	A	A	B	A

Intersection Summary				
Delay	10.8			
Level of Service	B			
Intersection Capacity Utilization	38.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	20	5	28	22	71	7	593	19	55	438	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.89		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1657	1689		1641	1517		1660	1754		1662	1697	
Flt Permitted	0.68	1.00		0.73	1.00		0.44	1.00		0.34	1.00	
Satd. Flow (perm)	1180	1689		1264	1517		768	1754		603	1697	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	56	31	8	38	30	96	8	666	21	61	487	38
RTOR Reduction (vph)	0	7	0	0	82	0	0	1	0	0	3	0
Lane Group Flow (vph)	56	32	0	38	44	0	8	686	0	61	522	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	8.7	8.7		8.7	8.7		41.1	41.1		41.1	41.1	
Effective Green, g (s)	8.2	8.2		8.2	8.2		40.6	40.6		40.6	40.6	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.71	0.71		0.71	0.71	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	169	242		181	218		547	1249		429	1208	
v/s Ratio Prot		0.02			0.03			c0.39			0.31	
v/s Ratio Perm	c0.05			0.03			0.01			0.10		
v/c Ratio	0.33	0.13		0.21	0.20		0.01	0.55		0.14	0.43	
Uniform Delay, d1	21.9	21.3		21.5	21.5		2.4	3.9		2.6	3.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.58	0.97	
Incremental Delay, d2	0.4	0.1		0.2	0.2		0.0	1.7		0.7	1.1	
Delay (s)	22.4	21.4		21.8	21.7		2.4	5.6		2.2	4.4	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		22.0			21.7			5.6			4.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	0	33	0	0	3	36	301	0	1	196	67
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	74	0	36	0	0	3	39	327	0	1	213	73
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	660	657	249	693	693	327	286			327		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	660	657	249	693	693	327	286			327		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	80	100	95	100	100	100	97			100		
cM capacity (veh/h)	365	372	789	333	355	714	1276			1232		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	110	3	366	287
Volume Left	74	0	39	1
Volume Right	36	3	0	73
cSH	443	714	1276	1232
Volume to Capacity	0.25	0.00	0.03	0.00
Queue Length 95th (ft)	24	0	2	0
Control Delay (s)	15.8	10.1	1.1	0.0
Lane LOS	C	B	A	A
Approach Delay (s)	15.8	10.1	1.1	0.0
Approach LOS	C	B		

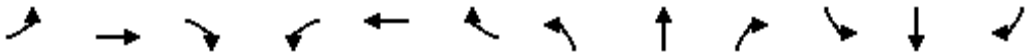
Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	56.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	33	29	308	35	33	198
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	32	335	38	36	215

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	67	373	251
Volume Left (vph)	36	0	36
Volume Right (vph)	32	38	0
Hadj (s)	-0.14	-0.03	0.06
Departure Headway (s)	5.1	4.3	4.5
Degree Utilization, x	0.10	0.45	0.32
Capacity (veh/h)	624	813	766
Control Delay (s)	8.7	10.8	9.6
Approach Delay (s)	8.7	10.8	9.6
Approach LOS	A	B	A

Intersection Summary			
Delay	10.2		
Level of Service	B		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	43	14	27	36	46	11	536	24	50	413	6
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
Hourly flow rate (vph)	35	47	15	29	39	50	12	583	26	54	449	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	97	118	621	510
Volume Left (vph)	35	29	12	54
Volume Right (vph)	15	50	26	7
Hadj (s)	0.01	-0.17	0.01	0.05
Departure Headway (s)	7.4	7.1	5.6	5.8
Degree Utilization, x	0.20	0.23	0.96	0.82
Capacity (veh/h)	457	474	639	610
Control Delay (s)	12.2	12.3	49.8	29.3
Approach Delay (s)	12.2	12.3	49.8	29.3
Approach LOS	B	B	E	D

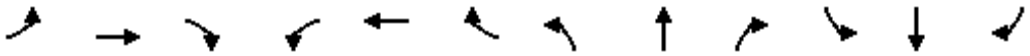
Intersection Summary			
Delay	36.0		
Level of Service	E		
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	31	0	0	22	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	0	0	24	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	12	12			24	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	12	12			24	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	1008	1069			1591	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	24	0
Volume Left	34	0	0
Volume Right	0	24	0
cSH	1008	1700	1700
Volume to Capacity	0.03	0.01	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

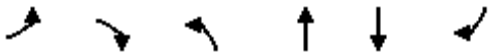
Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	25	2	7	24	8	7	33	8	9	26	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	3	27	2	8	26	9	8	36	9	10	28	3
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	35			37			113	93	41	112	90	37
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	35			37			113	93	41	112	90	37
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	95	99	99	96	100
cM capacity (veh/h)	1577			1563			819	786	1019	816	790	1029

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	42	52	41
Volume Left	3	8	8	10
Volume Right	2	9	9	3
cSH	1577	1563	823	811
Volume to Capacity	0.00	0.00	0.06	0.05
Queue Length 95th (ft)	0	0	5	4
Control Delay (s)	0.7	1.3	9.7	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.7	1.3	9.7	9.7
Approach LOS			A	A

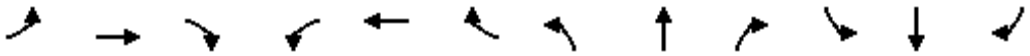
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	40	21	28	309	200	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	23	30	336	217	27
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	642	237	249			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	642	237	249			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	97	98			
cM capacity (veh/h)	423	798	1313			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	66	366	245
Volume Left	43	30	0
Volume Right	23	0	27
cSH	505	1313	1700
Volume to Capacity	0.13	0.02	0.14
Queue Length 95th (ft)	11	2	0
Control Delay (s)	13.2	0.9	0.0
Lane LOS	B	A	
Approach Delay (s)	13.2	0.9	0.0
Approach LOS	B		

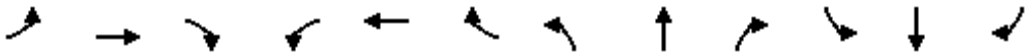
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	59	3	6	0	18	117	12	21	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	64	3	7	0	20	127	13	23	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	20			11			163	160	12	294	158	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			11			163	160	12	294	158	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			100	97	88	98	97	100
cM capacity (veh/h)	1583			1606			749	695	1065	540	698	1045

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	74	147	36
Volume Left	1	64	0	13
Volume Right	1	7	127	0
cSH	1583	1606	994	631
Volume to Capacity	0.00	0.04	0.15	0.06
Queue Length 95th (ft)	0	3	13	5
Control Delay (s)	0.8	6.4	9.2	11.1
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	6.4	9.2	11.1
Approach LOS			A	B

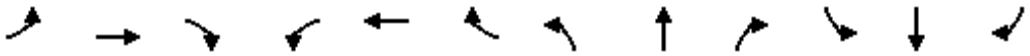
Intersection Summary				
Average Delay	8.4			
Intersection Capacity Utilization	30.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	124	19	12	63	31	5	12	23	20	12	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	8	135	21	13	68	34	5	13	25	22	13	5
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	119			161			296	312	158	327	305	108
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	119			161			296	312	158	327	305	108
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	98	97	96	98	99
cM capacity (veh/h)	1448			1410			619	583	878	571	588	927

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	163	115	43	40
Volume Left	8	13	5	22
Volume Right	21	34	25	5
cSH	1448	1410	729	608
Volume to Capacity	0.01	0.01	0.06	0.07
Queue Length 95th (ft)	0	1	5	5
Control Delay (s)	0.4	0.9	10.2	11.3
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	0.9	10.2	11.3
Approach LOS			B	B

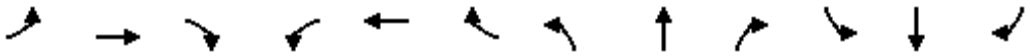
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	79	72	30	34	51	36	33	206	40	62	181	19
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
Hourly flow rate (vph)	86	78	33	37	55	39	36	224	43	67	197	21

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	197	132	303	285
Volume Left (vph)	86	37	36	67
Volume Right (vph)	33	39	43	21
Hadj (s)	0.02	-0.09	-0.03	0.04
Departure Headway (s)	5.8	5.8	5.3	5.4
Degree Utilization, x	0.32	0.21	0.45	0.43
Capacity (veh/h)	561	541	629	623
Control Delay (s)	11.4	10.4	12.6	12.4
Approach Delay (s)	11.4	10.4	12.6	12.4
Approach LOS	B	B	B	B

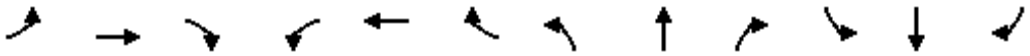
Intersection Summary			
Delay	11.9		
Level of Service	B		
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	123	45	29	63	127	21	403	22	60	370	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1665			1537	1253	1676	1745		1676	1739	
Flt Permitted		0.94			0.86	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1573			1336	1253	1676	1745		1676	1739	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	39	148	54	33	72	144	22	420	23	71	435	35
RTOR Reduction (vph)	0	21	0	0	0	114	0	2	0	0	3	0
Lane Group Flow (vph)	0	220	0	0	105	30	22	441	0	71	467	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		12.6			12.6	12.6	1.6	28.7		5.2	32.3	
Effective Green, g (s)		12.1			12.1	12.1	1.1	29.2		4.7	32.8	
Actuated g/C Ratio		0.21			0.21	0.21	0.02	0.50		0.08	0.57	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		328			278	261	31	878		135	983	
v/s Ratio Prot							0.01	0.25		c0.04	c0.27	
v/s Ratio Perm		c0.14			0.08	0.02						
v/c Ratio		0.67			0.38	0.12	0.71	0.50		0.53	0.47	
Uniform Delay, d1		21.1			19.7	18.6	28.3	9.6		25.6	7.5	
Progression Factor		1.00			1.00	1.00	1.25	1.01		1.00	1.00	
Incremental Delay, d2		4.2			0.3	0.1	50.4	1.9		3.7	1.6	
Delay (s)		25.3			20.0	18.7	85.8	11.5		29.2	9.1	
Level of Service		C			C	B	F	B		C	A	
Approach Delay (s)		25.3			19.2			15.0			11.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	464	175	156	431	50	267	187	124	54	181	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3031		1676	3353	1401	1676	1848			1531	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3031		1676	3353	1401	1676	1848			1531	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	46	510	192	164	454	53	322	225	149	56	187	18
RTOR Reduction (vph)	0	30	0	0	0	32	0	21	0	0	2	0
Lane Group Flow (vph)	46	672	0	164	454	21	322	353	0	0	259	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	6.7	36.6		14.5	44.4	44.4	24.9	24.9			23.5	
Effective Green, g (s)	7.2	37.6		15.0	45.4	45.4	24.4	24.4			23.0	
Actuated g/C Ratio	0.06	0.32		0.13	0.39	0.39	0.21	0.21			0.20	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	104	982		216	1312	548	352	388			303	
v/s Ratio Prot	0.03	c0.22		c0.10	0.14		c0.19	0.19			c0.17	
v/s Ratio Perm						0.01						
v/c Ratio	0.44	0.68		0.76	0.35	0.04	0.91	0.91			0.85	
Uniform Delay, d1	52.5	34.0		48.8	24.8	21.8	44.8	44.7			44.9	
Progression Factor	1.00	1.00		1.51	0.52	0.15	1.00	1.00			1.00	
Incremental Delay, d2	2.2	3.9		13.0	0.7	0.1	27.4	25.0			19.9	
Delay (s)	54.6	37.9		86.7	13.5	3.4	72.2	69.8			64.8	
Level of Service	D	D		F	B	A	E	E			E	
Approach Delay (s)		38.9			30.6			70.9			64.8	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	48.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	549	64	105	511	148	69	254	78	105	301	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3221		1676	3353	1364	1676	1765	1439	1676	1737	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3221		1676	3353	1364	1676	1765	1439	1676	1737	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	584	68	107	521	151	72	265	81	111	317	29
RTOR Reduction (vph)	0	6	0	0	0	73	0	0	64	0	3	0
Lane Group Flow (vph)	46	646	0	107	521	78	72	265	17	111	343	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	49.0		12.2	52.8	52.8	8.2	24.8	24.8	13.3	29.9	
Effective Green, g (s)	7.9	49.0		11.7	52.8	52.8	7.7	24.3	24.3	12.8	29.4	
Actuated g/C Ratio	0.07	0.42		0.10	0.46	0.46	0.07	0.21	0.21	0.11	0.25	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1360		169	1526	620	111	369	301	184	440	
v/s Ratio Prot	0.03	c0.20		c0.06	0.16		0.04	0.15		c0.07	c0.20	
v/s Ratio Perm						0.06			0.01			
v/c Ratio	0.40	0.47		0.63	0.34	0.13	0.65	0.72	0.06	0.60	0.78	
Uniform Delay, d1	51.8	24.2		50.1	20.4	18.3	52.8	42.7	36.7	49.2	40.3	
Progression Factor	0.70	0.59		1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.96	
Incremental Delay, d2	1.1	0.8		6.6	0.6	0.4	11.0	6.1	0.1	4.3	7.6	
Delay (s)	37.3	15.1		56.7	21.0	18.7	63.8	48.8	36.7	52.8	46.3	
Level of Service	D	B		E	C	B	E	D	D	D	D	
Approach Delay (s)		16.6			25.4			49.0			47.9	
Approach LOS		B			C			D			D	

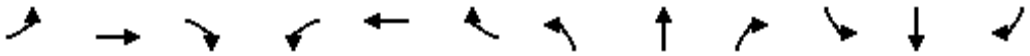
Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	646	79	67	685	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3110		1676	3172			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3110		1676	3172			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	659	81	69	706	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	7	0	0	4	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	733	0	69	754	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1206		121	1364			376	324		309	
v/s Ratio Prot	0.01	c0.24		c0.04	0.24			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.61		0.57	0.55			0.92	0.36		0.76	
Uniform Delay, d1	55.3	28.4		52.1	24.7			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.14	0.37			1.00	1.00		1.00	
Incremental Delay, d2	4.4	2.3		3.1	0.9			27.3	0.5		9.6	
Delay (s)	59.7	30.7		62.6	10.0			71.6	38.5		54.7	
Level of Service	E	C		E	A			E	D		D	
Approach Delay (s)		31.6			14.4			55.6			54.7	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

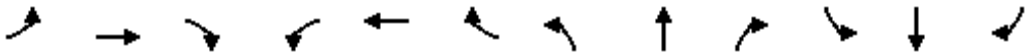
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	576	212	51	417	163	296	788	29	179	777	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	3081		1676	3115		3252	3245		1676	3213	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	3081		1676	3115		3252	3245		1676	3213	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	600	221	61	496	194	312	829	31	192	835	97
RTOR Reduction (vph)	0	33	0	0	36	0	0	2	0	0	8	0
Lane Group Flow (vph)	220	788	0	61	654	0	312	858	0	192	924	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.6	36.4		8.8	26.6		16.0	40.7		16.9	40.6	
Effective Green, g (s)	18.6	36.4		8.8	26.6		17.0	41.7		16.9	41.6	
Actuated g/C Ratio	0.16	0.31		0.08	0.23		0.15	0.36		0.15	0.36	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	268	966		127	714		476	1166		244	1152	
v/s Ratio Prot	0.13	c0.26		0.04	c0.21		0.10	c0.26		0.11	c0.29	
v/s Ratio Perm												
v/c Ratio	0.82	0.82		0.48	0.92		0.66	0.74		0.79	0.80	
Uniform Delay, d1	47.1	36.7		51.4	43.6		46.7	32.4		47.8	33.5	
Progression Factor	0.69	0.59		1.00	1.00		1.00	1.00		1.06	0.57	
Incremental Delay, d2	14.3	4.3		1.0	16.1		2.5	4.2		13.9	5.5	
Delay (s)	46.6	25.9		52.5	59.7		49.2	36.5		64.7	24.6	
Level of Service	D	C		D	E		D	D		E	C	
Approach Delay (s)		30.2			59.1			39.9			31.5	
Approach LOS		C			E			D			C	

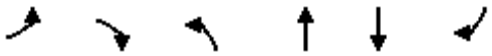
Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	10	137	5	3	10	75	1047	11	2	879	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.98	
Flpb, ped/bikes		0.95	1.00		0.99		0.96	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1613	3339			3261	
Flt Permitted		0.72	1.00		0.90		0.25	1.00			0.95	
Satd. Flow (perm)		1215	1360		1409		432	3339			3111	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	270	12	169	13	8	26	81	1126	12	2	897	72
RTOR Reduction (vph)	0	0	101	0	19	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	282	68	0	28	0	81	1137	0	0	966	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.5	29.5		29.0		79.5	79.5			79.5	
Effective Green, g (s)		29.5	29.5		29.5		80.5	80.5			80.5	
Actuated g/C Ratio		0.25	0.25		0.25		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		308	345		358		299	2317			2158	
v/s Ratio Prot								c0.34				
v/s Ratio Perm		c0.23	0.05		0.02		0.19				0.31	
v/c Ratio		0.92	0.20		0.08		0.27	0.49			0.45	
Uniform Delay, d1		42.0	33.9		32.9		6.7	8.2			7.9	
Progression Factor		1.00	1.00		1.00		0.50	0.50			2.05	
Incremental Delay, d2		29.8	0.1		0.0		1.4	0.5			0.6	
Delay (s)		71.8	34.0		32.9		4.7	4.6			16.8	
Level of Service		E	C		C		A	A			B	
Approach Delay (s)		57.7			32.9			4.6			16.8	
Approach LOS		E			C			A			B	

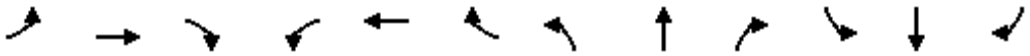
Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	97	93	1162	945	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.96	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1566		1612	3279	3318	
Flt Permitted	0.98		0.26	1.00	1.00	
Satd. Flow (perm)	1566		443	3279	3318	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	64	110	99	1236	964	28
RTOR Reduction (vph)	60	0	0	0	1	0
Lane Group Flow (vph)	114	0	99	1236	991	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	295		336	2490	2519	
v/s Ratio Prot	c0.07			c0.38	0.30	
v/s Ratio Perm			0.22			
v/c Ratio	0.39		0.29	0.50	0.39	
Uniform Delay, d1	41.2		4.3	5.4	4.8	
Progression Factor	1.00		0.48	0.55	1.00	
Incremental Delay, d2	0.3		1.9	0.6	0.5	
Delay (s)	41.5		3.9	3.6	5.2	
Level of Service	D		A	A	A	
Approach Delay (s)	41.5			3.6	5.2	
Approach LOS	D			A	A	

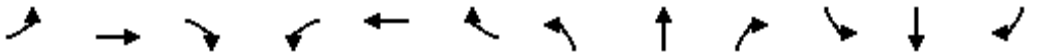
Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



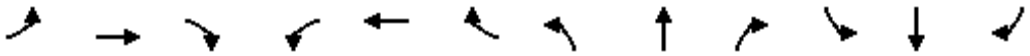
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	22	71	9	15	9	31	1190	20	19	947	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1712	1423		1660		1676	3335		1676	3328	
Flt Permitted		0.82	1.00		0.93		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1444	1423		1568		1676	3335		1676	3328	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	44	27	87	14	23	14	34	1308	22	20	986	32
RTOR Reduction (vph)	0	0	73	0	12	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	71	14	0	39	0	34	1329	0	20	1017	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.0	18.0		18.0		9.6	83.1		4.4	77.9	
Effective Green, g (s)		18.5	18.5		18.5		9.6	84.1		4.4	78.9	
Actuated g/C Ratio		0.16	0.16		0.16		0.08	0.72		0.04	0.68	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		230	226		250		138	2417		63	2263	
v/s Ratio Prot							0.02	c0.40		0.01	c0.31	
v/s Ratio Perm		c0.05	0.01		0.03							
v/c Ratio		0.31	0.06		0.16		0.25	0.55		0.32	0.45	
Uniform Delay, d1		43.1	41.4		42.0		49.8	7.3		54.3	8.5	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3	0.0		0.1		0.3	0.9		1.1	0.6	
Delay (s)		43.4	41.4		42.1		50.2	8.2		55.4	9.2	
Level of Service		D	D		D		D	A		E	A	
Approach Delay (s)		42.3			42.1			9.2			10.1	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



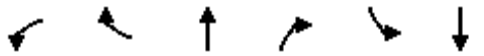
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	258	153	0	359	1131	0	0	0	739	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.94			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3095			2838	1365				2515		1429
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3095			2838	1365				2515		1429
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	269	159	0	366	1154	0	0	0	803	0	175
RTOR Reduction (vph)	0	65	0	0	178	433	0	0	0	0	0	109
Lane Group Flow (vph)	106	363	0	0	650	259	0	0	0	803	0	66
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	62.7			42.7	42.7				42.8		42.8
Effective Green, g (s)	16.0	62.7			42.7	42.7				43.3		43.3
Actuated g/C Ratio	0.14	0.55			0.37	0.37				0.38		0.38
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1702			1063	511				955		542
v/s Ratio Prot	c0.06	0.12			c0.23	0.19				c0.32		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.21			0.61	0.51				0.84		0.12
Uniform Delay, d1	45.0	13.1			28.9	27.5				32.2		23.0
Progression Factor	1.00	1.00			0.92	3.65				1.00		1.00
Incremental Delay, d2	0.5	0.3			2.2	0.7				6.7		0.1
Delay (s)	45.5	13.4			28.9	101.1				38.9		23.1
Level of Service	D	B			C	F				D		C
Approach Delay (s)		19.7			61.7			0.0			36.0	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



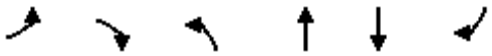
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	922	0	0	1049	407	452	58	842	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.94	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1403	1593	1410	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1403	1593	1410	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1002	0	0	1140	442	466	60	868	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	217	0	93	41	0	0	0
Lane Group Flow (vph)	92	1002	0	0	1140	225	419	405	436	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	61.8			58.1	58.1	35.5	35.5	44.2			
Effective Green, g (s)	8.4	61.8			58.1	58.1	35.5	35.5	44.2			
Actuated g/C Ratio	0.07	0.54			0.51	0.51	0.31	0.31	0.39			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2611			2455	715	496	439	552			
v/s Ratio Prot	0.05	c0.21			c0.24		0.26	c0.29	c0.31			
v/s Ratio Perm						0.16						
v/c Ratio	0.75	0.38			0.46	0.32	0.84	0.92	0.79			
Uniform Delay, d1	51.8	15.1			18.0	16.3	36.7	37.9	30.8			
Progression Factor	1.40	0.28			0.87	1.27	1.00	1.00	1.00			
Incremental Delay, d2	16.3	0.4			0.5	1.0	12.5	24.9	7.4			
Delay (s)	88.6	4.6			16.1	21.8	49.1	62.8	38.2			
Level of Service	F	A			B	C	D	E	D			
Approach Delay (s)		11.6			17.7			50.3			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



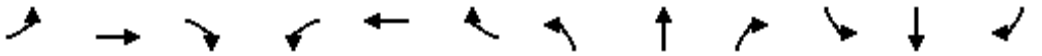
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	854	36	229	130	10	214
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	1.00		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3235		3353	1427		3342
Flt Permitted	0.95		1.00	1.00		0.94
Satd. Flow (perm)	3235		3353	1427		3147
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	880	37	263	149	12	252
RTOR Reduction (vph)	4	0	0	63	0	0
Lane Group Flow (vph)	913	0	263	86	0	264
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	40.6		66.2	66.2		66.2
Effective Green, g (s)	40.1		65.7	65.7		65.7
Actuated g/C Ratio	0.35		0.58	0.58		0.58
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1137		1932	822		1813
v/s Ratio Prot	c0.28		0.08			
v/s Ratio Perm				0.06		c0.08
v/c Ratio	0.80		0.14	0.10		0.15
Uniform Delay, d1	33.4		11.1	10.9		11.2
Progression Factor	0.29		0.23	0.00		1.00
Incremental Delay, d2	3.6		0.1	0.2		0.2
Delay (s)	13.4		2.7	0.2		11.3
Level of Service	B		A	A		B
Approach Delay (s)	13.4		1.8			11.3
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



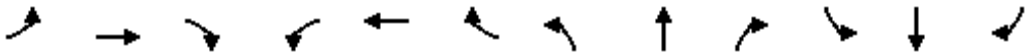
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	113	35	692	511	204	191
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	143	44	713	527	227	212
RTOR Reduction (vph)	0	19	0	0	0	185
Lane Group Flow (vph)	143	25	713	527	227	27
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	15.1	65.1	46.5	91.9	41.9	15.1
Effective Green, g (s)	14.6	64.6	46.0	91.4	41.4	14.6
Actuated g/C Ratio	0.13	0.57	0.40	0.80	0.36	0.13
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	214	850	1312	1415	640	192
v/s Ratio Prot	c0.09	0.02	c0.22	c0.30	0.13	0.02
v/s Ratio Perm						
v/c Ratio	0.67	0.03	0.54	0.37	0.35	0.14
Uniform Delay, d1	47.4	10.9	26.0	3.2	26.5	44.1
Progression Factor	1.41	4.20	0.54	0.13	1.00	1.00
Incremental Delay, d2	7.6	0.0	1.2	0.6	1.5	0.3
Delay (s)	74.5	45.7	15.3	1.0	28.1	44.5
Level of Service	E	D	B	A	C	D
Approach Delay (s)	67.7			9.2	36.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	457	1027	289	472	115	205	24	104	141	201	707
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.93	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2841	1365	1676	3353	1470	1593	1613	1444		1729	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2841	1365	1676	3353	1470	1593	1613	1444		1729	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	278	462	1037	357	583	142	220	26	112	144	205	721
RTOR Reduction (vph)	0	124	63	0	0	54	0	0	99	0	0	82
Lane Group Flow (vph)	278	701	611	357	583	88	123	123	13	0	349	639
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	909	592	249	1014	444	181	183	164		455	1169
v/s Ratio Prot	0.09	0.25	c0.45	c0.21	0.17		0.08	0.08			c0.20	0.24
v/s Ratio Perm						0.06			0.01			
v/c Ratio	0.48	0.77	1.03	1.43	0.57	0.20	0.68	0.67	0.08		0.77	0.55
Uniform Delay, d1	41.9	35.0	32.2	48.5	33.6	29.5	48.5	48.5	45.1		38.8	23.3
Progression Factor	0.95	0.71	0.66	0.71	0.59	0.48	1.00	1.00	1.00		0.59	0.29
Incremental Delay, d2	2.2	5.1	41.8	213.8	2.0	0.9	8.9	8.5	0.1		10.8	1.7
Delay (s)	42.0	29.8	63.2	248.3	21.9	14.9	57.4	57.0	45.3		33.7	8.5
Level of Service	D	C	E	F	C	B	E	E	D		C	A
Approach Delay (s)		44.4			95.7			53.4			16.7	
Approach LOS		D			F			D			B	

Intersection Summary			
HCM 2000 Control Delay	51.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	232	913	60	0	168	0	958	53	0	246	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3315			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3315			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	242	951	62	0	175	0	998	55	0	283	0
RTOR Reduction (vph)	0	0	622	0	0	159	0	3	0	0	0	0
Lane Group Flow (vph)	126	242	329	62	0	16	0	1050	0	0	283	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.4	15.4	40.4	10.7		10.7		53.1			28.3	
Effective Green, g (s)	14.4	14.4	39.4	10.2		10.2		52.6			27.8	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	192	405	777	149		131		1529			817	
v/s Ratio Prot	c0.08	0.08	0.15	c0.04				c0.32			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.66	0.60	0.42	0.42		0.12		0.69			0.35	
Uniform Delay, d1	47.4	47.1	28.6	49.1		47.8		24.2			35.6	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.44			0.52	
Incremental Delay, d2	7.0	2.0	0.3	1.4		0.3		2.2			1.1	
Delay (s)	54.5	49.0	28.9	50.5		48.1		12.9			19.6	
Level of Service	D	D	C	D		D		B			B	
Approach Delay (s)		35.0			48.7			12.9			19.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	103	1	161	15	853	130	213	985	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2350	1458		1676	3353	1376	1676	3310	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1828	1458		1676	3353	1376	1676	3310	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	121	1	189	16	927	141	227	1048	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	46	0	1	0
Lane Group Flow (vph)	0	28	1	121	28	0	16	927	95	227	1073	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.4	16.4		4.2	57.9	57.9	19.7	73.4	
Effective Green, g (s)		4.0	4.0	16.4	16.4		3.7	58.4	58.4	19.2	73.9	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	262	209		54	1717	704	282	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.28		c0.14	0.32	
v/s Ratio Perm			0.00	c0.07					0.07			
v/c Ratio		0.47	0.02	0.46	0.13		0.30	0.54	0.14	0.80	0.50	
Uniform Delay, d1		54.0	53.1	44.8	42.6		53.9	18.7	14.6	45.6	10.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.97	1.18	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.2	0.4	12.1	0.7	
Delay (s)		56.2	53.2	45.2	42.7		55.0	20.0	15.0	56.1	12.9	
Level of Service		E	D	D	D		D	B	B	E	B	
Approach Delay (s)		55.1			43.7			19.8			20.5	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	429	171	67	544	27	205	154	41	28	182	118
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3185		1676	3322		1676	1698		1666	1765	1478
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.63	1.00	1.00
Satd. Flow (perm)	1676	3185		1676	3322		1676	1698		1097	1765	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	466	186	73	591	29	223	167	45	30	198	128
RTOR Reduction (vph)	0	39	0	0	3	0	0	7	0	0	0	72
Lane Group Flow (vph)	87	613	0	73	617	0	223	205	0	30	198	56
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	12.0	31.1		9.0	28.1		20.4	52.4		38.5	38.3	50.3
Effective Green, g (s)	12.0	31.1		9.0	28.1		20.4	52.4		38.5	38.3	50.3
Actuated g/C Ratio	0.11	0.27		0.08	0.25		0.18	0.46		0.34	0.34	0.44
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	176	868		132	818		299	780		401	592	652
v/s Ratio Prot	0.05	c0.19		0.04	c0.19		c0.13	0.12		0.00	c0.11	0.01
v/s Ratio Perm										0.02		0.03
v/c Ratio	0.49	0.71		0.55	0.75		0.75	0.26		0.07	0.33	0.09
Uniform Delay, d1	48.1	37.3		50.6	39.8		44.3	18.9		25.7	28.3	18.5
Progression Factor	0.77	1.05		1.00	1.00		0.99	1.11		1.00	1.00	1.00
Incremental Delay, d2	1.5	1.8		4.9	4.0		9.7	0.8		0.1	1.5	0.1
Delay (s)	38.7	41.0		55.5	43.7		53.7	21.9		25.8	29.8	18.6
Level of Service	D	D		E	D		D	C		C	C	B
Approach Delay (s)		40.8			45.0			38.2			25.4	
Approach LOS		D			D			D			C	

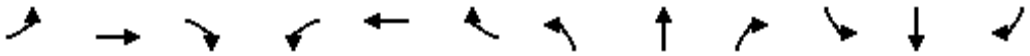
Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	476	0	0	617	0	32
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	517	0	0	671	0	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			517		853	259
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			517		853	259
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			1045		298	740

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	259	259	335	335	35
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	35
cSH	1700	1700	1700	1700	740
Volume to Capacity	0.15	0.15	0.20	0.20	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	10.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.1
Approach LOS					B

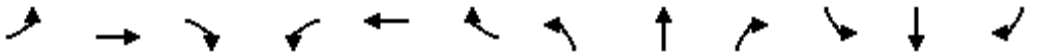
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	49	0	9	0	69	54	4	51	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
Hourly flow rate (vph)	1	0	0	53	0	10	0	75	59	4	55	0

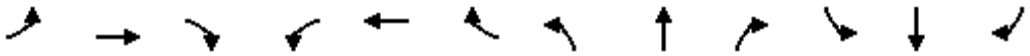
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	53	10	0	134	60
Volume Left (vph)	1	53	0	0	0	4
Volume Right (vph)	0	0	10	0	59	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.27	0.05
Departure Headway (s)	5.3	5.5	4.3	4.7	4.5	4.9
Degree Utilization, x	0.00	0.08	0.01	0.00	0.17	0.08
Capacity (veh/h)	650	623	794	761	789	725
Control Delay (s)	8.3	7.8	6.2	6.5	7.1	8.3
Approach Delay (s)	8.3	7.5		7.1		8.3
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	17.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	12	7	4	6	10	9	332	13	9	369	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98			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	0.94		1.00	0.91			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1676	1630		1672	1578			3326			1763	1473
Flt Permitted	0.75	1.00		0.74	1.00			0.95			0.99	1.00
Satd. Flow (perm)	1316	1630		1309	1578			3153			1750	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	13	8	4	7	11	10	361	14	10	401	50
RTOR Reduction (vph)	0	7	0	0	9	0	0	2	0	0	0	6
Lane Group Flow (vph)	57	14	0	4	9	0	0	383	0	0	411	44
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	189	234		188	227			2301			1277	1075
v/s Ratio Prot		0.01			0.01							
v/s Ratio Perm	c0.04			0.00				0.12			c0.23	0.03
v/c Ratio	0.30	0.06		0.02	0.04			0.17			0.32	0.04
Uniform Delay, d1	21.8	21.1		21.0	21.0			2.4			2.7	2.1
Progression Factor	1.00	1.00		1.00	1.00			0.58			1.01	1.00
Incremental Delay, d2	0.7	0.1		0.0	0.0			0.2			0.6	0.1
Delay (s)	22.5	21.2		21.0	21.1			1.5			3.3	2.2
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		22.1			21.0			1.5			3.2	
Approach LOS		C			C			A			A	

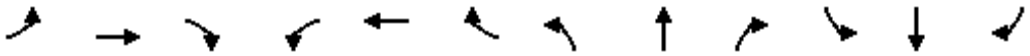
Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	29	0	4	0	119	28	4	100	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
Hourly flow rate (vph)	0	0	0	32	0	4	0	129	30	4	109	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	36	160	113
Volume Left (vph)	0	32	0	4
Volume Right (vph)	0	4	30	0
Hadj (s)	0.00	0.14	-0.08	0.04
Departure Headway (s)	4.5	4.6	4.0	4.2
Degree Utilization, x	0.00	0.05	0.18	0.13
Capacity (veh/h)	757	725	875	845
Control Delay (s)	7.5	7.8	7.9	7.8
Approach Delay (s)	0.0	7.8	7.9	7.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.9			
Level of Service	A			
Intersection Capacity Utilization	19.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	7	1	9	6	16	3	309	17	37	315	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.89		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1730		1669	1527		1669	1748		1668	1741	
Flt Permitted	0.74	1.00		0.75	1.00		0.54	1.00		0.55	1.00	
Satd. Flow (perm)	1307	1730		1321	1527		952	1748		964	1741	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	8	1	10	7	17	3	336	18	40	342	27
RTOR Reduction (vph)	0	1	0	0	15	0	0	2	0	0	2	0
Lane Group Flow (vph)	27	8	0	10	9	0	3	352	0	40	367	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	5.4	5.4		5.4	5.4		44.4	44.4		44.4	44.4	
Effective Green, g (s)	5.4	5.4		5.4	5.4		44.4	44.4		44.4	44.4	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.78	0.78		0.78	0.78	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	123	163		125	144		741	1361		750	1356	
v/s Ratio Prot		0.00			0.01			0.20			c0.21	
v/s Ratio Perm	c0.02			0.01			0.00			0.04		
v/c Ratio	0.22	0.05		0.08	0.06		0.00	0.26		0.05	0.27	
Uniform Delay, d1	23.9	23.5		23.5	23.5		1.4	1.7		1.5	1.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.40	1.96	
Incremental Delay, d2	0.3	0.0		0.1	0.1		0.0	0.5		0.1	0.5	
Delay (s)	24.2	23.5		23.6	23.6		1.4	2.2		2.2	3.9	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		24.0			23.6			2.2			3.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	0	23	0	0	0	27	82	1	1	62	69
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	72	0	25	0	0	0	29	89	1	1	67	75
Pedestrians					4			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	255	260	106	285	297	94	142			94		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	255	260	106	285	297	94	142			94		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	100	97	100	100	100	98			100		
cM capacity (veh/h)	685	629	948	634	600	960	1440			1495		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	97	0	120	143
Volume Left	72	0	29	1
Volume Right	25	0	1	75
cSH	738	1700	1440	1495
Volume to Capacity	0.13	0.00	0.02	0.00
Queue Length 95th (ft)	11	0	2	0
Control Delay (s)	10.6	0.0	2.0	0.1
Lane LOS	B	A	A	A
Approach Delay (s)	10.6	0.0	2.0	0.1
Approach LOS	B	A		

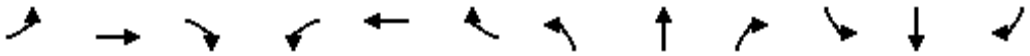
Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	30.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	12	12	98	27	10	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	13	107	29	11	84

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	26	136	95
Volume Left (vph)	13	0	11
Volume Right (vph)	13	29	0
Hadj (s)	-0.17	-0.10	0.06
Departure Headway (s)	4.2	4.0	4.1
Degree Utilization, x	0.03	0.15	0.11
Capacity (veh/h)	806	891	855
Control Delay (s)	7.3	7.6	7.6
Approach Delay (s)	7.3	7.6	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	23.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	17	2	15	16	26	5	286	15	27	299	7
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
Hourly flow rate (vph)	21	18	2	16	17	28	5	311	16	29	325	8

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	62	333	362
Volume Left (vph)	21	16	5	29
Volume Right (vph)	2	28	16	8
Hadj (s)	0.10	-0.19	0.01	0.04
Departure Headway (s)	5.7	5.4	4.6	4.6
Degree Utilization, x	0.07	0.09	0.43	0.46
Capacity (veh/h)	546	581	754	754
Control Delay (s)	9.1	8.9	11.0	11.6
Approach Delay (s)	9.1	8.9	11.0	11.6
Approach LOS	A	A	B	B

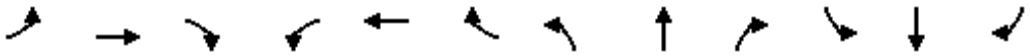
Intersection Summary				
Delay		11.0		
Level of Service		B		
Intersection Capacity Utilization		44.6%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	0	0	16	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	0	0	17	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9	9			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9	9			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1012	1073			1600	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	17	0
Volume Left	15	0	0
Volume Right	0	17	0
cSH	1012	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

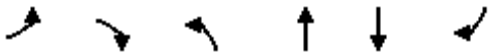
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	16	1	11	11	6	3	26	5	8	26	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	17	1	12	12	7	3	28	5	9	28	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	18			27			85	69	37	87	67	20
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	18			27			85	69	37	87	67	20
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	97	99	99	97	100
cM capacity (veh/h)	1598			1574			857	809	1019	853	812	1053

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	30	37	37
Volume Left	0	12	3	9
Volume Right	1	7	5	0
cSH	1598	1574	838	821
Volume to Capacity	0.00	0.01	0.04	0.05
Queue Length 95th (ft)	0	1	3	4
Control Delay (s)	0.0	2.9	9.5	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.9	9.5	9.6
Approach LOS			A	A

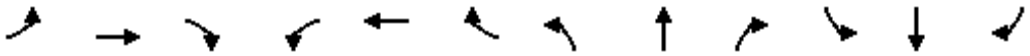
Intersection Summary				
Average Delay	6.5			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	22	22	102	71	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	24	24	111	77	18
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	256	99	104			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	256	99	104			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	714	946	1478			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	45	135	96
Volume Left	21	24	0
Volume Right	24	0	18
cSH	822	1478	1700
Volume to Capacity	0.05	0.02	0.06
Queue Length 95th (ft)	4	1	0
Control Delay (s)	9.6	1.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	1.4	0.0
Approach LOS	A		

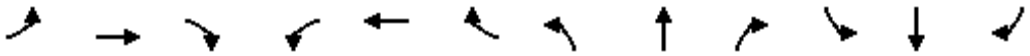
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	13	0	8	25	11	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	14	0	9	27	12	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			5			82	87	5	109	80	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			5			82	87	5	109	80	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	99	99	100
cM capacity (veh/h)	1588			1613			877	783	1077	821	790	1054

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	47	36	21
Volume Left	0	30	0	12
Volume Right	1	14	27	0
cSH	1588	1613	987	808
Volume to Capacity	0.00	0.02	0.04	0.03
Queue Length 95th (ft)	0	1	3	2
Control Delay (s)	0.0	4.8	8.8	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.8	8.8	9.6
Approach LOS			A	A

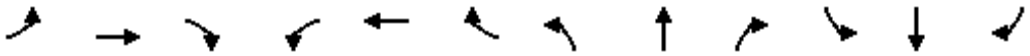
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	35	11	8	43	22	2	10	10	17	20	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	38	12	9	47	24	2	11	11	18	22	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	81			54			139	146	54	152	140	72
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	81			54			139	146	54	152	140	72
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	99	99	98	97	100
cM capacity (veh/h)	1504			1546			796	732	1005	776	738	980

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	79	24	41
Volume Left	0	9	2	18
Volume Right	12	24	11	1
cSH	1504	1546	842	760
Volume to Capacity	0.00	0.01	0.03	0.05
Queue Length 95th (ft)	0	0	2	4
Control Delay (s)	0.0	0.8	9.4	10.0
Lane LOS		A	A	B
Approach Delay (s)	0.0	0.8	9.4	10.0
Approach LOS			A	B

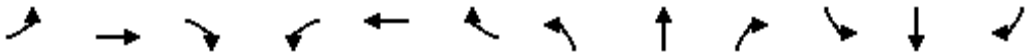
Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	25.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	38	24	30	34	23	29	92	36	31	46	12
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
Hourly flow rate (vph)	8	41	26	33	37	25	32	100	39	34	50	13

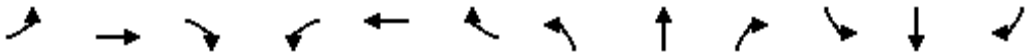
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	75	95	171	97
Volume Left (vph)	8	33	32	34
Volume Right (vph)	26	25	39	13
Hadj (s)	-0.15	-0.06	-0.07	0.02
Departure Headway (s)	4.5	4.6	4.3	4.5
Degree Utilization, x	0.09	0.12	0.21	0.12
Capacity (veh/h)	743	736	791	751
Control Delay (s)	7.9	8.2	8.5	8.1
Approach Delay (s)	7.9	8.2	8.5	8.1
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	29.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	60	38	24	59	55	24	219	8	28	275	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1651			1734	1453	1676	1752		1676	1740	
Flt Permitted		0.92			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1534			1612	1453	1676	1752		1676	1740	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	65	41	26	64	60	26	238	9	30	299	23
RTOR Reduction (vph)	0	34	0	0	0	51	0	2	0	0	3	0
Lane Group Flow (vph)	0	101	0	0	90	9	26	245	0	30	319	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.8			8.8	8.8	1.6	34.5		3.2	36.1	
Effective Green, g (s)		8.8			8.8	8.8	1.6	34.5		3.2	36.1	
Actuated g/C Ratio		0.15			0.15	0.15	0.03	0.59		0.06	0.62	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		232			244	220	46	1042		92	1083	
v/s Ratio Prot							c0.02	0.14		0.02	c0.18	
v/s Ratio Perm		c0.07			0.06	0.01						
v/c Ratio		0.44			0.37	0.04	0.57	0.24		0.33	0.29	
Uniform Delay, d1		22.3			22.1	21.0	27.9	5.5		26.4	5.1	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			0.3	0.0	14.9	0.5		2.1	0.7	
Delay (s)		22.8			22.4	21.0	42.8	6.1		28.4	5.8	
Level of Service		C			C	C	D	A		C	A	
Approach Delay (s)		22.8			21.9			9.6			7.7	
Approach LOS		C			C			A			A	

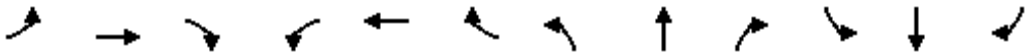
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	666	241	206	585	23	259	87	201	23	59	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.90			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	2999		1676	3353	1335	1676	1705			1474	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	2999		1676	3353	1335	1676	1705			1474	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	47	709	256	226	643	25	282	95	218	28	71	29
RTOR Reduction (vph)	0	27	0	0	0	14	0	72	0	0	9	0
Lane Group Flow (vph)	47	938	0	226	643	11	282	241	0	0	119	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	7.4	39.2		19.0	50.8	50.8	24.1	24.1			21.2	
Effective Green, g (s)	7.9	40.2		19.5	51.8	51.8	23.6	23.6			20.7	
Actuated g/C Ratio	0.07	0.34		0.16	0.43	0.43	0.20	0.20			0.17	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	110	1004		272	1447	576	329	335			254	
v/s Ratio Prot	0.03	c0.31		c0.13	0.19		c0.17	0.14			c0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.43	0.93		0.83	0.44	0.02	0.86	0.72			0.47	
Uniform Delay, d1	53.9	38.6		48.7	24.0	19.5	46.6	45.1			44.7	
Progression Factor	1.00	1.00		1.36	0.48	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.9	16.4		17.5	0.9	0.1	19.0	6.7			1.0	
Delay (s)	55.8	55.1		83.6	12.5	19.6	65.6	51.8			45.7	
Level of Service	E	E		F	B	B	E	D			D	
Approach Delay (s)		55.1			30.7			58.3			45.7	
Approach LOS		E			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	47.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	735	98	175	655	77	81	121	123	64	211	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.90	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3194		1676	3353	1273	1676	1765	1449	1676	1678	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3194		1676	3353	1273	1676	1765	1449	1676	1678	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	766	102	182	682	80	86	129	131	72	237	83
RTOR Reduction (vph)	0	8	0	0	0	41	0	0	103	0	11	0
Lane Group Flow (vph)	61	860	0	182	682	39	86	129	28	72	309	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	50.4		16.9	58.9	58.9	9.9	26.4	26.4	9.6	26.1	
Effective Green, g (s)	7.9	50.4		16.4	58.9	58.9	9.4	25.9	25.9	9.1	25.6	
Actuated g/C Ratio	0.07	0.42		0.14	0.49	0.49	0.08	0.22	0.22	0.08	0.21	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1341		229	1645	624	131	380	312	127	357	
v/s Ratio Prot	0.04	c0.27		c0.11	0.20		c0.05	0.07		0.04	c0.18	
v/s Ratio Perm						0.03			0.02			
v/c Ratio	0.55	0.64		0.79	0.41	0.06	0.66	0.34	0.09	0.57	0.87	
Uniform Delay, d1	54.3	27.6		50.2	19.5	16.1	53.7	39.8	37.6	53.5	45.5	
Progression Factor	0.60	0.46		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	1.2		16.6	0.8	0.2	10.1	0.4	0.1	4.6	19.0	
Delay (s)	35.2	14.0		66.8	20.3	16.2	63.8	40.2	37.7	58.2	64.5	
Level of Service	D	B		E	C	B	E	D	D	E	E	
Approach Delay (s)		15.3			28.9			45.1			63.3	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	882	80	117	877	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3134		1676	3180			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3134		1676	3180			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	959	87	121	904	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1041	0	121	951	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1358		173	1666			310	266		245	
v/s Ratio Prot	0.01	c0.33		c0.07	0.30			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.77		0.70	0.57			0.84	0.12		0.49	
Uniform Delay, d1	58.9	28.9		52.0	19.4			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.41			1.00	1.00		1.00	
Incremental Delay, d2	13.6	4.2		6.4	0.8			17.4	0.1		1.1	
Delay (s)	72.5	33.0		65.2	8.7			64.8	40.8		48.2	
Level of Service	E	C		E	A			E	D		D	
Approach Delay (s)		33.4			15.1			55.3			48.2	
Approach LOS		C			B			E			D	

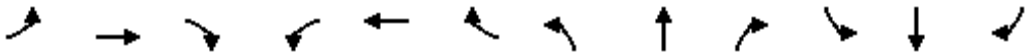
Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	557	333	49	399	136	460	532	30	129	630	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	0.98		1.00	0.99		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	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2960		1676	3166		3252	3232		1676	3106	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2960		1676	3166		3252	3232		1676	3106	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	612	366	59	481	164	517	598	34	139	677	197
RTOR Reduction (vph)	0	74	0	0	30	0	0	3	0	0	22	0
Lane Group Flow (vph)	160	904	0	59	615	0	517	629	0	139	852	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.5	38.2		8.8	27.5		21.0	45.4		14.4	37.8	
Effective Green, g (s)	19.5	38.2		8.8	27.5		22.0	46.4		14.4	38.8	
Actuated g/C Ratio	0.16	0.32		0.07	0.23		0.18	0.39		0.12	0.32	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	272	942		122	725		596	1249		201	1004	
v/s Ratio Prot	0.10	c0.31		0.04	c0.19		c0.16	0.19		0.08	c0.27	
v/s Ratio Perm												
v/c Ratio	0.59	0.96		0.48	0.85		0.87	0.50		0.69	0.85	
Uniform Delay, d1	46.5	40.1		53.4	44.3		47.6	28.0		50.7	37.9	
Progression Factor	0.52	0.40		1.00	1.00		1.00	1.00		0.92	0.91	
Incremental Delay, d2	1.5	15.7		1.1	8.8		12.3	1.5		8.7	8.5	
Delay (s)	25.7	31.7		54.5	53.0		59.8	29.5		55.3	43.1	
Level of Service	C	C		D	D		E	C		E	D	
Approach Delay (s)		30.8			53.1			43.1			44.8	
Approach LOS		C			D			D			D	

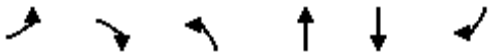
Intersection Summary			
HCM 2000 Control Delay	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	0	103	8	2	1	107	765	5	1	831	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.96	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1608	3346			3257	
Flt Permitted		0.80	1.00		0.82		0.28	1.00			0.95	
Satd. Flow (perm)		1387	1410		1384		471	3346			3110	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	104	0	108	17	4	2	116	832	5	1	884	78
RTOR Reduction (vph)	0	0	92	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	104	16	0	21	0	116	837	0	0	960	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.3	17.3		16.8		95.7	95.7			95.7	
Effective Green, g (s)		17.3	17.3		17.3		96.7	96.7			96.7	
Actuated g/C Ratio		0.14	0.14		0.14		0.81	0.81			0.81	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		199	203		199		379	2696			2506	
v/s Ratio Prot								0.25				
v/s Ratio Perm		c0.07	0.01		0.02		0.25				c0.31	
v/c Ratio		0.52	0.08		0.11		0.31	0.31			0.38	
Uniform Delay, d1		47.5	44.4		44.6		3.0	3.0			3.3	
Progression Factor		1.00	1.00		1.00		0.54	0.57			1.00	
Incremental Delay, d2		1.1	0.1		0.1		1.8	0.3			0.4	
Delay (s)		48.7	44.5		44.7		3.4	2.0			3.7	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.5			44.7			2.2			3.7	
Approach LOS		D			D			A			A	

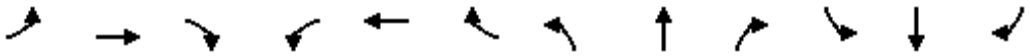
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	49	70	800	883	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1558		1632	3279	3335	
Flt Permitted	0.99		0.28	1.00	1.00	
Satd. Flow (perm)	1558		476	3279	3335	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	26	64	75	860	920	17
RTOR Reduction (vph)	51	0	0	0	1	0
Lane Group Flow (vph)	39	0	75	860	936	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	310		352	2429	2471	
v/s Ratio Prot	c0.02			0.26	c0.28	
v/s Ratio Perm			0.16			
v/c Ratio	0.12		0.21	0.35	0.38	
Uniform Delay, d1	32.9		4.0	4.5	4.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		1.4	0.4	0.4	
Delay (s)	33.0		5.4	5.0	5.1	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.0	5.1	
Approach LOS	C			A	A	

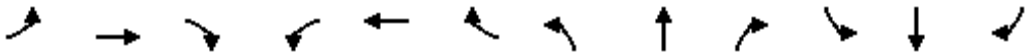
Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	6	29	13	5	11	13	786	8	22	890	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1699	1461		1615		1676	3345		1676	3344	
Flt Permitted		0.81	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1425	1461		1468		1676	3345		1676	3344	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	27	8	37	17	6	14	14	827	8	24	967	13
RTOR Reduction (vph)	0	0	32	0	12	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	35	5	0	25	0	14	835	0	24	980	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		2.4	73.1		4.4	75.1	
Effective Green, g (s)		12.5	12.5		12.5		2.4	74.1		4.4	76.1	
Actuated g/C Ratio		0.12	0.12		0.12		0.02	0.74		0.04	0.76	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		178	182		183		40	2478		73	2544	
v/s Ratio Prot							0.01	c0.25		0.01	c0.29	
v/s Ratio Perm		c0.02	0.00		0.02							
v/c Ratio		0.20	0.03		0.14		0.35	0.34		0.33	0.39	
Uniform Delay, d1		39.2	38.4		38.9		48.0	4.5		46.4	4.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2	0.0		0.1		1.9	0.4		1.0	0.4	
Delay (s)		39.4	38.4		39.1		50.0	4.8		47.3	4.5	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		38.9			39.1			5.6			5.5	
Approach LOS		D			D			A			A	

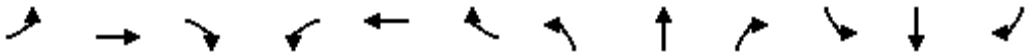
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	75	5	27	5	123	23	10	71	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
Hourly flow rate (vph)	1	1	1	82	5	29	5	134	25	11	77	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	84	32	5	159	89
Volume Left (vph)	1	82	0	5	0	11
Volume Right (vph)	1	0	29	0	25	1
Hadj (s)	-0.10	0.52	-0.61	0.53	-0.08	0.05
Departure Headway (s)	5.2	5.7	4.5	5.4	4.8	5.1
Degree Utilization, x	0.00	0.13	0.04	0.01	0.21	0.13
Capacity (veh/h)	644	604	751	640	722	682
Control Delay (s)	8.2	8.3	6.5	7.3	7.9	8.8
Approach Delay (s)	8.2	7.8		7.9		8.8
Approach LOS	A	A		A		A

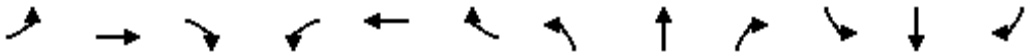
Intersection Summary				
Delay	8.1			
Level of Service	A			
Intersection Capacity Utilization	31.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	18	0	7	0	143	23	11	127	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
Hourly flow rate (vph)	0	0	0	20	0	8	0	155	25	12	138	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	27	180	150
Volume Left (vph)	0	20	0	12
Volume Right (vph)	0	8	25	0
Hadj (s)	0.00	0.01	-0.05	0.05
Departure Headway (s)	4.6	4.6	4.1	4.2
Degree Utilization, x	0.00	0.03	0.20	0.17
Capacity (veh/h)	732	718	866	845
Control Delay (s)	7.6	7.8	8.1	8.1
Approach Delay (s)	0.0	7.8	8.1	8.1
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.1			
Level of Service	A			
Intersection Capacity Utilization	28.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	3	0	189	0	0	121	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	0	0	0	0	3	0	205	0	0	132	0
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	341	337	132	337	337	206	132			205		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	341	337	132	337	337	206	132			205		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	610	584	918	617	584	833	1454			1366		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	3	205	132
Volume Left	0	0	0	0
Volume Right	0	3	0	0
cSH	1700	833	1454	1366
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	9.3	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	9.3	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	20.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	24	21	171	32	10	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	23	186	35	11	124

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	49	221	135
Volume Left (vph)	26	0	11
Volume Right (vph)	23	35	0
Hadj (s)	-0.14	-0.06	0.05
Departure Headway (s)	4.5	4.1	4.3
Degree Utilization, x	0.06	0.25	0.16
Capacity (veh/h)	729	858	822
Control Delay (s)	7.8	8.5	8.1
Approach Delay (s)	7.8	8.5	8.1
Approach LOS	A	A	A

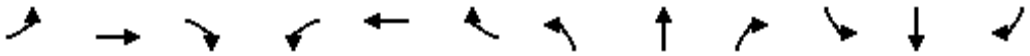
Intersection Summary			
Delay	8.3		
Level of Service	A		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	12	0	0	10	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	0	0	11	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	5	5			11	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	5	5			11	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	1016	1078			1608	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	11	0
Volume Left	13	0	0
Volume Right	0	11	0
cSH	1016	1700	1700
Volume to Capacity	0.01	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

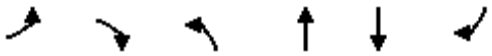
Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	8	2	11	14	0	1	0	6	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	9	2	12	15	0	1	0	7	0	0	0
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	15			16			57	54	15	55	55	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	15			16			57	54	15	55	55	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	100	100	100
cM capacity (veh/h)	1603			1595			925	828	1060	928	826	1058

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	27	8	0
Volume Left	0	12	1	0
Volume Right	2	0	7	0
cSH	1603	1595	1039	1700
Volume to Capacity	0.00	0.01	0.01	0.00
Queue Length 95th (ft)	0	1	1	0
Control Delay (s)	0.0	3.2	8.5	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	3.2	8.5	0.0
Approach LOS			A	A

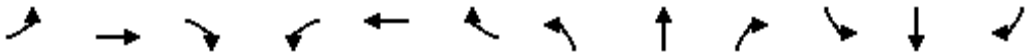
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	7	7	189	107	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	8	8	205	116	32
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	374	154	166			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	374	154	166			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	99			
cM capacity (veh/h)	613	876	1391			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	213	148
Volume Left	18	8	0
Volume Right	8	0	32
cSH	672	1391	1700
Volume to Capacity	0.04	0.01	0.09
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.6	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.6	0.3	0.0
Approach LOS	B		

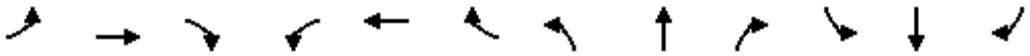
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	39	37	12	21	34	43	24	164	39	11	57	25
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
Hourly flow rate (vph)	42	40	13	23	37	47	26	178	42	12	62	27

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	96	107	247	101
Volume Left (vph)	42	23	26	12
Volume Right (vph)	13	47	42	27
Hadj (s)	0.04	-0.19	-0.05	-0.10
Departure Headway (s)	4.9	4.7	4.5	4.6
Degree Utilization, x	0.13	0.14	0.31	0.13
Capacity (veh/h)	674	709	769	731
Control Delay (s)	8.6	8.4	9.4	8.3
Approach Delay (s)	8.6	8.4	9.4	8.3
Approach LOS	A	A	A	A

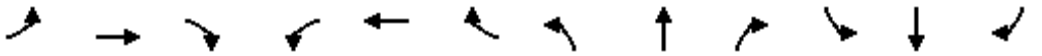
Intersection Summary			
Delay	8.9		
Level of Service	A		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	260	74	106	244	90	82	119	54	13	61	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.95			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3153		1676	3353	1442	1676	1865			1535	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3153		1676	3353	1442	1676	1865			1535	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	22	286	81	112	257	95	99	143	65	13	63	6
RTOR Reduction (vph)	0	20	0	0	0	44	0	18	0	0	4	0
Lane Group Flow (vph)	22	347	0	112	257	51	99	190	0	0	78	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	3.2	42.4		10.5	49.7	49.7	13.7	13.7			11.9	
Effective Green, g (s)	3.7	43.4		11.0	50.7	50.7	13.2	13.2			11.4	
Actuated g/C Ratio	0.04	0.46		0.12	0.53	0.53	0.14	0.14			0.12	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	65	1440		194	1789	769	232	259			184	
v/s Ratio Prot	0.01	c0.11		c0.07	0.08		0.06	c0.10			c0.05	
v/s Ratio Perm						0.04						
v/c Ratio	0.34	0.24		0.58	0.14	0.07	0.43	0.73			0.43	
Uniform Delay, d1	44.5	15.7		39.8	11.2	10.7	37.4	39.2			38.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	2.2	0.4		3.4	0.2	0.2	0.9	9.7			1.2	
Delay (s)	46.7	16.1		43.2	11.4	10.9	38.4	48.9			39.9	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		17.9			18.9			45.5			39.9	
Approach LOS		B			B			D			D	

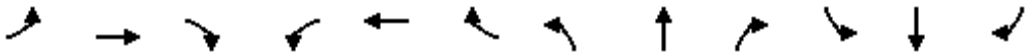
Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	417	399	0	458	1351	0	0	0	594	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3007			2854	1283				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3007			2854	1283				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	434	416	0	477	1407	0	0	0	646	0	273
RTOR Reduction (vph)	0	139	0	0	176	472	0	0	0	0	0	192
Lane Group Flow (vph)	95	711	0	0	864	372	0	0	0	646	0	81
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	72.2			50.2	50.2				33.3		33.3
Effective Green, g (s)	18.0	72.2			50.2	50.2				33.8		33.8
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1904			1256	564				745		428
v/s Ratio Prot	0.06	c0.24			c0.30					c0.26		
v/s Ratio Perm						0.29						0.06
v/c Ratio	0.36	0.37			0.69	0.66				0.87		0.19
Uniform Delay, d1	42.9	10.0			25.6	25.2				38.0		29.9
Progression Factor	1.00	1.00			0.45	5.92				1.00		1.00
Incremental Delay, d2	0.3	0.6			1.8	3.6				10.3		0.2
Delay (s)	43.2	10.6			13.5	152.5				48.3		30.0
Level of Service	D	B			B	F				D		C
Approach Delay (s)		13.9			75.7			0.0			42.9	
Approach LOS		B			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	52.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



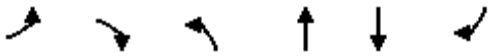
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	866	0	0	1318	381	491	289	765	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.95	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1512	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1512	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	902	0	0	1373	397	540	318	841	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	18	20	0	0	0
Lane Group Flow (vph)	153	902	0	0	1373	188	486	564	611	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	543	750			
v/s Ratio Prot	c0.09	0.19			c0.28		0.31	c0.37	c0.43			
v/s Ratio Perm						0.14						
v/c Ratio	0.58	0.46			0.76	0.36	0.85	1.04	0.81			
Uniform Delay, d1	44.5	25.0			30.9	25.6	33.7	36.5	22.4			
Progression Factor	0.76	0.48			0.70	0.52	1.00	1.00	1.00			
Incremental Delay, d2	7.0	0.6			2.1	1.4	11.3	49.1	6.8			
Delay (s)	41.0	12.7			23.8	14.7	45.0	85.6	29.1			
Level of Service	D	B			C	B	D	F	C			
Approach Delay (s)		16.8			21.8			53.0			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



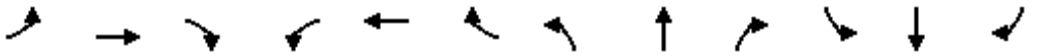
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	523	78	338	99	43	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3188		3353	1455		3336
Flt Permitted	0.96		1.00	1.00		0.88
Satd. Flow (perm)	3188		3353	1455		2960
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	588	88	363	106	46	460
RTOR Reduction (vph)	11	0	0	56	0	0
Lane Group Flow (vph)	665	0	363	50	0	506
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1454		1582	686		1396
v/s Ratio Prot	c0.21		0.11			
v/s Ratio Perm				0.03		c0.17
v/c Ratio	0.46		0.23	0.07		0.36
Uniform Delay, d1	21.3		17.8	16.5		19.2
Progression Factor	0.47		0.18	0.01		1.00
Incremental Delay, d2	1.0		0.3	0.2		0.7
Delay (s)	11.0		3.5	0.3		19.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		2.7			19.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



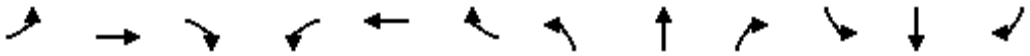
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	81	64	434	466	174	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	100	79	472	507	198	169
RTOR Reduction (vph)	0	18	0	0	0	150
Lane Group Flow (vph)	100	61	472	507	198	19
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	13.3	87.9	71.1	93.7	19.1	13.3
Effective Green, g (s)	12.8	87.4	70.6	93.2	18.6	12.8
Actuated g/C Ratio	0.11	0.77	0.62	0.82	0.16	0.11
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1150	2013	1442	287	168
v/s Ratio Prot	c0.06	0.04	0.15	c0.29	c0.11	0.01
v/s Ratio Perm						
v/c Ratio	0.53	0.05	0.23	0.35	0.69	0.11
Uniform Delay, d1	47.8	3.2	9.7	2.7	45.0	45.5
Progression Factor	1.49	4.54	0.17	0.13	1.00	1.00
Incremental Delay, d2	2.9	0.0	0.2	0.6	6.8	0.3
Delay (s)	74.1	14.7	1.9	0.9	51.7	45.8
Level of Service	E	B	A	A	D	D
Approach Delay (s)	47.9			1.4	49.0	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



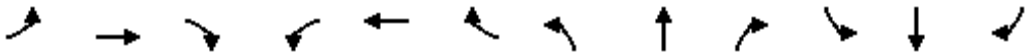
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	674	618	231	853	122	140	37	103	169	165	632
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3065	1365	1676	3353	1480	1593	1629	1479		1721	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3065	1365	1676	3353	1480	1593	1629	1479		1721	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	393	775	710	241	889	127	156	41	114	188	183	702
RTOR Reduction (vph)	0	26	114	0	0	52	0	0	101	0	0	74
Lane Group Flow (vph)	393	1005	340	241	889	75	98	99	13	0	371	628
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	989	592	249	1102	486	177	181	164		452	1106
v/s Ratio Prot	0.12	c0.33	c0.25	0.14	c0.27		0.06	0.06			c0.22	0.24
v/s Ratio Perm						0.05			0.01			
v/c Ratio	0.78	1.02	0.57	0.97	0.81	0.15	0.55	0.55	0.08		0.82	0.57
Uniform Delay, d1	46.2	38.6	24.3	48.2	34.9	27.0	48.0	47.9	45.4		39.5	25.2
Progression Factor	0.94	0.70	0.41	0.83	0.76	0.57	1.00	1.00	1.00		0.89	0.47
Incremental Delay, d2	8.9	29.6	0.9	41.9	5.2	0.5	3.0	2.7	0.1		14.4	2.0
Delay (s)	52.5	56.8	10.9	81.8	31.8	16.0	50.9	50.6	45.5		49.6	13.9
Level of Service	D	E	B	F	C	B	D	D	D		D	B
Approach Delay (s)		44.8			39.8			48.9			26.3	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	39.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



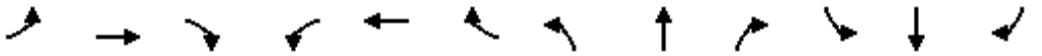
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	118	595	51	0	108	0	739	40	0	239	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3197	2250	1676		1463		3320			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3197	2250	1676		1463		3320			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	134	676	62	0	132	0	803	43	0	278	0
RTOR Reduction (vph)	0	0	464	0	0	120	0	3	0	0	0	0
Lane Group Flow (vph)	71	148	212	62	0	12	0	843	0	0	278	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.8	11.8	36.8	10.7		10.7		55.1			30.3	
Effective Green, g (s)	10.8	10.8	35.8	10.2		10.2		54.6			29.8	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.26	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	144	302	706	149		130		1590			876	
v/s Ratio Prot	c0.05	0.05	0.09	c0.04				c0.25			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.49	0.49	0.30	0.42		0.09		0.53			0.32	
Uniform Delay, d1	49.0	49.0	29.6	49.1		47.6		20.7			33.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.47	
Incremental Delay, d2	1.9	0.9	0.2	1.4		0.2		1.3			0.9	
Delay (s)	50.9	49.9	29.8	50.5		47.9		22.0			16.9	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.8			48.7			22.0			16.9	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	78	2	79	10	687	103	99	745	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3310	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3310	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	101	3	103	10	701	105	103	776	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	60	0	3	0
Lane Group Flow (vph)	0	29	1	101	24	0	10	701	45	103	811	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.7	31.7	8.7	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.2	32.2	8.2	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1439	620	183	1725	
v/s Ratio Prot		c0.02			0.02		0.01	0.21		c0.06	c0.24	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.26	0.08		0.34	0.49	0.07	0.56	0.47	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	15.4	12.6	31.7	11.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	1.2	0.2	2.4	0.9	
Delay (s)		35.8	34.2	25.4	24.4		39.0	16.6	12.8	34.1	12.3	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			16.4			14.7	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	558	198	93	443	66	362	434	58	152	300	258
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3179		1676	3251		1676	1723		1665	1765	1453
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.48	1.00	1.00
Satd. Flow (perm)	1676	3179		1676	3251		1676	1723		836	1765	1453
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	168	641	228	97	461	69	373	447	60	167	330	284
RTOR Reduction (vph)	0	32	0	0	10	0	0	4	0	0	0	72
Lane Group Flow (vph)	168	837	0	97	520	0	373	503	0	167	330	212
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	16.8	33.6		10.6	27.4		28.0	44.1		26.8	26.6	43.4
Effective Green, g (s)	16.3	34.1		10.1	27.9		27.5	43.6		26.3	26.1	42.4
Actuated g/C Ratio	0.14	0.30		0.09	0.24		0.24	0.38		0.23	0.23	0.37
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	239	950		148	795		404	658		265	404	540
v/s Ratio Prot	0.10	c0.26		0.06	c0.16		c0.22	0.29		0.06	c0.19	0.06
v/s Ratio Perm										0.09		0.09
v/c Ratio	0.70	0.88		0.66	0.65		0.92	0.76		0.63	0.82	0.39
Uniform Delay, d1	46.5	38.0		50.3	38.7		42.2	30.7		40.3	41.7	26.3
Progression Factor	0.55	0.69		1.00	1.00		1.01	1.15		1.00	1.00	1.00
Incremental Delay, d2	3.6	4.0		10.0	1.9		25.1	7.7		4.8	16.5	0.5
Delay (s)	29.4	30.3		60.3	40.7		67.6	42.8		45.1	58.2	26.8
Level of Service	C	C		E	D		E	D		D	E	C
Approach Delay (s)		30.1			43.7			53.4			44.0	
Approach LOS		C			D			D			D	

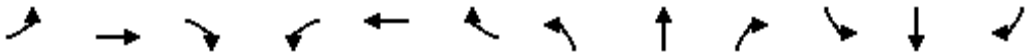
Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	729	0	0	503	0	100
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	792	0	0	547	0	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			792		1066	396
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			792		1066	396
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	82
cM capacity (veh/h)			824		217	603

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	396	396	273	273	109
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	109
cSH	1700	1700	1700	1700	603
Volume to Capacity	0.23	0.23	0.16	0.16	0.18
Queue Length 95th (ft)	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	12.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.3
Approach LOS					B

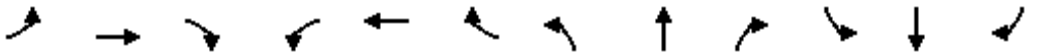
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	56	0	27	1	245	89	20	135	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
Hourly flow rate (vph)	1	1	5	61	0	29	1	266	97	22	147	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	61	29	1	363	170
Volume Left (vph)	1	61	0	1	0	22
Volume Right (vph)	5	0	29	0	97	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.15	0.06
Departure Headway (s)	5.6	6.3	5.1	5.5	4.8	5.3
Degree Utilization, x	0.01	0.11	0.04	0.00	0.48	0.25
Capacity (veh/h)	570	520	634	638	734	660
Control Delay (s)	8.7	8.9	7.2	7.3	11.0	10.0
Approach Delay (s)	8.7	8.3		11.0		10.0
Approach LOS	A	A		B		A

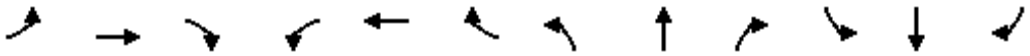
Intersection Summary				
Delay	10.3			
Level of Service	B			
Intersection Capacity Utilization	42.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	46	37	21	9	36	28	704	67	53	492	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.97			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.97	1.00			1.00			1.00	1.00
Frt	1.00	0.93		1.00	0.88			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1660	1594		1633	1508			3251			1713	1459
Flt Permitted	0.72	1.00		0.69	1.00			0.93			0.87	1.00
Satd. Flow (perm)	1254	1594		1185	1508			3021			1489	1459
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	134	58	47	28	12	48	33	828	79	55	512	47
RTOR Reduction (vph)	0	38	0	0	38	0	0	7	0	0	0	5
Lane Group Flow (vph)	134	67	0	28	22	0	0	933	0	0	567	42
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	11.8	11.8		11.8	11.8			38.0			38.0	38.0
Effective Green, g (s)	11.3	11.3		11.3	11.3			37.5			37.5	37.5
Actuated g/C Ratio	0.20	0.20		0.20	0.20			0.66			0.66	0.66
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	248	316		234	298			1987			979	959
v/s Ratio Prot		0.04			0.01							
v/s Ratio Perm	c0.11			0.02				0.31			c0.38	0.03
v/c Ratio	0.54	0.21		0.12	0.07			0.47			0.58	0.04
Uniform Delay, d1	20.5	19.1		18.8	18.6			4.8			5.4	3.4
Progression Factor	1.00	1.00		1.00	1.00			0.61			0.76	0.59
Incremental Delay, d2	1.9	0.2		0.2	0.1			0.7			1.5	0.0
Delay (s)	22.4	19.4		18.9	18.7			3.7			5.6	2.1
Level of Service	C	B		B	B			A			A	A
Approach Delay (s)		21.1			18.7			3.7			5.3	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

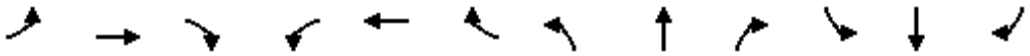
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	22	0	10	0	320	16	17	190	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
Hourly flow rate (vph)	0	0	0	24	0	11	0	348	17	18	207	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	35	365	225
Volume Left (vph)	0	24	0	18
Volume Right (vph)	0	11	17	0
Hadj (s)	0.00	-0.02	0.01	0.05
Departure Headway (s)	5.2	5.2	4.2	4.4
Degree Utilization, x	0.00	0.05	0.43	0.28
Capacity (veh/h)	614	619	835	791
Control Delay (s)	8.2	8.4	10.4	9.1
Approach Delay (s)	0.0	8.4	10.4	9.1
Approach LOS	A	A	B	A

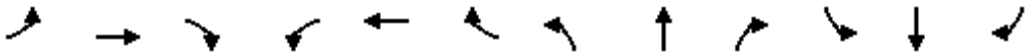
Intersection Summary				
Delay	9.8			
Level of Service	A			
Intersection Capacity Utilization	36.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	18	5	36	19	83	7	640	25	63	491	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.88		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1658	1683		1641	1502		1661	1751		1664	1717	
Flt Permitted	0.66	1.00		0.73	1.00		0.42	1.00		0.31	1.00	
Satd. Flow (perm)	1159	1683		1267	1502		739	1751		548	1717	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	42	28	8	49	26	112	8	719	28	70	546	8
RTOR Reduction (vph)	0	7	0	0	96	0	0	1	0	0	1	0
Lane Group Flow (vph)	42	29	0	49	42	0	8	746	0	70	553	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	8.6	8.6		8.6	8.6		41.2	41.2		41.2	41.2	
Effective Green, g (s)	8.1	8.1		8.1	8.1		40.7	40.7		40.7	40.7	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.71	0.71		0.71	0.71	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	164	239		180	213		527	1250		391	1225	
v/s Ratio Prot		0.02			0.03			c0.43			0.32	
v/s Ratio Perm	0.04			c0.04			0.01			0.13		
v/c Ratio	0.26	0.12		0.27	0.20		0.02	0.60		0.18	0.45	
Uniform Delay, d1	21.8	21.3		21.8	21.6		2.4	4.1		2.7	3.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.57	0.86	
Incremental Delay, d2	0.3	0.1		0.3	0.2		0.1	2.1		0.9	1.1	
Delay (s)	22.1	21.4		22.1	21.7		2.4	6.2		2.4	4.0	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		21.8			21.8			6.1			3.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	3	0	313	0	1	240	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	0	0	0	0	3	0	340	0	1	261	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	607	603	261	603	603	340	261			340		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	607	603	261	603	603	340	261			340		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	407	413	778	410	413	702	1304			1219		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	3	340	262
Volume Left	0	0	0	1
Volume Right	0	3	0	0
cSH	1700	702	1304	1219
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	10.2	0.0	0.0
Lane LOS	A	B		A
Approach Delay (s)	0.0	10.2	0.0	0.0
Approach LOS	A	B		

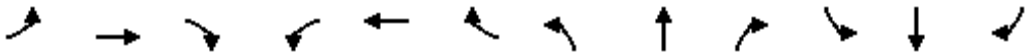
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	34	17	297	36	23	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	18	323	39	25	238

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	55	362	263
Volume Left (vph)	37	0	25
Volume Right (vph)	18	39	0
Hadj (s)	-0.03	-0.03	0.05
Departure Headway (s)	5.2	4.3	4.5
Degree Utilization, x	0.08	0.43	0.33
Capacity (veh/h)	612	818	778
Control Delay (s)	8.7	10.6	9.6
Approach Delay (s)	8.7	10.6	9.6
Approach LOS	A	B	A

Intersection Summary			
Delay	10.1		
Level of Service	B		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	36	12	35	28	73	8	561	30	78	447	6
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
Hourly flow rate (vph)	35	39	13	38	30	79	9	610	33	85	486	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	87	148	651	577
Volume Left (vph)	35	38	9	85
Volume Right (vph)	13	79	33	7
Hadj (s)	0.02	-0.24	0.01	0.06
Departure Headway (s)	7.7	7.1	5.8	5.9
Degree Utilization, x	0.19	0.29	1.0	0.94
Capacity (veh/h)	446	481	626	603
Control Delay (s)	12.4	13.1	74.9	47.0
Approach Delay (s)	12.4	13.1	74.9	47.0
Approach LOS	B	B	F	E

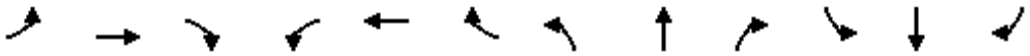
Intersection Summary				
Delay		54.0		
Level of Service		F		
Intersection Capacity Utilization		84.7%	ICU Level of Service	E
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	27	0	0	18	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	0	0	20	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	10	10			20	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	10	10			20	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	1010	1072			1597	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	29	20	0
Volume Left	29	0	0
Volume Right	0	20	0
cSH	1010	1700	1700
Volume to Capacity	0.03	0.01	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

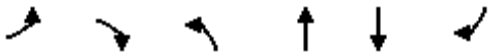
Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	24	2	2	23	0	7	0	6	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	26	2	2	25	0	8	0	7	0	0	0
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	25			36			72	65	40	68	66	32
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			36			72	65	40	68	66	32
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	99	100	100	100
cM capacity (veh/h)	1589			1564			903	820	1020	909	818	1036

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	28	27	14	0
Volume Left	0	2	8	0
Volume Right	2	0	7	0
cSH	1589	1564	953	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	0.6	8.8	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.6	8.8	0.0
Approach LOS			A	A

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	39	5	2	300	224	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	5	2	326	243	25
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	600	262	272			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	600	262	272			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	99	100			
cM capacity (veh/h)	457	773	1286			

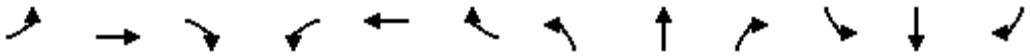
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	48	328	268
Volume Left	42	2	0
Volume Right	5	0	25
cSH	480	1286	1700
Volume to Capacity	0.10	0.00	0.16
Queue Length 95th (ft)	8	0	0
Control Delay (s)	13.3	0.1	0.0
Lane LOS	B	A	
Approach Delay (s)	13.3	0.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	73	3	6	0	14	122	12	17	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	79	3	7	0	15	133	13	18	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	20			11			191	191	12	328	188	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			11			191	191	12	328	188	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	98	88	97	97	100
cM capacity (veh/h)	1583			1606			715	662	1065	508	664	1045

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	89	148	32
Volume Left	1	79	0	13
Volume Right	1	7	133	0
cSH	1583	1606	1002	590
Volume to Capacity	0.00	0.05	0.15	0.05
Queue Length 95th (ft)	0	4	13	4
Control Delay (s)	0.8	6.6	9.2	11.5
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	6.6	9.2	11.5
Approach LOS			A	B

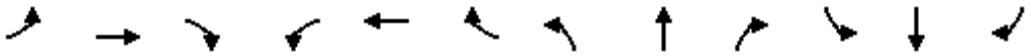
Intersection Summary			
Average Delay	8.3		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	133	19	12	81	11	5	1	23	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	3	145	21	13	88	12	5	1	25	5	0	1
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	117			171			295	310	168	331	315	117
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	117			171			295	310	168	331	315	117
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	100	97	99	100	100
cM capacity (veh/h)	1451			1399			635	586	867	578	583	917

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	168	113	32	7
Volume Left	3	13	5	5
Volume Right	21	12	25	1
cSH	1451	1399	803	616
Volume to Capacity	0.00	0.01	0.04	0.01
Queue Length 95th (ft)	0	1	3	1
Control Delay (s)	0.2	0.9	9.7	10.9
Lane LOS	A	A	A	B
Approach Delay (s)	0.2	0.9	9.7	10.9
Approach LOS			A	B

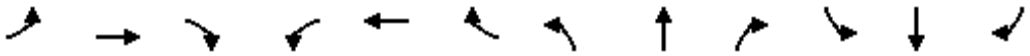
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	24.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	87	66	22	34	49	15	17	185	40	48	186	36
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
Hourly flow rate (vph)	95	72	24	37	53	16	18	201	43	52	202	39

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	190	107	263	293
Volume Left (vph)	95	37	18	52
Volume Right (vph)	24	16	43	39
Hadj (s)	0.06	0.01	-0.05	-0.01
Departure Headway (s)	5.6	5.7	5.2	5.2
Degree Utilization, x	0.30	0.17	0.38	0.42
Capacity (veh/h)	582	549	645	657
Control Delay (s)	11.0	9.9	11.3	11.9
Approach Delay (s)	11.0	9.9	11.3	11.9
Approach LOS	B	A	B	B

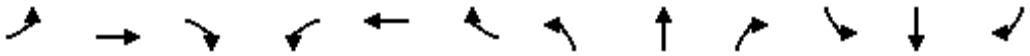
Intersection Summary				
Delay	11.2			
Level of Service	B			
Intersection Capacity Utilization	51.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	109	37	29	48	127	12	430	22	60	409	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1666			1530	1252	1676	1747		1676	1741	
Flt Permitted		0.93			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1563			1323	1252	1676	1747		1676	1741	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	41	131	45	33	55	144	12	448	23	71	481	36
RTOR Reduction (vph)	0	19	0	0	0	115	0	2	0	0	3	0
Lane Group Flow (vph)	0	198	0	0	88	29	12	469	0	71	514	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		12.1			12.1	12.1	1.6	29.2		5.2	32.8	
Effective Green, g (s)		11.6			11.6	11.6	1.1	29.7		4.7	33.3	
Actuated g/C Ratio		0.20			0.20	0.20	0.02	0.51		0.08	0.57	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		312			264	250	31	894		135	999	
v/s Ratio Prot							0.01	0.27		c0.04	c0.30	
v/s Ratio Perm		c0.13			0.07	0.02						
v/c Ratio		0.63			0.33	0.12	0.39	0.52		0.53	0.51	
Uniform Delay, d1		21.3			19.9	19.0	28.1	9.4		25.6	7.5	
Progression Factor		1.00			1.00	1.00	1.22	0.98		1.00	1.00	
Incremental Delay, d2		3.1			0.3	0.1	7.0	2.0		3.7	1.9	
Delay (s)		24.3			20.2	19.1	41.2	11.2		29.2	9.4	
Level of Service		C			C	B	D	B		C	A	
Approach Delay (s)		24.3			19.5			11.9			11.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

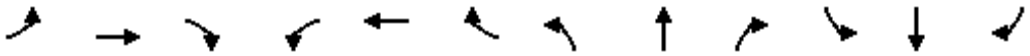
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	559	184	156	529	46	278	176	124	62	171	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3056		1676	3353	1402	1676	1843			1530	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3056		1676	3353	1402	1676	1843			1530	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	21	614	202	164	557	48	335	212	149	64	176	16
RTOR Reduction (vph)	0	25	0	0	0	28	0	22	0	0	2	0
Lane Group Flow (vph)	21	791	0	164	557	20	335	339	0	0	254	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	3.3	36.4		14.5	47.6	47.6	25.4	25.4			23.2	
Effective Green, g (s)	3.8	37.4		15.0	48.6	48.6	24.9	24.9			22.7	
Actuated g/C Ratio	0.03	0.32		0.13	0.42	0.42	0.21	0.21			0.20	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	54	985		216	1404	587	359	395			299	
v/s Ratio Prot	0.01	c0.26		c0.10	0.17		c0.20	0.18			c0.17	
v/s Ratio Perm						0.01						
v/c Ratio	0.39	0.80		0.76	0.40	0.03	0.93	0.86			0.85	
Uniform Delay, d1	55.0	35.9		48.8	23.5	19.9	44.7	43.9			45.0	
Progression Factor	1.00	1.00		1.51	0.50	0.11	1.00	1.00			1.00	
Incremental Delay, d2	3.4	6.9		12.7	0.8	0.1	30.7	16.5			19.2	
Delay (s)	58.3	42.8		86.2	12.6	2.4	75.5	60.3			64.2	
Level of Service	E	D		F	B	A	E	E			E	
Approach Delay (s)		43.2			27.6			67.6			64.2	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

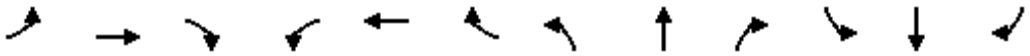
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	629	87	108	597	147	77	273	83	114	324	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3208		1676	3353	1364	1676	1765	1440	1676	1739	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3208		1676	3353	1364	1676	1765	1440	1676	1739	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	669	93	110	609	150	80	284	86	120	341	29
RTOR Reduction (vph)	0	8	0	0	0	66	0	0	67	0	3	0
Lane Group Flow (vph)	46	754	0	110	609	84	80	284	19	120	367	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	47.8		12.3	51.7	51.7	8.3	25.6	25.6	13.6	30.9	
Effective Green, g (s)	7.9	47.8		11.8	51.7	51.7	7.8	25.1	25.1	13.1	30.4	
Actuated g/C Ratio	0.07	0.41		0.10	0.45	0.45	0.07	0.22	0.22	0.11	0.26	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1321		170	1494	607	112	381	311	189	455	
v/s Ratio Prot	0.03	c0.23		c0.07	0.18		0.05	0.16		c0.07	c0.21	
v/s Ratio Perm						0.06			0.01			
v/c Ratio	0.40	0.57		0.65	0.41	0.14	0.71	0.75	0.06	0.63	0.81	
Uniform Delay, d1	51.8	26.2		50.1	21.8	19.0	53.0	42.5	36.1	49.2	40.1	
Progression Factor	0.64	0.50		1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.96	
Incremental Delay, d2	1.0	1.0		7.3	0.8	0.5	18.2	7.3	0.1	5.4	8.9	
Delay (s)	33.9	14.1		57.4	22.6	19.5	71.2	49.8	36.1	54.2	47.6	
Level of Service	C	B		E	C	B	E	D	D	D	D	
Approach Delay (s)		15.3			26.5			51.0			49.2	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

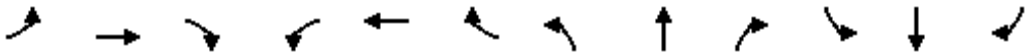
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	741	79	67	774	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3122		1676	3177			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3122		1676	3177			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	756	81	69	798	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	831	0	69	847	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1211		121	1366			376	324		309	
v/s Ratio Prot	0.01	c0.27		c0.04	0.27			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.69		0.57	0.62			0.92	0.36		0.76	
Uniform Delay, d1	55.3	29.6		52.1	25.7			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.15	0.35			1.00	1.00		1.00	
Incremental Delay, d2	4.4	3.2		2.3	0.9			27.3	0.5		9.6	
Delay (s)	59.7	32.8		62.2	9.8			71.6	38.5		54.7	
Level of Service	E	C		E	A			E	D		D	
Approach Delay (s)		33.5			13.8			55.6			54.7	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

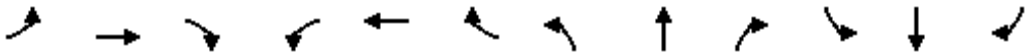
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	613	269	56	465	183	337	842	32	215	850	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	3046		1676	3115		3252	3244		1676	3220	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	3046		1676	3115		3252	3244		1676	3220	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	639	280	67	554	218	355	886	34	231	914	97
RTOR Reduction (vph)	0	42	0	0	36	0	0	2	0	0	7	0
Lane Group Flow (vph)	220	877	0	67	736	0	355	918	0	231	1004	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.0	38.0		8.8	27.8		16.0	37.5		18.5	39.0	
Effective Green, g (s)	19.0	38.0		8.8	27.8		17.0	38.5		18.5	40.0	
Actuated g/C Ratio	0.16	0.33		0.08	0.24		0.15	0.33		0.16	0.34	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	274	997		127	746		476	1076		267	1110	
v/s Ratio Prot	0.13	c0.29		0.04	c0.24		0.11	c0.28		0.14	c0.31	
v/s Ratio Perm												
v/c Ratio	0.80	0.88		0.53	0.99		0.75	0.85		0.87	0.90	
Uniform Delay, d1	46.7	36.8		51.6	43.9		47.4	36.1		47.5	36.2	
Progression Factor	0.65	0.54		1.00	1.00		1.00	1.00		1.07	0.64	
Incremental Delay, d2	11.5	7.0		1.8	29.3		5.5	8.6		22.1	11.1	
Delay (s)	41.7	26.7		53.4	73.3		52.9	44.7		72.8	34.2	
Level of Service	D	C		D	E		D	D		E	C	
Approach Delay (s)		29.6			71.7			47.0			41.4	
Approach LOS		C			E			D			D	

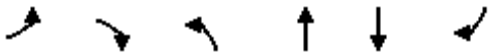
Intersection Summary			
HCM 2000 Control Delay	45.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	10	123	5	3	10	60	1136	11	2	1000	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.99	
Flpb, ped/bikes		0.95	1.00		0.99		0.97	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1627	3340			3271	
Flt Permitted		0.72	1.00		0.90		0.22	1.00			0.95	
Satd. Flow (perm)		1215	1360		1409		371	3340			3120	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	270	12	152	13	8	26	65	1222	12	2	1020	72
RTOR Reduction (vph)	0	0	79	0	19	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	282	73	0	28	0	65	1233	0	0	1090	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.5	29.5		29.0		79.5	79.5			79.5	
Effective Green, g (s)		29.5	29.5		29.5		80.5	80.5			80.5	
Actuated g/C Ratio		0.25	0.25		0.25		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		308	345		358		257	2317			2165	
v/s Ratio Prot								c0.37				
v/s Ratio Perm		c0.23	0.05		0.02		0.18				0.35	
v/c Ratio		0.92	0.21		0.08		0.25	0.53			0.50	
Uniform Delay, d1		42.0	34.1		32.9		6.6	8.6			8.3	
Progression Factor		1.00	1.00		1.00		0.51	0.50			2.06	
Incremental Delay, d2		29.8	0.1		0.0		1.2	0.4			0.8	
Delay (s)		71.8	34.2		32.9		4.5	4.7			17.9	
Level of Service		E	C		C		A	A			B	
Approach Delay (s)		58.6			32.9			4.7			17.9	
Approach LOS		E			C			A			B	

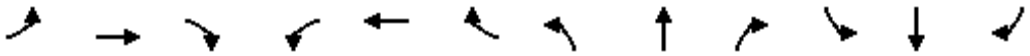
Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	55	105	134	1241	1028	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1561		1622	3279	3323	
Flt Permitted	0.98		0.24	1.00	1.00	
Satd. Flow (perm)	1561		404	3279	3323	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	62	119	143	1320	1049	26
RTOR Reduction (vph)	67	0	0	0	1	0
Lane Group Flow (vph)	114	0	143	1320	1074	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	294		306	2490	2523	
v/s Ratio Prot	c0.07			c0.40	0.32	
v/s Ratio Perm			0.35			
v/c Ratio	0.39		0.47	0.53	0.43	
Uniform Delay, d1	41.2		5.2	5.6	5.0	
Progression Factor	1.00		0.66	0.57	1.00	
Incremental Delay, d2	0.3		4.2	0.7	0.5	
Delay (s)	41.5		7.6	3.9	5.5	
Level of Service	D		A	A	A	
Approach Delay (s)	41.5			4.2	5.5	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

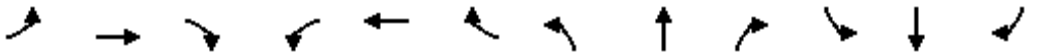
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	22	102	10	15	9	54	1260	22	19	1018	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1703	1424		1660		1676	3334		1676	3319	
Flt Permitted		0.80	1.00		0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1408	1424		1545		1676	3334		1676	3319	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	72	27	124	16	23	14	59	1385	24	20	1060	47
RTOR Reduction (vph)	0	0	104	0	12	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	99	20	0	41	0	59	1408	0	20	1105	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.6	18.6		18.6		13.2	82.5		4.4	73.7	
Effective Green, g (s)		19.1	19.1		19.1		13.2	83.5		4.4	74.7	
Actuated g/C Ratio		0.16	0.16		0.16		0.11	0.72		0.04	0.64	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		231	234		254		190	2399		63	2137	
v/s Ratio Prot							0.04	c0.42		0.01	c0.33	
v/s Ratio Perm		c0.07	0.01		0.03							
v/c Ratio		0.43	0.09		0.16		0.31	0.59		0.32	0.52	
Uniform Delay, d1		43.5	41.1		41.6		47.2	7.9		54.3	11.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		0.1		0.3	1.1		1.1	0.9	
Delay (s)		44.0	41.1		41.7		47.6	8.9		55.4	11.9	
Level of Service		D	D		D		D	A		E	B	
Approach Delay (s)		42.4			41.7			10.5			12.7	
Approach LOS		D			D			B			B	

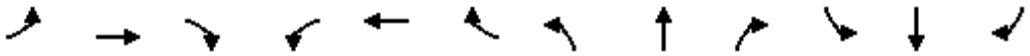
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	266	153	0	369	1192	0	0	0	756	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.95			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3099			2834	1365				2515		1430
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3099			2834	1365				2515		1430
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	277	159	0	377	1216	0	0	0	822	0	175
RTOR Reduction (vph)	0	62	0	0	185	462	0	0	0	0	0	107
Lane Group Flow (vph)	106	374	0	0	678	268	0	0	0	822	0	68
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	61.9			41.9	41.9				43.6		43.6
Effective Green, g (s)	16.0	61.9			41.9	41.9				44.1		44.1
Actuated g/C Ratio	0.14	0.54			0.37	0.37				0.39		0.39
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1682			1041	501				972		553
v/s Ratio Prot	c0.06	0.12			c0.24	0.20				c0.33		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.22			0.65	0.54				0.85		0.12
Uniform Delay, d1	45.0	13.5			30.0	28.4				31.8		22.5
Progression Factor	1.00	1.00			0.85	3.98				1.00		1.00
Incremental Delay, d2	0.5	0.3			2.6	0.9				6.8		0.1
Delay (s)	45.5	13.8			28.1	114.0				38.6		22.6
Level of Service	D	B			C	F				D		C
Approach Delay (s)		20.0			67.5			0.0			35.8	
Approach LOS		C			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



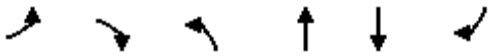
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	947	0	0	1119	472	452	58	935	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.93	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1402	1593	1407	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1402	1593	1407	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1029	0	0	1216	513	466	60	964	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	262	0	88	38	0	0	0
Lane Group Flow (vph)	92	1029	0	0	1216	251	419	453	492	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	60.0			55.8	55.8	37.8	37.8	46.0			
Effective Green, g (s)	8.4	60.0			55.8	55.8	37.8	37.8	46.0			
Actuated g/C Ratio	0.07	0.53			0.49	0.49	0.33	0.33	0.40			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2535			2358	686	528	466	575			
v/s Ratio Prot	c0.05	0.21			c0.25		0.26	c0.32	c0.35			
v/s Ratio Perm						0.18						
v/c Ratio	0.75	0.41			0.52	0.37	0.79	0.97	0.86			
Uniform Delay, d1	51.8	16.3			19.9	18.1	34.6	37.6	31.0			
Progression Factor	1.39	0.29			0.86	0.89	1.00	1.00	1.00			
Incremental Delay, d2	16.1	0.4			0.6	1.2	8.0	34.5	12.0			
Delay (s)	88.0	5.1			17.6	17.2	42.6	72.1	43.0			
Level of Service	F	A			B	B	D	E	D			
Approach Delay (s)		11.9			17.5			53.4			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



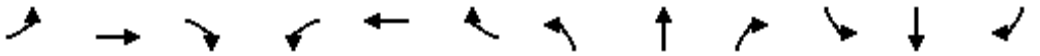
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	879	66	279	156	42	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	3216		3353	1427		3323
Flt Permitted	0.96		1.00	1.00		0.86
Satd. Flow (perm)	3216		3353	1427		2893
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	906	68	321	179	49	321
RTOR Reduction (vph)	7	0	0	80	0	0
Lane Group Flow (vph)	967	0	321	99	0	370
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	43.0		63.8	63.8		63.8
Effective Green, g (s)	42.5		63.3	63.3		63.3
Actuated g/C Ratio	0.37		0.56	0.56		0.56
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1198		1861	792		1606
v/s Ratio Prot	c0.30		0.10			
v/s Ratio Perm				0.07		c0.13
v/c Ratio	0.81		0.17	0.13		0.23
Uniform Delay, d1	32.1		12.5	12.1		12.9
Progression Factor	0.29		0.25	0.00		1.00
Incremental Delay, d2	3.4		0.2	0.3		0.3
Delay (s)	12.5		3.3	0.3		13.3
Level of Service	B		A	A		B
Approach Delay (s)	12.5		2.2			13.3
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



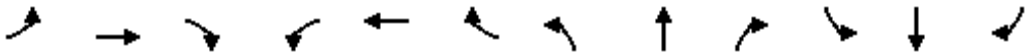
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	138	68	724	583	269	215
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	175	86	746	601	299	239
RTOR Reduction (vph)	0	36	0	0	0	204
Lane Group Flow (vph)	175	50	746	601	299	35
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	17.3	67.3	46.5	89.7	39.7	17.3
Effective Green, g (s)	16.8	66.8	46.0	89.2	39.2	16.8
Actuated g/C Ratio	0.15	0.59	0.40	0.78	0.34	0.15
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	878	1312	1381	606	221
v/s Ratio Prot	c0.10	0.03	c0.23	0.34	c0.17	0.02
v/s Ratio Perm						
v/c Ratio	0.71	0.06	0.57	0.44	0.49	0.16
Uniform Delay, d1	46.3	10.1	26.3	4.1	29.6	42.4
Progression Factor	1.39	5.87	0.51	0.13	1.00	1.00
Incremental Delay, d2	9.2	0.0	1.2	0.7	2.9	0.3
Delay (s)	73.7	59.3	14.7	1.2	32.4	42.8
Level of Service	E	E	B	A	C	D
Approach Delay (s)	68.9			8.7	37.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	515	1035	294	556	138	205	24	104	169	208	757
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.94	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2863	1365	1676	3353	1470	1593	1613	1444		1726	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2863	1365	1676	3353	1470	1593	1613	1444		1726	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	330	520	1045	363	686	170	220	26	112	172	212	772
RTOR Reduction (vph)	0	96	61	0	0	54	0	0	99	0	0	61
Lane Group Flow (vph)	330	790	618	363	686	116	123	123	13	0	384	711
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	916	592	249	1014	444	181	183	164		454	1169
v/s Ratio Prot	0.10	0.28	c0.45	c0.22	0.20		0.08	0.08			c0.22	0.27
v/s Ratio Perm						0.08			0.01			
v/c Ratio	0.57	0.86	1.04	1.46	0.68	0.26	0.68	0.67	0.08		0.85	0.61
Uniform Delay, d1	42.7	36.4	32.2	48.5	34.9	30.1	48.5	48.5	45.1		39.8	24.2
Progression Factor	0.93	0.73	0.67	0.70	0.60	0.44	1.00	1.00	1.00		0.68	0.36
Incremental Delay, d2	3.0	8.2	44.3	223.8	3.0	1.2	8.9	8.5	0.1		15.8	2.1
Delay (s)	42.6	34.8	66.0	257.7	23.8	14.4	57.4	57.0	45.3		42.8	10.9
Level of Service	D	C	E	F	C	B	E	E	D		D	B
Approach Delay (s)		47.3			92.1			53.4			21.5	
Approach LOS		D			F			D			C	

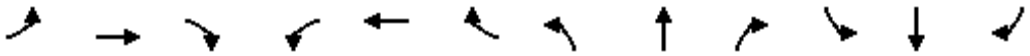
Intersection Summary			
HCM 2000 Control Delay	53.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	257	908	74	0	194	0	1035	71	0	344	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3306			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3306			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	268	946	77	0	202	0	1078	74	0	395	0
RTOR Reduction (vph)	0	0	617	0	0	183	0	4	0	0	0	0
Lane Group Flow (vph)	126	268	329	77	0	19	0	1148	0	0	395	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.6	15.6	40.6	11.2		11.2		52.4			27.6	
Effective Green, g (s)	14.6	14.6	39.6	10.7		10.7		51.9			27.1	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	195	411	781	157		138		1505			797	
v/s Ratio Prot	0.08	c0.08	0.15	c0.05				c0.35			0.12	
v/s Ratio Perm						0.01						
v/c Ratio	0.65	0.65	0.42	0.49		0.14		0.76			0.50	
Uniform Delay, d1	47.2	47.3	28.4	49.1		47.4		25.9			37.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.41			0.52	
Incremental Delay, d2	6.4	3.3	0.3	1.8		0.3		3.1			2.1	
Delay (s)	53.6	50.6	28.7	50.8		47.7		13.8			21.7	
Level of Service	D	D	C	D		D		B			C	
Approach Delay (s)		35.4			48.6			13.8			21.7	
Approach LOS		D			D			B			C	

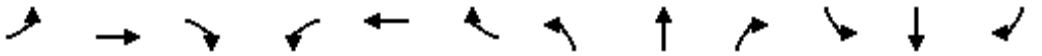
Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	106	1	161	15	948	134	221	1085	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2355	1458		1676	3353	1375	1676	3314	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1832	1458		1676	3353	1375	1676	3314	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	125	1	189	16	1030	146	235	1154	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	43	0	1	0
Lane Group Flow (vph)	0	28	1	125	28	0	16	1030	103	235	1179	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.5	16.5		4.2	57.2	57.2	20.3	73.3	
Effective Green, g (s)		4.0	4.0	16.5	16.5		3.7	57.7	57.7	19.8	73.8	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	265	211		54	1697	695	291	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.31		c0.14	0.36	
v/s Ratio Perm			0.00	c0.07					0.07			
v/c Ratio		0.47	0.02	0.47	0.13		0.30	0.61	0.15	0.81	0.55	
Uniform Delay, d1		54.0	53.1	44.7	42.5		53.9	20.1	15.0	45.3	11.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.93	1.24	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.6	0.5	11.6	0.8	
Delay (s)		56.2	53.2	45.2	42.6		55.0	21.7	15.5	53.7	14.5	
Level of Service		E	D	D	D		D	C	B	D	B	
Approach Delay (s)		55.1			43.7			21.4			21.0	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	474	191	72	603	39	239	178	40	40	198	137
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3184		1676	3313		1676	1707		1667	1765	1479
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.61	1.00	1.00
Satd. Flow (perm)	1676	3184		1676	3313		1676	1707		1073	1765	1479
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	515	208	78	655	42	260	193	43	43	215	149
RTOR Reduction (vph)	0	38	0	0	4	0	0	7	0	0	0	92
Lane Group Flow (vph)	108	685	0	78	693	0	260	229	0	43	215	57
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	13.1	34.8		10.5	32.2		22.7	45.1		31.0	30.8	43.9
Effective Green, g (s)	13.1	34.8		10.5	32.2		22.7	45.1		31.0	30.8	43.9
Actuated g/C Ratio	0.11	0.31		0.09	0.28		0.20	0.40		0.27	0.27	0.39
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	971		154	935		333	675		335	476	569
v/s Ratio Prot	0.06	c0.22		0.05	c0.21		c0.16	0.13		0.01	c0.12	0.01
v/s Ratio Perm										0.03		0.03
v/c Ratio	0.56	0.71		0.51	0.74		0.78	0.34		0.13	0.45	0.10
Uniform Delay, d1	47.7	35.1		49.3	37.1		43.3	24.1		31.5	34.6	22.4
Progression Factor	0.77	1.06		1.00	1.00		1.00	1.14		1.00	1.00	1.00
Incremental Delay, d2	2.3	1.4		2.6	3.2		11.2	1.4		0.2	3.1	0.1
Delay (s)	39.0	38.4		51.9	40.3		54.4	28.8		31.6	37.7	22.5
Level of Service	D	D		D	D		D	C		C	D	C
Approach Delay (s)		38.5			41.5			42.2			31.5	
Approach LOS		D			D			D			C	

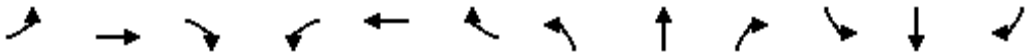
Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	505	0	0	661	0	29
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	549	0	0	718	0	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			549		908	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			549		908	274
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			1017		275	723

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	274	274	359	359	32
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	32
cSH	1700	1700	1700	1700	723
Volume to Capacity	0.16	0.16	0.21	0.21	0.04
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	10.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.2
Approach LOS					B

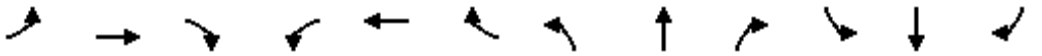
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	23	0	9	0	59	23	4	40	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
Hourly flow rate (vph)	1	0	0	25	0	10	0	64	25	4	43	0

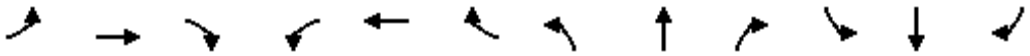
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	25	10	0	89	48
Volume Left (vph)	1	25	0	0	0	4
Volume Right (vph)	0	0	10	0	25	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.16	0.05
Departure Headway (s)	5.1	5.4	4.2	4.6	4.5	4.7
Degree Utilization, x	0.00	0.04	0.01	0.00	0.11	0.06
Capacity (veh/h)	680	643	828	780	789	749
Control Delay (s)	8.1	7.4	6.0	6.4	6.8	8.1
Approach Delay (s)	8.1	7.0		6.8		8.1
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.2			
Level of Service	A			
Intersection Capacity Utilization	15.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	4	7	11	6	36	9	387	20	46	399	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.96		1.00	0.98			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	0.90		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1676	1532		1672	1506			3320			1755	1473
Flt Permitted	0.73	1.00		0.75	1.00			0.95			0.93	1.00
Satd. Flow (perm)	1283	1532		1320	1506			3147			1641	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	4	8	12	7	39	10	421	22	50	434	22
RTOR Reduction (vph)	0	7	0	0	33	0	0	3	0	0	0	3
Lane Group Flow (vph)	30	5	0	12	13	0	0	450	0	0	484	19
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	184	220		189	216			2296			1197	1075
v/s Ratio Prot		0.00			0.01							
v/s Ratio Perm	c0.02			0.01				0.14			c0.29	0.01
v/c Ratio	0.16	0.02		0.06	0.06			0.20			0.40	0.02
Uniform Delay, d1	21.4	21.0		21.1	21.1			2.4			3.0	2.1
Progression Factor	1.00	1.00		1.00	1.00			0.48			0.96	0.87
Incremental Delay, d2	0.3	0.0		0.1	0.1			0.2			0.9	0.0
Delay (s)	21.7	21.0		21.2	21.1			1.3			3.7	1.9
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		21.5			21.2			1.3			3.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



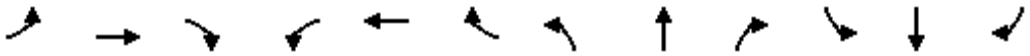
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	1	0	4	0	78	7	4	63	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1	0	4	0	85	8	4	68	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	5	92	73
Volume Left (vph)	0	1	0	4
Volume Right (vph)	0	4	8	0
Hadj (s)	0.00	-0.41	-0.02	0.05
Departure Headway (s)	4.3	3.8	4.0	4.0
Degree Utilization, x	0.00	0.01	0.10	0.08
Capacity (veh/h)	819	894	892	882
Control Delay (s)	7.3	6.9	7.4	7.4
Approach Delay (s)	0.0	6.9	7.4	7.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.4			
Level of Service	A			
Intersection Capacity Utilization	17.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	3	1	13	1	59	3	344	20	69	343	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.85		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1687		1669	1446		1669	1747		1669	1764	
Flt Permitted	0.71	1.00		0.76	1.00		0.54	1.00		0.52	1.00	
Satd. Flow (perm)	1259	1687		1327	1446		947	1747		922	1764	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	3	1	14	1	64	3	374	22	75	373	1
RTOR Reduction (vph)	0	1	0	0	56	0	0	2	0	0	0	0
Lane Group Flow (vph)	10	3	0	14	9	0	3	394	0	75	374	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Effective Green, g (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	154	207		162	177		711	1311		692	1324	
v/s Ratio Prot		0.00			0.01			c0.23			0.21	
v/s Ratio Perm	0.01			c0.01			0.00			0.08		
v/c Ratio	0.06	0.02		0.09	0.05		0.00	0.30		0.11	0.28	
Uniform Delay, d1	22.1	22.0		22.2	22.1		1.8	2.3		1.9	2.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.24	1.67	
Incremental Delay, d2	0.1	0.0		0.1	0.0		0.0	0.6		0.3	0.5	
Delay (s)	22.2	22.0		22.2	22.1		1.8	2.9		2.7	4.3	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		22.1			22.1			2.9			4.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	0	0	0	0	86	1	1	66	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
Hourly flow rate (vph)	0	0	0	0	0	0	0	93	1	1	72	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	0	95	73
Volume Left (vph)	0	0	0	1
Volume Right (vph)	0	0	1	0
Hadj (s)	0.00	0.00	0.03	0.04
Departure Headway (s)	4.3	4.3	4.0	4.0
Degree Utilization, x	0.00	0.00	0.10	0.08
Capacity (veh/h)	819	819	886	887
Control Delay (s)	7.3	7.3	7.5	7.4
Approach Delay (s)	0.0	0.0	7.5	7.4
Approach LOS	A	A	A	A

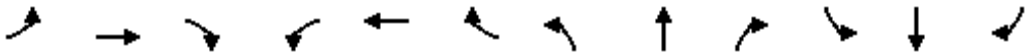
Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	16.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	11	2	85	26	3	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	2	92	28	3	71

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	14	121	74
Volume Left (vph)	12	0	3
Volume Right (vph)	2	28	0
Hadj (s)	0.11	-0.11	0.04
Departure Headway (s)	4.4	3.9	4.1
Degree Utilization, x	0.02	0.13	0.08
Capacity (veh/h)	777	906	870
Control Delay (s)	7.5	7.5	7.5
Approach Delay (s)	7.5	7.5	7.5
Approach LOS	A	A	A

Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	17.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	10	1	19	6	47	4	302	18	44	314	7
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
Hourly flow rate (vph)	21	11	1	21	7	51	4	328	20	48	341	8

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	33	78	352	397
Volume Left (vph)	21	21	4	48
Volume Right (vph)	1	51	20	8
Hadj (s)	0.14	-0.30	0.00	0.05
Departure Headway (s)	5.9	5.4	4.7	4.7
Degree Utilization, x	0.05	0.12	0.46	0.52
Capacity (veh/h)	519	579	743	745
Control Delay (s)	9.3	9.1	11.6	12.6
Approach Delay (s)	9.3	9.1	11.6	12.6
Approach LOS	A	A	B	B

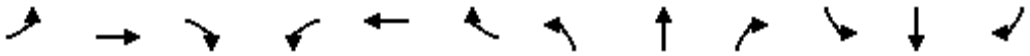
Intersection Summary				
Delay	11.7			
Level of Service	B			
Intersection Capacity Utilization	53.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	0	0	16	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	0	0	17	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9	9			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9	9			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1012	1073			1600	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	17	0
Volume Left	15	0	0
Volume Right	0	17	0
cSH	1012	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

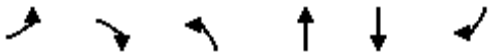
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	16	1	4	11	0	3	0	5	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	17	1	4	12	0	3	0	5	0	0	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	12			27			53	48	37	54	48	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	12			27			53	48	37	54	48	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	100	100	100
cM capacity (veh/h)	1607			1574			928	835	1019	924	835	1057

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	16	9	0
Volume Left	0	4	3	0
Volume Right	1	0	5	0
cSH	1607	1574	983	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	2.0	8.7	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.0	8.7	0.0
Approach LOS			A	A

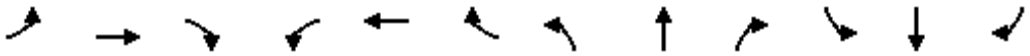
Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	18.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	18	7	2	89	59	16
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	8	2	97	64	17
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	185	86	90			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185	86	90			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	100			
cM capacity (veh/h)	796	962	1496			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	99	82
Volume Left	20	2	0
Volume Right	8	0	17
cSH	836	1496	1700
Volume to Capacity	0.03	0.00	0.05
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.4	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	0.2	0.0
Approach LOS	A		

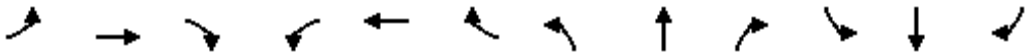
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	13	0	8	25	11	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	14	0	9	27	12	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			5			82	87	5	109	80	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			5			82	87	5	109	80	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	99	99	100
cM capacity (veh/h)	1588			1613			877	783	1077	821	790	1054

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	47	36	21
Volume Left	0	30	0	12
Volume Right	1	14	27	0
cSH	1588	1613	987	808
Volume to Capacity	0.00	0.02	0.04	0.03
Queue Length 95th (ft)	0	1	3	2
Control Delay (s)	0.0	4.8	8.8	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.8	8.8	9.6
Approach LOS			A	A

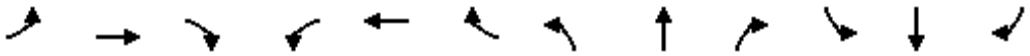
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	35	11	8	43	3	2	2	10	4	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	38	12	9	47	3	2	2	11	4	0	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	60			54			118	125	54	138	130	61
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	60			54			118	125	54	138	130	61
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	99	100	100
cM capacity (veh/h)	1531			1546			841	752	1005	801	748	993

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	59	15	5
Volume Left	0	9	2	4
Volume Right	12	3	11	1
cSH	1531	1546	934	833
Volume to Capacity	0.00	0.01	0.02	0.01
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	1.1	8.9	9.4
Lane LOS		A	A	A
Approach Delay (s)	0.0	1.1	8.9	9.4
Approach LOS			A	A

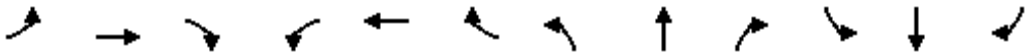
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	31	18	30	31	6	14	76	36	12	38	12
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
Hourly flow rate (vph)	8	34	20	33	34	7	15	83	39	13	41	13

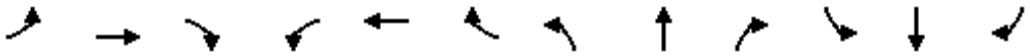
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	61	73	137	67
Volume Left (vph)	8	33	15	13
Volume Right (vph)	20	7	39	13
Hadj (s)	-0.13	0.07	-0.12	-0.04
Departure Headway (s)	4.3	4.5	4.2	4.3
Degree Utilization, x	0.07	0.09	0.16	0.08
Capacity (veh/h)	792	753	829	791
Control Delay (s)	7.6	7.9	8.0	7.7
Approach Delay (s)	7.6	7.9	8.0	7.7
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.8			
Level of Service	A			
Intersection Capacity Utilization	27.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	48	24	24	46	55	16	237	8	28	293	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1664			1728	1453	1676	1753		1676	1741	
Flt Permitted		0.90			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1524			1610	1453	1676	1753		1676	1741	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	52	26	26	50	60	17	258	9	30	318	23
RTOR Reduction (vph)	0	22	0	0	0	51	0	1	0	0	3	0
Lane Group Flow (vph)	0	85	0	0	76	9	17	266	0	30	338	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.6			8.6	8.6	1.6	34.7		3.2	36.3	
Effective Green, g (s)		8.6			8.6	8.6	1.6	34.7		3.2	36.3	
Actuated g/C Ratio		0.15			0.15	0.15	0.03	0.60		0.06	0.63	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		225			238	215	46	1048		92	1089	
v/s Ratio Prot							0.01	0.15		c0.02	c0.19	
v/s Ratio Perm		c0.06			0.05	0.01						
v/c Ratio		0.38			0.32	0.04	0.37	0.25		0.33	0.31	
Uniform Delay, d1		22.3			22.1	21.2	27.7	5.5		26.4	5.0	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			0.3	0.0	5.0	0.6		2.1	0.7	
Delay (s)		22.7			22.4	21.2	32.7	6.1		28.4	5.8	
Level of Service		C			C	C	C	A		C	A	
Approach Delay (s)		22.7			21.9			7.7			7.6	
Approach LOS		C			C			A			A	

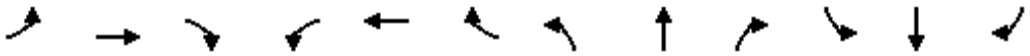
Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	777	255	206	681	17	274	82	201	15	55	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.89			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3020		1676	3353	1336	1676	1701			1469	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3020		1676	3353	1336	1676	1701			1469	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	23	827	271	226	748	19	298	89	218	18	66	28
RTOR Reduction (vph)	0	23	0	0	0	10	0	76	0	0	11	0
Lane Group Flow (vph)	23	1075	0	226	748	9	298	231	0	0	101	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	39.0		18.7	52.7	52.7	24.9	24.9			20.9	
Effective Green, g (s)	5.5	40.0		19.2	53.7	53.7	24.4	24.4			20.4	
Actuated g/C Ratio	0.05	0.33		0.16	0.45	0.45	0.20	0.20			0.17	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	76	1006		268	1500	597	340	345			249	
v/s Ratio Prot	0.01	c0.36		c0.13	0.22		c0.18	0.14			c0.07	
v/s Ratio Perm						0.01						
v/c Ratio	0.30	1.07		0.84	0.50	0.01	0.88	0.67			0.41	
Uniform Delay, d1	55.4	40.0		48.9	23.6	18.4	46.3	44.1			44.4	
Progression Factor	1.00	1.00		1.43	0.45	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.6	48.5		18.6	1.1	0.0	21.3	4.4			0.8	
Delay (s)	57.0	88.5		88.4	11.6	18.5	67.7	48.4			45.2	
Level of Service	E	F		F	B	B	E	D			D	
Approach Delay (s)		87.8			29.2			57.9			45.2	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	59.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

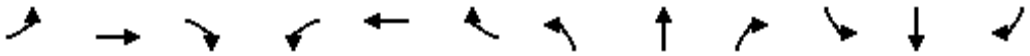
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	830	106	175	738	77	89	131	123	53	225	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.89	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3198		1676	3353	1271	1676	1765	1450	1676	1683	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3198		1676	3353	1271	1676	1765	1450	1676	1683	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	865	110	182	769	80	95	139	131	60	253	83
RTOR Reduction (vph)	0	7	0	0	0	43	0	0	98	0	10	0
Lane Group Flow (vph)	61	968	0	182	769	37	95	139	33	60	326	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.6		16.7	54.9	54.9	12.3	30.8	30.8	9.2	27.7	
Effective Green, g (s)	7.9	46.6		16.2	54.9	54.9	11.8	30.3	30.3	8.7	27.2	
Actuated g/C Ratio	0.07	0.39		0.13	0.46	0.46	0.10	0.25	0.25	0.07	0.23	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1241		226	1533	581	164	445	366	121	381	
v/s Ratio Prot	0.04	c0.30		c0.11	0.23		c0.06	c0.08		0.04	c0.19	
v/s Ratio Perm						0.03			0.02			
v/c Ratio	0.55	0.78		0.81	0.50	0.06	0.58	0.31	0.09	0.50	0.86	
Uniform Delay, d1	54.3	32.2		50.4	22.9	18.2	51.7	36.4	34.3	53.5	44.5	
Progression Factor	0.55	0.39		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	1.4		18.0	1.2	0.2	4.0	0.3	0.1	2.3	16.7	
Delay (s)	31.2	14.1		68.4	24.1	18.4	55.8	36.7	34.4	55.9	61.2	
Level of Service	C	B		E	C	B	E	D	C	E	E	
Approach Delay (s)		15.1			31.5			40.8			60.4	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

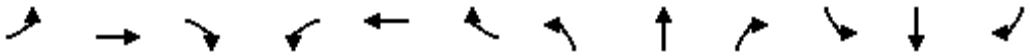
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	967	80	117	960	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3141		1676	3183			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3141		1676	3183			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	1051	87	121	990	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1134	0	121	1037	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1361		173	1668			310	266		245	
v/s Ratio Prot	0.01	c0.36		c0.07	0.33			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.83		0.70	0.62			0.84	0.12		0.49	
Uniform Delay, d1	58.9	30.2		52.0	20.2			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.36			1.00	1.00		1.00	
Incremental Delay, d2	13.6	6.1		5.1	0.8			17.4	0.1		1.1	
Delay (s)	72.5	36.3		64.1	8.0			64.8	40.8		48.2	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		36.6			13.9			55.3			48.2	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		

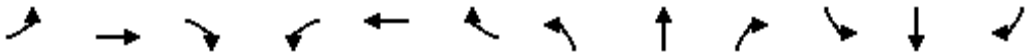
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	600	375	49	447	161	495	568	30	162	660	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	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	1.00	
Frt	1.00	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2951		1676	3160		3252	3235		1676	3112	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2951		1676	3160		3252	3235		1676	3112	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	659	412	59	539	194	556	638	34	174	710	197
RTOR Reduction (vph)	0	79	0	0	32	0	0	3	0	0	21	0
Lane Group Flow (vph)	160	992	0	59	702	0	556	669	0	174	886	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.9	41.1		8.8	30.0		21.0	41.5		15.4	34.9	
Effective Green, g (s)	19.9	41.1		8.8	30.0		22.0	42.5		15.4	35.9	
Actuated g/C Ratio	0.17	0.34		0.07	0.25		0.18	0.35		0.13	0.30	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	277	1010		122	790		596	1145		215	931	
v/s Ratio Prot	0.10	c0.34		0.04	c0.22		c0.17	0.21		0.10	c0.28	
v/s Ratio Perm												
v/c Ratio	0.58	0.98		0.48	0.89		0.93	0.58		0.81	0.95	
Uniform Delay, d1	46.2	39.1		53.4	43.4		48.3	31.6		50.9	41.2	
Progression Factor	0.51	0.36		1.00	1.00		1.00	1.00		0.92	0.91	
Incremental Delay, d2	1.1	18.3		1.1	11.5		21.5	2.2		18.2	19.0	
Delay (s)	24.9	32.3		54.5	54.9		69.7	33.7		64.9	56.7	
Level of Service	C	C		D	D		E	C		E	E	
Approach Delay (s)		31.4			54.9			50.0			58.0	
Approach LOS		C			D			D			E	

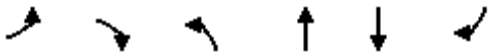
Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	0	91	8	2	1	94	839	5	1	906	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.96	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1617	3346			3265	
Flt Permitted		0.80	1.00		0.82		0.25	1.00			0.95	
Satd. Flow (perm)		1387	1410		1384		433	3346			3117	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	104	0	96	17	4	2	102	912	5	1	964	78
RTOR Reduction (vph)	0	0	82	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	104	14	0	21	0	102	917	0	0	1040	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.3	17.3		16.8		95.7	95.7			95.7	
Effective Green, g (s)		17.3	17.3		17.3		96.7	96.7			96.7	
Actuated g/C Ratio		0.14	0.14		0.14		0.81	0.81			0.81	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		199	203		199		348	2696			2511	
v/s Ratio Prot								0.27				
v/s Ratio Perm		c0.07	0.01		0.02		0.24				c0.33	
v/c Ratio		0.52	0.07		0.11		0.29	0.34			0.41	
Uniform Delay, d1		47.5	44.4		44.6		3.0	3.1			3.4	
Progression Factor		1.00	1.00		1.00		0.52	0.56			1.00	
Incremental Delay, d2		1.1	0.1		0.1		1.7	0.3			0.5	
Delay (s)		48.7	44.4		44.7		3.3	2.0			3.9	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.6			44.7			2.1			3.9	
Approach LOS		D			D			A			A	

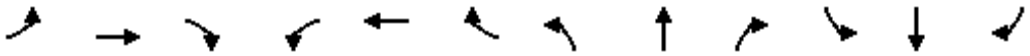
Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	19	50	86	866	949	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.98	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1555		1638	3279	3337	
Flt Permitted	0.99		0.26	1.00	1.00	
Satd. Flow (perm)	1555		440	3279	3337	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	25	66	92	931	989	16
RTOR Reduction (vph)	53	0	0	0	1	0
Lane Group Flow (vph)	38	0	92	931	1004	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	309		326	2429	2472	
v/s Ratio Prot	c0.02			0.28	c0.30	
v/s Ratio Perm			0.21			
v/c Ratio	0.12		0.28	0.38	0.41	
Uniform Delay, d1	32.9		4.2	4.7	4.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		2.2	0.5	0.5	
Delay (s)	33.0		6.4	5.1	5.3	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.3	5.3	
Approach LOS	C			A	A	

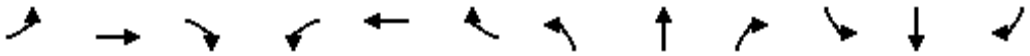
Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	5	50	13	4	11	29	846	8	22	934	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1690	1461		1611		1676	3346		1676	3338	
Flt Permitted		0.76	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1337	1461		1452		1676	3346		1676	3338	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	45	6	64	17	5	14	31	891	8	24	1015	23
RTOR Reduction (vph)	0	0	56	0	12	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	51	8	0	24	0	31	899	0	24	1037	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		7.8	73.1		4.4	69.7	
Effective Green, g (s)		12.5	12.5		12.5		7.8	74.1		4.4	70.7	
Actuated g/C Ratio		0.12	0.12		0.12		0.08	0.74		0.04	0.71	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		167	182		181		130	2479		73	2359	
v/s Ratio Prot							0.02	c0.27		0.01	c0.31	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.31	0.04		0.13		0.24	0.36		0.33	0.44	
Uniform Delay, d1		39.8	38.5		38.9		43.3	4.6		46.4	6.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		0.1		0.3	0.4		1.0	0.6	
Delay (s)		40.2	38.5		39.0		43.7	5.0		47.3	6.8	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		39.3			39.0			6.3			7.7	
Approach LOS		D			D			A			A	

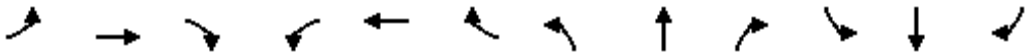
Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	100	5	27	5	132	49	10	88	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
Hourly flow rate (vph)	1	1	1	109	5	29	5	143	53	11	96	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	111	32	5	197	108
Volume Left (vph)	1	109	0	5	0	11
Volume Right (vph)	1	0	29	0	53	1
Hadj (s)	-0.10	0.52	-0.61	0.53	-0.16	0.05
Departure Headway (s)	5.4	5.8	4.7	5.6	4.9	5.2
Degree Utilization, x	0.00	0.18	0.04	0.01	0.27	0.16
Capacity (veh/h)	614	587	723	625	715	662
Control Delay (s)	8.4	8.9	6.7	7.4	8.4	9.2
Approach Delay (s)	8.4	8.4		8.4		9.2
Approach LOS	A	A		A		A

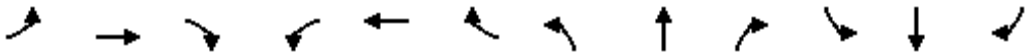
Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	33.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	26	0	7	0	178	37	11	169	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
Hourly flow rate (vph)	0	0	0	28	0	8	0	193	40	12	184	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	36	234	196
Volume Left (vph)	0	28	0	12
Volume Right (vph)	0	8	40	0
Hadj (s)	0.00	0.06	-0.07	0.05
Departure Headway (s)	4.9	4.9	4.1	4.3
Degree Utilization, x	0.00	0.05	0.27	0.23
Capacity (veh/h)	676	670	854	818
Control Delay (s)	7.9	8.1	8.6	8.6
Approach Delay (s)	0.0	8.1	8.6	8.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	30.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	21	0	0	3	26	192	0	0	121	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	50	0	23	0	0	3	28	209	0	0	132	54
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	428	424	159	447	451	210	186			209		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	428	424	159	447	451	210	186			209		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	100	97	100	100	100	98			100		
cM capacity (veh/h)	526	511	887	501	494	830	1389			1362		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	3	237	186
Volume Left	50	0	28	0
Volume Right	23	3	0	54
cSH	603	830	1389	1362
Volume to Capacity	0.12	0.00	0.02	0.00
Queue Length 95th (ft)	10	0	2	0
Control Delay (s)	11.8	9.4	1.1	0.0
Lane LOS	B	A	A	
Approach Delay (s)	11.8	9.4	1.1	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	42.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	26	29	192	39	17	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	32	209	42	18	139

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	60	251	158
Volume Left (vph)	28	0	18
Volume Right (vph)	32	42	0
Hadj (s)	-0.19	-0.07	0.06
Departure Headway (s)	4.6	4.1	4.4
Degree Utilization, x	0.08	0.29	0.19
Capacity (veh/h)	713	847	798
Control Delay (s)	8.0	8.8	8.4
Approach Delay (s)	8.0	8.8	8.4
Approach LOS	A	A	A

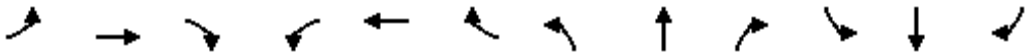
Intersection Summary			
Delay	8.6		
Level of Service	A		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	15	2	5	13	11	19
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	2	5	14	12	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57	12			20	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57	12			20	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			99	
cM capacity (veh/h)	943	1068			1597	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	18	20	33
Volume Left	16	0	12
Volume Right	2	14	0
cSH	956	1700	1597
Volume to Capacity	0.02	0.01	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	8.8	0.0	2.7
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	2.7
Approach LOS	A		

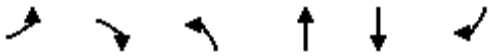
Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	19	3	20	16	5	2	15	7	8	23	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	21	3	22	17	5	2	16	8	9	25	2
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	23			29			113	98	27	106	97	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	23			29			113	98	27	106	97	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	98	99	99	97	100
cM capacity (veh/h)	1592			1578			824	777	1044	841	778	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	26	45	26	36
Volume Left	2	22	2	9
Volume Right	3	5	8	2
cSH	1592	1578	844	805
Volume to Capacity	0.00	0.01	0.03	0.04
Queue Length 95th (ft)	0	1	2	3
Control Delay (s)	0.6	3.6	9.4	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.6	3.6	9.4	9.7
Approach LOS			A	A

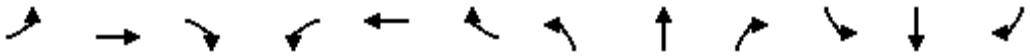
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	18.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	27	30	19	207	122	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	33	21	225	133	34
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	437	171	184			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	437	171	184			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	96	98			
cM capacity (veh/h)	558	856	1370			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	62	246	166
Volume Left	29	21	0
Volume Right	33	0	34
cSH	683	1370	1700
Volume to Capacity	0.09	0.02	0.10
Queue Length 95th (ft)	7	1	0
Control Delay (s)	10.8	0.8	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	0.8	0.0
Approach LOS	B		

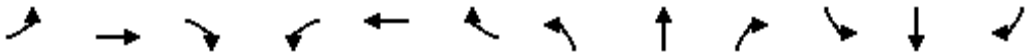
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	39	52	24	21	40	58	33	179	39	31	75	25
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
Hourly flow rate (vph)	42	57	26	23	43	63	36	195	42	34	82	27

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	125	129	273	142
Volume Left (vph)	42	23	36	34
Volume Right (vph)	26	63	42	27
Hadj (s)	-0.02	-0.22	-0.03	-0.03
Departure Headway (s)	5.1	4.9	4.7	4.9
Degree Utilization, x	0.18	0.18	0.36	0.19
Capacity (veh/h)	642	667	726	685
Control Delay (s)	9.2	8.9	10.3	9.0
Approach Delay (s)	9.2	8.9	10.3	9.0
Approach LOS	A	A	B	A

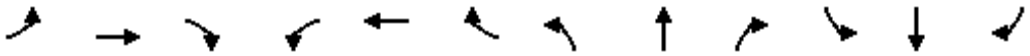
Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	36.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	260	74	106	247	99	82	127	54	29	72	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3153		1676	3353	1441	1676	1872			1526	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3153		1676	3353	1441	1676	1872			1526	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	30	286	81	112	260	104	99	153	65	30	74	9
RTOR Reduction (vph)	0	21	0	0	0	54	0	16	0	0	4	0
Lane Group Flow (vph)	30	346	0	112	260	50	99	202	0	0	109	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	39.4		10.5	44.9	44.9	13.9	13.9			14.7	
Effective Green, g (s)	5.5	40.4		11.0	45.9	45.9	13.4	13.4			14.2	
Actuated g/C Ratio	0.06	0.43		0.12	0.48	0.48	0.14	0.14			0.15	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	97	1340		194	1620	696	236	264			228	
v/s Ratio Prot	0.02	c0.11		c0.07	0.08		0.06	c0.11			c0.07	
v/s Ratio Perm						0.03						
v/c Ratio	0.31	0.26		0.58	0.16	0.07	0.42	0.76			0.48	
Uniform Delay, d1	42.9	17.6		39.8	13.8	13.1	37.2	39.3			37.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.3	0.5		3.4	0.2	0.2	0.9	11.8			1.1	
Delay (s)	44.3	18.1		43.2	14.0	13.3	38.1	51.1			38.1	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		20.1			20.7			47.1			38.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

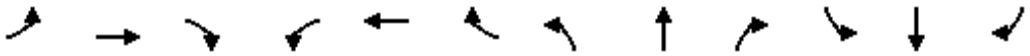
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	101	5	27	5	133	49	10	88	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
Hourly flow rate (vph)	1	1	1	110	5	29	5	145	53	11	96	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	113	32	5	198	108
Volume Left (vph)	1	110	0	5	0	11
Volume Right (vph)	1	0	29	0	53	1
Hadj (s)	-0.10	0.52	-0.61	0.53	-0.15	0.05
Departure Headway (s)	5.4	5.8	4.7	5.6	4.9	5.2
Degree Utilization, x	0.00	0.18	0.04	0.01	0.27	0.16
Capacity (veh/h)	613	586	722	624	715	662
Control Delay (s)	8.4	8.9	6.7	7.4	8.4	9.2
Approach Delay (s)	8.4	8.4		8.4		9.2
Approach LOS	A	A		A		A

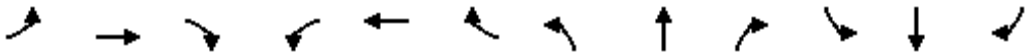
Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	33.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	28	0	7	0	180	43	11	170	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
Hourly flow rate (vph)	0	0	0	30	0	8	0	196	47	12	185	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	38	242	197
Volume Left (vph)	0	30	0	12
Volume Right (vph)	0	8	47	0
Hadj (s)	0.00	0.07	-0.08	0.05
Departure Headway (s)	4.9	4.9	4.1	4.3
Degree Utilization, x	0.00	0.05	0.28	0.23
Capacity (veh/h)	671	665	854	815
Control Delay (s)	7.9	8.2	8.7	8.6
Approach Delay (s)	0.0	8.2	8.7	8.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	30.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	0	27	0	0	3	28	189	0	0	121	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	62	0	29	0	0	3	30	205	0	0	132	57
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	430	426	160	455	454	206	188			205		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	430	426	160	455	454	206	188			205		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	100	97	100	100	100	98			100		
cM capacity (veh/h)	524	509	885	490	491	833	1386			1366		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	91	3	236	188
Volume Left	62	0	30	0
Volume Right	29	3	0	57
cSH	603	833	1386	1366
Volume to Capacity	0.15	0.00	0.02	0.00
Queue Length 95th (ft)	13	0	2	0
Control Delay (s)	12.0	9.3	1.2	0.0
Lane LOS	B	A	A	
Approach Delay (s)	12.0	9.3	1.2	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	43.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	26	30	190	36	18	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	33	207	39	20	145

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	61	246	164
Volume Left (vph)	28	0	20
Volume Right (vph)	33	39	0
Hadj (s)	-0.19	-0.06	0.06
Departure Headway (s)	4.6	4.2	4.4
Degree Utilization, x	0.08	0.28	0.20
Capacity (veh/h)	714	844	798
Control Delay (s)	8.0	8.8	8.4
Approach Delay (s)	8.0	8.8	8.4
Approach LOS	A	A	A

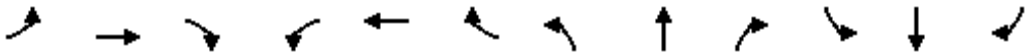
Intersection Summary			
Delay	8.6		
Level of Service	A		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	16	0	0	13	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	0	0	14	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	7	7			14	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	7	7			14	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1014	1075			1604	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	14	0
Volume Left	17	0	0
Volume Right	0	14	0
cSH	1014	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

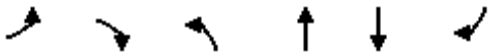
Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	8	2	20	15	6	1	17	7	11	33	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	9	2	22	16	7	1	18	8	12	36	3
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	23			16			106	85	15	94	83	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	23			16			106	85	15	94	83	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	98	99	99	95	100
cM capacity (veh/h)	1592			1595			823	789	1060	855	792	1052

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	13	45	27	51
Volume Left	2	22	1	12
Volume Right	2	7	8	3
cSH	1592	1595	852	819
Volume to Capacity	0.00	0.01	0.03	0.06
Queue Length 95th (ft)	0	1	2	5
Control Delay (s)	1.2	3.6	9.4	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	1.2	3.6	9.4	9.7
Approach LOS			A	A

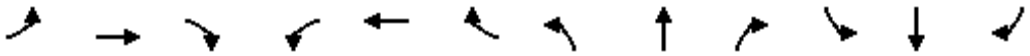
Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	28	19	208	127	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	30	21	226	138	33
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	443	176	189			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	443	176	189			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	96	98			
cM capacity (veh/h)	554	851	1365			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	53	247	171
Volume Left	23	21	0
Volume Right	30	0	33
cSH	692	1365	1700
Volume to Capacity	0.08	0.02	0.10
Queue Length 95th (ft)	6	1	0
Control Delay (s)	10.6	0.8	0.0
Lane LOS	B	A	
Approach Delay (s)	10.6	0.8	0.0
Approach LOS	B		

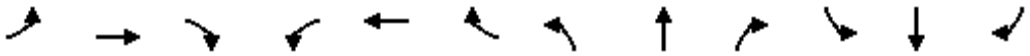
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	39	47	18	21	38	59	33	179	39	36	73	25
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
Hourly flow rate (vph)	42	51	20	23	41	64	36	195	42	39	79	27

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	113	128	273	146
Volume Left (vph)	42	23	36	39
Volume Right (vph)	20	64	42	27
Hadj (s)	0.01	-0.23	-0.03	-0.02
Departure Headway (s)	5.1	4.9	4.7	4.8
Degree Utilization, x	0.16	0.17	0.35	0.20
Capacity (veh/h)	638	671	732	691
Control Delay (s)	9.1	8.9	10.2	9.0
Approach Delay (s)	9.1	8.9	10.2	9.0
Approach LOS	A	A	B	A

Intersection Summary			
Delay	9.5		
Level of Service	A		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	260	74	106	247	99	82	127	54	25	70	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3153		1676	3353	1441	1676	1872			1531	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3153		1676	3353	1441	1676	1872			1531	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	30	286	81	112	260	104	99	153	65	26	72	7
RTOR Reduction (vph)	0	20	0	0	0	51	0	16	0	0	3	0
Lane Group Flow (vph)	30	347	0	112	260	53	99	202	0	0	102	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	41.6		10.5	47.1	47.1	13.9	13.9			12.5	
Effective Green, g (s)	5.5	42.6		11.0	48.1	48.1	13.4	13.4			12.0	
Actuated g/C Ratio	0.06	0.45		0.12	0.51	0.51	0.14	0.14			0.13	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	97	1413		194	1697	729	236	264			193	
v/s Ratio Prot	0.02	c0.11		c0.07	0.08		0.06	c0.11			c0.07	
v/s Ratio Perm						0.04						
v/c Ratio	0.31	0.25		0.58	0.15	0.07	0.42	0.76			0.53	
Uniform Delay, d1	42.9	16.2		39.8	12.6	12.0	37.2	39.3			38.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.3	0.4		3.4	0.2	0.2	0.9	11.8			2.0	
Delay (s)	44.3	16.7		43.2	12.7	12.2	38.1	51.1			40.8	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		18.7			19.8			47.1			40.8	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	424	399	0	462	1371	0	0	0	614	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3010			2853	1282				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3010			2853	1282				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	442	416	0	481	1428	0	0	0	667	0	273
RTOR Reduction (vph)	0	138	0	0	178	484	0	0	0	0	0	191
Lane Group Flow (vph)	95	720	0	0	874	373	0	0	0	667	0	82
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	71.6			49.6	49.6				33.9		33.9
Effective Green, g (s)	18.0	71.6			49.6	49.6				34.4		34.4
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1890			1241	557				758		435
v/s Ratio Prot	0.06	c0.24			c0.31					c0.27		
v/s Ratio Perm						0.29						0.06
v/c Ratio	0.36	0.38			0.70	0.67				0.88		0.19
Uniform Delay, d1	42.9	10.4			26.2	25.7				37.8		29.5
Progression Factor	1.00	1.00			0.44	6.33				1.00		1.00
Incremental Delay, d2	0.3	0.6			2.0	3.7				11.3		0.2
Delay (s)	43.2	11.0			13.5	166.0				49.1		29.6
Level of Service	D	B			B	F				D		C
Approach Delay (s)		14.2			81.9			0.0			43.5	
Approach LOS		B			F			A			D	

Intersection Summary			
HCM 2000 Control Delay	55.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	893	0	0	1343	387	491	289	789	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.94	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1510	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1510	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	930	0	0	1399	403	540	318	867	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	19	20	0	0	0
Lane Group Flow (vph)	153	930	0	0	1399	194	486	570	630	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	543	750			
v/s Ratio Prot	c0.09	0.19			c0.29		0.31	c0.38	c0.44			
v/s Ratio Perm						0.14						
v/c Ratio	0.58	0.48			0.77	0.37	0.85	1.05	0.84			
Uniform Delay, d1	44.5	25.1			31.2	25.7	33.7	36.5	22.9			
Progression Factor	0.78	0.48			0.70	0.50	1.00	1.00	1.00			
Incremental Delay, d2	6.9	0.6			2.3	1.4	11.3	52.6	8.2			
Delay (s)	41.6	12.7			24.1	14.2	45.0	89.1	31.1			
Level of Service	D	B			C	B	D	F	C			
Approach Delay (s)		16.8			21.9			54.8			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	531	78	338	99	43	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3189		3353	1455		3336
Flt Permitted	0.96		1.00	1.00		0.88
Satd. Flow (perm)	3189		3353	1455		2960
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	597	88	363	106	46	460
RTOR Reduction (vph)	10	0	0	56	0	0
Lane Group Flow (vph)	675	0	363	50	0	506
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1454		1582	686		1396
v/s Ratio Prot	c0.21		0.11			
v/s Ratio Perm				0.03		c0.17
v/c Ratio	0.46		0.23	0.07		0.36
Uniform Delay, d1	21.4		17.8	16.5		19.2
Progression Factor	0.46		0.19	0.01		1.00
Incremental Delay, d2	1.0		0.3	0.2		0.7
Delay (s)	11.0		3.6	0.3		19.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		2.8			19.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	81	64	441	472	174	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	100	79	479	513	198	169
RTOR Reduction (vph)	0	18	0	0	0	150
Lane Group Flow (vph)	100	61	479	513	198	19
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	13.3	87.9	71.1	93.7	19.1	13.3
Effective Green, g (s)	12.8	87.4	70.6	93.2	18.6	12.8
Actuated g/C Ratio	0.11	0.77	0.62	0.82	0.16	0.11
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1150	2013	1442	287	168
v/s Ratio Prot	c0.06	0.04	0.15	c0.29	c0.11	0.01
v/s Ratio Perm						
v/c Ratio	0.53	0.05	0.24	0.36	0.69	0.11
Uniform Delay, d1	47.8	3.2	9.7	2.7	45.0	45.5
Progression Factor	1.49	4.53	0.17	0.13	1.00	1.00
Incremental Delay, d2	2.9	0.0	0.2	0.6	6.8	0.3
Delay (s)	73.8	14.7	1.9	0.9	51.7	45.8
Level of Service	E	B	A	A	D	D
Approach Delay (s)	47.7			1.4	49.0	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	701	642	231	876	122	140	37	103	169	165	639
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3065	1365	1676	3353	1480	1593	1629	1479		1721	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3065	1365	1676	3353	1480	1593	1629	1479		1721	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	393	806	738	241	912	127	156	41	114	188	183	710
RTOR Reduction (vph)	0	26	114	0	0	52	0	0	101	0	0	72
Lane Group Flow (vph)	393	1046	358	241	912	75	98	99	13	0	371	638
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	989	592	249	1102	486	177	181	164		452	1106
v/s Ratio Prot	0.12	c0.34	c0.26	0.14	c0.27		0.06	0.06			c0.22	0.24
v/s Ratio Perm						0.05			0.01			
v/c Ratio	0.78	1.06	0.61	0.97	0.83	0.15	0.55	0.55	0.08		0.82	0.58
Uniform Delay, d1	46.2	38.6	24.8	48.2	35.3	27.0	48.0	47.9	45.4		39.5	25.4
Progression Factor	0.95	0.70	0.41	0.81	0.75	0.56	1.00	1.00	1.00		0.89	0.48
Incremental Delay, d2	8.7	42.0	1.1	41.4	5.8	0.5	3.0	2.7	0.1		14.4	2.0
Delay (s)	52.7	69.1	11.4	80.7	32.2	15.6	50.9	50.6	45.5		49.6	14.1
Level of Service	D	E	B	F	C	B	D	D	D		D	B
Approach Delay (s)		51.7			39.7			48.9			26.3	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	118	618	51	0	108	0	752	40	0	239	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3197	2250	1676		1463		3320			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3197	2250	1676		1463		3320			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	134	702	62	0	132	0	817	43	0	278	0
RTOR Reduction (vph)	0	0	482	0	0	120	0	3	0	0	0	0
Lane Group Flow (vph)	71	148	220	62	0	12	0	857	0	0	278	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.8	11.8	36.8	10.7		10.7		55.1			30.3	
Effective Green, g (s)	10.8	10.8	35.8	10.2		10.2		54.6			29.8	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.26	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	144	302	706	149		130		1590			876	
v/s Ratio Prot	c0.05	0.05	0.10	c0.04				c0.26			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.49	0.49	0.31	0.42		0.09		0.54			0.32	
Uniform Delay, d1	49.0	49.0	29.7	49.1		47.6		20.9			33.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.47	
Incremental Delay, d2	1.9	0.9	0.2	1.4		0.2		1.3			0.9	
Delay (s)	50.9	49.9	29.9	50.5		47.9		22.2			17.0	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.8			48.7			22.2			17.0	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	78	2	79	10	700	103	99	769	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3311	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3311	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	101	3	103	10	714	105	103	801	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	60	0	3	0
Lane Group Flow (vph)	0	29	1	101	24	0	10	714	45	103	836	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.7	31.7	8.7	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.2	32.2	8.2	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1439	620	183	1726	
v/s Ratio Prot		c0.02			0.02		0.01	0.21		c0.06	c0.25	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.26	0.08		0.34	0.50	0.07	0.56	0.48	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	15.5	12.6	31.7	11.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	1.2	0.2	2.4	1.0	
Delay (s)		35.8	34.2	25.4	24.4		39.0	16.7	12.8	34.1	12.5	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			16.5			14.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	558	226	101	443	66	385	444	60	152	311	258
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3162		1676	3251		1676	1723		1666	1765	1454
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.47	1.00	1.00
Satd. Flow (perm)	1676	3162		1676	3251		1676	1723		826	1765	1454
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	168	641	260	105	461	69	397	458	62	167	342	284
RTOR Reduction (vph)	0	39	0	0	10	0	0	4	0	0	0	66
Lane Group Flow (vph)	168	862	0	105	520	0	397	516	0	167	342	218
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	16.8	34.1		10.7	28.0		29.3	43.5		24.9	24.7	41.5
Effective Green, g (s)	16.3	34.6		10.2	28.5		28.8	43.0		24.4	24.2	40.5
Actuated g/C Ratio	0.14	0.30		0.09	0.25		0.25	0.38		0.21	0.21	0.36
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	239	959		149	812		423	649		250	374	516
v/s Ratio Prot	0.10	c0.27		0.06	c0.16		c0.24	0.30		0.06	c0.19	0.06
v/s Ratio Perm										0.08		0.09
v/c Ratio	0.70	0.90		0.70	0.64		0.94	0.79		0.67	0.91	0.42
Uniform Delay, d1	46.5	38.0		50.4	38.2		41.7	31.6		41.5	43.9	27.9
Progression Factor	0.56	0.68		1.00	1.00		1.01	1.13		1.00	1.00	1.00
Incremental Delay, d2	3.1	4.1		14.1	1.7		27.0	9.0		6.6	29.2	0.6
Delay (s)	29.1	30.0		64.5	39.9		69.1	44.8		48.1	73.1	28.4
Level of Service	C	C		E	D		E	D		D	E	C
Approach Delay (s)		29.9			44.0			55.3			51.8	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Volume (veh/h)	729	0	82	510	0	110
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	792	0	89	554	0	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			792		1248	396
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			792		1248	396
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		100	80
cM capacity (veh/h)			824		147	603

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	396	396	274	370	120
Volume Left	0	0	89	0	0
Volume Right	0	0	0	0	120
cSH	1700	1700	824	1700	603
Volume to Capacity	0.23	0.23	0.11	0.22	0.20
Queue Length 95th (ft)	0	0	9	0	18
Control Delay (s)	0.0	0.0	4.0	0.0	12.4
Lane LOS			A		B
Approach Delay (s)	0.0		1.7		12.4
Approach LOS					B

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	45.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	75	0	27	1	264	123	20	148	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
Hourly flow rate (vph)	1	1	5	82	0	29	1	287	134	22	161	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	82	29	1	421	184
Volume Left (vph)	1	82	0	1	0	22
Volume Right (vph)	5	0	29	0	134	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.19	0.05
Departure Headway (s)	5.9	6.5	5.3	5.6	4.9	5.4
Degree Utilization, x	0.01	0.15	0.04	0.00	0.57	0.28
Capacity (veh/h)	536	503	608	625	725	640
Control Delay (s)	8.9	9.5	7.4	7.4	12.9	10.5
Approach Delay (s)	8.9	8.9		12.9		10.5
Approach LOS	A	A		B		B

Intersection Summary				
Delay	11.6			
Level of Service	B			
Intersection Capacity Utilization	43.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	54	37	21	9	45	28	712	67	60	520	57
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.97			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.97	1.00			1.00			1.00	1.00
Frt	1.00	0.94		1.00	0.88			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1660	1609		1634	1499			3252			1713	1459
Flt Permitted	0.71	1.00		0.68	1.00			0.93			0.85	1.00
Satd. Flow (perm)	1241	1609		1175	1499			3017			1465	1459
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	156	68	47	28	12	60	33	838	79	62	542	59
RTOR Reduction (vph)	0	37	0	0	48	0	0	7	0	0	0	7
Lane Group Flow (vph)	156	78	0	28	24	0	0	943	0	0	604	52
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	12.3	12.3		12.3	12.3			37.5			37.5	37.5
Effective Green, g (s)	11.8	11.8		11.8	11.8			37.0			37.0	37.0
Actuated g/C Ratio	0.21	0.21		0.21	0.21			0.65			0.65	0.65
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	256	333		243	310			1958			950	947
v/s Ratio Prot		0.05			0.02							
v/s Ratio Perm	c0.13			0.02				0.31			c0.41	0.04
v/c Ratio	0.61	0.23		0.12	0.08			0.48			0.64	0.06
Uniform Delay, d1	20.5	18.8		18.4	18.2			5.1			6.0	3.6
Progression Factor	1.00	1.00		1.00	1.00			0.64			0.78	0.62
Incremental Delay, d2	3.4	0.3		0.2	0.1			0.8			1.6	0.1
Delay (s)	24.0	19.1		18.5	18.3			4.0			6.2	2.3
Level of Service	C	B		B	B			A			A	A
Approach Delay (s)		21.9			18.4			4.0			5.9	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	45	0	10	0	374	25	17	222	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
Hourly flow rate (vph)	0	0	0	49	0	11	0	407	27	18	241	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	60	434	260
Volume Left (vph)	0	49	0	18
Volume Right (vph)	0	11	27	0
Hadj (s)	0.00	0.09	0.00	0.05
Departure Headway (s)	5.6	5.5	4.4	4.6
Degree Utilization, x	0.00	0.09	0.53	0.33
Capacity (veh/h)	567	577	810	760
Control Delay (s)	8.6	9.1	12.1	9.8
Approach Delay (s)	0.0	9.1	12.1	9.8
Approach LOS	A	A	B	A

Intersection Summary				
Delay		11.1		
Level of Service		B		
Intersection Capacity Utilization	40.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	22	5	36	23	83	7	645	25	63	501	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1658	1695		1641	1511		1662	1751		1664	1706	
Flt Permitted	0.65	1.00		0.73	1.00		0.40	1.00		0.31	1.00	
Satd. Flow (perm)	1132	1695		1260	1511		706	1751		541	1706	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	50	34	8	49	31	112	8	725	28	70	557	28
RTOR Reduction (vph)	0	7	0	0	96	0	0	1	0	0	2	0
Lane Group Flow (vph)	50	35	0	49	47	0	8	752	0	70	583	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	8.7	8.7		8.7	8.7		41.1	41.1		41.1	41.1	
Effective Green, g (s)	8.2	8.2		8.2	8.2		40.6	40.6		40.6	40.6	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.71	0.71		0.71	0.71	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	162	243		181	217		502	1247		385	1215	
v/s Ratio Prot		0.02			0.03			c0.43			0.34	
v/s Ratio Perm	c0.04			0.04			0.01			0.13		
v/c Ratio	0.31	0.14		0.27	0.22		0.02	0.60		0.18	0.48	
Uniform Delay, d1	21.9	21.3		21.7	21.6		2.4	4.1		2.7	3.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.52	0.80	
Incremental Delay, d2	0.4	0.1		0.3	0.2		0.1	2.2		0.9	1.2	
Delay (s)	22.3	21.4		22.0	21.7		2.4	6.3		2.3	4.0	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		21.9			21.8			6.3			3.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	61	0	30	0	0	3	28	315	0	1	240	54
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	66	0	33	0	0	3	30	342	0	1	261	59
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	699	696	290	728	725	342	320			342		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	699	696	290	728	725	342	320			342		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	81	100	96	100	100	100	98			100		
cM capacity (veh/h)	346	356	749	318	343	700	1240			1217		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	99	3	373	321
Volume Left	66	0	30	1
Volume Right	33	3	0	59
cSH	421	700	1240	1217
Volume to Capacity	0.24	0.00	0.02	0.00
Queue Length 95th (ft)	23	0	2	0
Control Delay (s)	16.2	10.2	0.9	0.0
Lane LOS	C	B	A	A
Approach Delay (s)	16.2	10.2	0.9	0.0
Approach LOS	C	B		

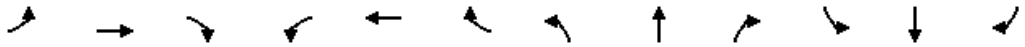
Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	58.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	40	27	317	40	32	240
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	29	345	43	35	261

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	73	388	296
Volume Left (vph)	43	0	35
Volume Right (vph)	29	43	0
Hadj (s)	-0.09	-0.03	0.06
Departure Headway (s)	5.3	4.4	4.6
Degree Utilization, x	0.11	0.47	0.38
Capacity (veh/h)	599	799	760
Control Delay (s)	9.0	11.3	10.3
Approach Delay (s)	9.0	11.3	10.3
Approach LOS	A	B	B

Intersection Summary			
Delay	10.7		
Level of Service	B		
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	35	45	13	35	37	73	10	562	30	78	451	12
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
Hourly flow rate (vph)	38	49	14	38	40	79	11	611	33	85	490	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	101	158	654	588
Volume Left (vph)	38	38	11	85
Volume Right (vph)	14	79	33	13
Hadj (s)	0.03	-0.22	0.01	0.05
Departure Headway (s)	7.8	7.3	6.0	6.0
Degree Utilization, x	0.22	0.32	1.0	0.98
Capacity (veh/h)	443	475	599	588
Control Delay (s)	13.0	13.7	88.1	56.0
Approach Delay (s)	13.0	13.7	88.1	56.0
Approach LOS	B	B	F	F

Intersection Summary				
Delay		62.7		
Level of Service		F		
Intersection Capacity Utilization	85.8%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	30	7	22	22	6	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	8	24	24	7	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	59	36			48	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	59	36			48	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	99			100	
cM capacity (veh/h)	944	1037			1559	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	40	48	16
Volume Left	33	0	7
Volume Right	8	24	0
cSH	961	1700	1559
Volume to Capacity	0.04	0.03	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.9	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	2.9
Approach LOS	A		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	16.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	30	2	7	28	7	9	24	8	8	22	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	33	2	8	30	8	10	26	9	9	24	3
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	38			43			118	99	47	114	97	41
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	38			43			118	99	47	114	97	41
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	97	99	99	97	100
cM capacity (veh/h)	1572			1556			817	781	1012	822	783	1024

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	37	46	45	36
Volume Left	2	8	10	9
Volume Right	2	8	9	3
cSH	1572	1556	825	810
Volume to Capacity	0.00	0.00	0.05	0.04
Queue Length 95th (ft)	0	0	4	3
Control Delay (s)	0.4	1.3	9.6	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.4	1.3	9.6	9.7
Approach LOS			A	A

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	44	22	28	318	244	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	24	30	346	265	33
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	702	288	302			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	702	288	302			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	97	98			
cM capacity (veh/h)	390	748	1255			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	72	376	298
Volume Left	48	30	0
Volume Right	24	0	33
cSH	464	1255	1700
Volume to Capacity	0.15	0.02	0.18
Queue Length 95th (ft)	14	2	0
Control Delay (s)	14.2	0.9	0.0
Lane LOS	B	A	
Approach Delay (s)	14.2	0.9	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	76	3	27	0	19	126	21	21	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	83	3	29	0	21	137	23	23	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	43			11			211	220	12	353	206	32
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	43			11			211	220	12	353	206	32
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	97	87	95	96	100
cM capacity (veh/h)	1553			1606			689	636	1065	483	648	1030

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	115	158	46
Volume Left	1	83	0	23
Volume Right	1	29	137	0
cSH	1553	1606	979	553
Volume to Capacity	0.00	0.05	0.16	0.08
Queue Length 95th (ft)	0	4	14	7
Control Delay (s)	0.8	5.4	9.4	12.1
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	5.4	9.4	12.1
Approach LOS			A	B

Intersection Summary				
Average Delay	8.1			
Intersection Capacity Utilization	37.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	141	20	12	96	28	11	8	23	19	10	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	8	153	22	13	104	30	12	9	25	21	11	4
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	152			181			347	363	177	378	359	143
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			181			347	363	177	378	359	143
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	98	97	96	98	100
cM capacity (veh/h)	1409			1387			575	546	857	530	549	888

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	183	148	46	36
Volume Left	8	13	12	21
Volume Right	22	30	25	4
cSH	1409	1387	692	564
Volume to Capacity	0.01	0.01	0.07	0.06
Queue Length 95th (ft)	0	1	5	5
Control Delay (s)	0.4	0.7	10.6	11.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	0.7	10.6	11.8
Approach LOS			B	B

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	25.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	87	76	33	34	62	35	36	209	40	69	203	36
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
Hourly flow rate (vph)	95	83	36	37	67	38	39	227	43	75	221	39

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	213	142	310	335
Volume Left (vph)	95	37	39	75
Volume Right (vph)	36	38	43	39
Hadj (s)	0.02	-0.07	-0.02	0.01
Departure Headway (s)	6.0	6.1	5.6	5.6
Degree Utilization, x	0.36	0.24	0.48	0.52
Capacity (veh/h)	534	499	601	610
Control Delay (s)	12.3	11.0	13.6	14.3
Approach Delay (s)	12.3	11.0	13.6	14.3
Approach LOS	B	B	B	B

Intersection Summary				
Delay		13.2		
Level of Service		B		
Intersection Capacity Utilization		54.6%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	124	52	29	66	127	22	431	22	60	411	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1656			1538	1253	1676	1747		1676	1738	
Flt Permitted		0.93			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1561			1334	1253	1676	1747		1676	1738	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	42	149	63	33	75	144	23	449	23	71	484	41
RTOR Reduction (vph)	0	24	0	0	0	113	0	3	0	0	4	0
Lane Group Flow (vph)	0	230	0	0	108	31	23	470	0	71	521	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		12.9			12.9	12.9	1.6	28.5		5.1	32.0	
Effective Green, g (s)		12.4			12.4	12.4	1.1	29.0		4.6	32.5	
Actuated g/C Ratio		0.21			0.21	0.21	0.02	0.50		0.08	0.56	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		333			285	267	31	873		132	973	
v/s Ratio Prot							0.01	0.27		c0.04	c0.30	
v/s Ratio Perm		c0.15			0.08	0.02						
v/c Ratio		0.69			0.38	0.12	0.74	0.54		0.54	0.54	
Uniform Delay, d1		21.0			19.5	18.4	28.3	9.9		25.7	8.0	
Progression Factor		1.00			1.00	1.00	1.21	0.97		1.00	1.00	
Incremental Delay, d2		4.9			0.3	0.1	58.7	2.1		4.2	2.1	
Delay (s)		26.0			19.8	18.4	92.8	11.7		29.8	10.1	
Level of Service		C			B	B	F	B		C	B	
Approach Delay (s)		26.0			19.0			15.5			12.5	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	559	184	156	542	54	278	188	124	76	182	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3055		1676	3353	1401	1676	1849			1527	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3055		1676	3353	1401	1676	1849			1527	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	46	614	202	164	571	57	335	227	149	78	188	19
RTOR Reduction (vph)	0	26	0	0	0	36	0	20	0	0	2	0
Lane Group Flow (vph)	46	790	0	164	571	21	335	356	0	0	283	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	6.6	34.8		14.4	42.6	42.6	25.4	25.4			24.9	
Effective Green, g (s)	7.1	35.8		14.9	43.6	43.6	24.9	24.9			24.4	
Actuated g/C Ratio	0.06	0.31		0.13	0.38	0.38	0.21	0.21			0.21	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	102	942		215	1260	526	359	396			321	
v/s Ratio Prot	0.03	c0.26		c0.10	0.17		c0.20	0.19			c0.19	
v/s Ratio Perm						0.02						
v/c Ratio	0.45	0.84		0.76	0.45	0.04	0.93	0.90			0.88	
Uniform Delay, d1	52.6	37.4		48.8	27.2	22.9	44.7	44.3			44.4	
Progression Factor	1.00	1.00		1.53	0.49	0.12	1.00	1.00			1.00	
Incremental Delay, d2	2.3	8.9		13.3	1.1	0.1	30.7	22.2			23.2	
Delay (s)	54.9	46.3		87.8	14.4	3.0	75.5	66.5			67.6	
Level of Service	D	D		F	B	A	E	E			E	
Approach Delay (s)		46.7			28.8			70.7			67.6	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	50.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	642	89	108	617	156	79	276	83	128	326	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3208		1676	3353	1364	1676	1765	1440	1676	1739	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3208		1676	3353	1364	1676	1765	1440	1676	1739	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	683	95	110	630	159	82	288	86	135	343	29
RTOR Reduction (vph)	0	8	0	0	0	66	0	0	68	0	3	0
Lane Group Flow (vph)	46	770	0	110	630	93	82	288	18	135	369	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	47.7		12.3	51.6	51.6	8.3	25.1	25.1	14.2	31.0	
Effective Green, g (s)	7.9	47.7		11.8	51.6	51.6	7.8	24.6	24.6	13.7	30.5	
Actuated g/C Ratio	0.07	0.41		0.10	0.44	0.44	0.07	0.21	0.21	0.12	0.26	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1319		170	1491	606	112	374	305	197	457	
v/s Ratio Prot	0.03	c0.24		c0.07	0.19		0.05	0.16		c0.08	c0.21	
v/s Ratio Perm						0.07			0.01			
v/c Ratio	0.40	0.58		0.65	0.42	0.15	0.73	0.77	0.06	0.69	0.81	
Uniform Delay, d1	51.8	26.5		50.1	22.0	19.2	53.1	43.0	36.5	49.1	40.0	
Progression Factor	0.64	0.51		1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.96	
Incremental Delay, d2	0.9	1.0		7.3	0.9	0.5	20.6	9.1	0.1	7.8	8.8	
Delay (s)	33.8	14.5		57.4	22.9	19.7	73.6	52.1	36.5	56.3	47.1	
Level of Service	C	B		E	C	B	E	D	D	E	D	
Approach Delay (s)		15.6			26.6			53.0			49.6	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	768	79	67	802	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3125		1676	3179			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3125		1676	3179			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	784	81	69	827	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	859	0	69	876	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1212		121	1367			376	324		309	
v/s Ratio Prot	0.01	c0.28		c0.04	0.28			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.71		0.57	0.64			0.92	0.36		0.76	
Uniform Delay, d1	55.3	30.0		52.1	26.0			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.16	0.34			1.00	1.00		1.00	
Incremental Delay, d2	4.4	3.5		2.0	0.9			27.3	0.5		9.6	
Delay (s)	59.7	33.5		62.6	9.7			71.6	38.5		54.7	
Level of Service	E	C		E	A			E	D		D	
Approach Delay (s)		34.2			13.6			55.6			54.7	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	632	276	56	486	188	345	860	32	219	865	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	3047		1676	3118		3252	3245		1676	3221	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	3047		1676	3118		3252	3245		1676	3221	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	658	288	67	579	224	363	905	34	235	930	97
RTOR Reduction (vph)	0	42	0	0	35	0	0	2	0	0	7	0
Lane Group Flow (vph)	220	904	0	67	768	0	363	937	0	235	1020	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.2	38.2		8.8	27.8		16.0	37.1		18.7	38.8	
Effective Green, g (s)	19.2	38.2		8.8	27.8		17.0	38.1		18.7	39.8	
Actuated g/C Ratio	0.17	0.33		0.08	0.24		0.15	0.33		0.16	0.34	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	277	1003		127	747		476	1065		270	1105	
v/s Ratio Prot	0.13	c0.30		0.04	c0.25		0.11	c0.29		0.14	c0.32	
v/s Ratio Perm												
v/c Ratio	0.79	0.90		0.53	1.03		0.76	0.88		0.87	0.92	
Uniform Delay, d1	46.5	37.1		51.6	44.1		47.6	36.8		47.5	36.6	
Progression Factor	0.64	0.53		1.00	1.00		1.00	1.00		1.07	0.65	
Incremental Delay, d2	10.4	8.6		1.8	40.3		6.4	10.4		22.8	12.9	
Delay (s)	40.0	28.2		53.4	84.4		54.0	47.2		73.4	36.8	
Level of Service	D	C		D	F		D	D		E	D	
Approach Delay (s)		30.4			82.0			49.1			43.6	
Approach LOS		C			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	10	137	5	3	10	75	1143	11	2	1007	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.98	
Flpb, ped/bikes		0.95	1.00		0.99		0.97	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1629	3340			3268	
Flt Permitted		0.72	1.00		0.90		0.21	1.00			0.95	
Satd. Flow (perm)		1215	1360		1408		365	3340			3117	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	273	12	169	13	8	26	81	1229	12	2	1028	76
RTOR Reduction (vph)	0	0	77	0	19	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	285	92	0	28	0	81	1240	0	0	1102	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.7	29.7		29.2		79.3	79.3			79.3	
Effective Green, g (s)		29.7	29.7		29.7		80.3	80.3			80.3	
Actuated g/C Ratio		0.26	0.26		0.26		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		311	348		360		252	2312			2157	
v/s Ratio Prot								c0.37				
v/s Ratio Perm		c0.23	0.07		0.02		0.22				0.35	
v/c Ratio		0.92	0.26		0.08		0.32	0.54			0.51	
Uniform Delay, d1		41.9	34.4		32.7		7.1	8.7			8.5	
Progression Factor		1.00	1.00		1.00		0.51	0.50			2.03	
Incremental Delay, d2		29.7	0.1		0.0		1.5	0.4			0.8	
Delay (s)		71.7	34.6		32.8		5.1	4.7			18.1	
Level of Service		E	C		C		A	A			B	
Approach Delay (s)		57.8			32.8			4.8			18.1	
Approach LOS		E			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

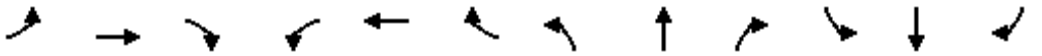
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	111	141	1242	1031	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1560		1622	3279	3322	
Flt Permitted	0.98		0.24	1.00	1.00	
Satd. Flow (perm)	1560		402	3279	3322	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	64	126	150	1321	1052	27
RTOR Reduction (vph)	68	0	0	0	1	0
Lane Group Flow (vph)	122	0	150	1321	1078	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	294		305	2490	2523	
v/s Ratio Prot	c0.08			c0.40	0.32	
v/s Ratio Perm			0.37			
v/c Ratio	0.41		0.49	0.53	0.43	
Uniform Delay, d1	41.4		5.4	5.6	5.0	
Progression Factor	1.00		0.70	0.57	1.00	
Incremental Delay, d2	0.3		4.6	0.7	0.5	
Delay (s)	41.8		8.3	3.9	5.5	
Level of Service	D		A	A	A	
Approach Delay (s)	41.8			4.3	5.5	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

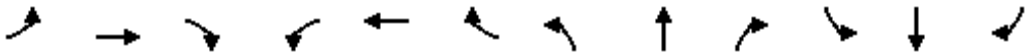
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	23	102	10	16	9	54	1262	22	19	1023	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1703	1424		1664		1676	3334		1676	3317	
Flt Permitted		0.79	1.00		0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1396	1424		1552		1676	3334		1676	3317	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	74	28	124	16	25	14	59	1387	24	20	1066	51
RTOR Reduction (vph)	0	0	103	0	12	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	102	21	0	43	0	59	1410	0	20	1115	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.7	18.7		18.7		13.2	82.4		4.4	73.6	
Effective Green, g (s)		19.2	19.2		19.2		13.2	83.4		4.4	74.6	
Actuated g/C Ratio		0.17	0.17		0.17		0.11	0.72		0.04	0.64	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		231	235		256		190	2397		63	2133	
v/s Ratio Prot							0.04	c0.42		0.01	c0.34	
v/s Ratio Perm		c0.07	0.01		0.03							
v/c Ratio		0.44	0.09		0.17		0.31	0.59		0.32	0.52	
Uniform Delay, d1		43.6	41.0		41.6		47.2	7.9		54.3	11.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		0.1		0.3	1.1		1.1	0.9	
Delay (s)		44.1	41.0		41.7		47.6	9.0		55.4	12.0	
Level of Service		D	D		D		D	A		E	B	
Approach Delay (s)		42.4			41.7			10.6			12.8	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	424	399	0	462	1371	0	0	0	614	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3010			2853	1282				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3010			2853	1282				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	442	416	0	481	1428	0	0	0	667	0	273
RTOR Reduction (vph)	0	138	0	0	178	484	0	0	0	0	0	191
Lane Group Flow (vph)	95	720	0	0	874	373	0	0	0	667	0	82
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	71.6			49.6	49.6				33.9		33.9
Effective Green, g (s)	18.0	71.6			49.6	49.6				34.4		34.4
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1890			1241	557				758		435
v/s Ratio Prot	0.06	c0.24			c0.31					c0.27		
v/s Ratio Perm						0.29						0.06
v/c Ratio	0.36	0.38			0.70	0.67				0.88		0.19
Uniform Delay, d1	42.9	10.4			26.2	25.7				37.8		29.5
Progression Factor	1.00	1.00			0.44	6.33				1.00		1.00
Incremental Delay, d2	0.3	0.6			2.0	3.7				11.3		0.2
Delay (s)	43.2	11.0			13.5	166.0				49.1		29.6
Level of Service	D	B			B	F				D		C
Approach Delay (s)		14.2			82.0			0.0			43.5	
Approach LOS		B			F			A			D	

Intersection Summary			
HCM 2000 Control Delay	55.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



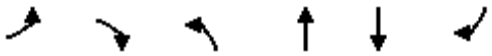
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	893	0	0	1343	387	491	289	789	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.94	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1510	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1510	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	930	0	0	1399	403	540	318	867	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	19	20	0	0	0
Lane Group Flow (vph)	153	930	0	0	1399	194	486	570	630	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	543	750			
v/s Ratio Prot	c0.09	0.19			c0.29		0.31	c0.38	c0.44			
v/s Ratio Perm						0.14						
v/c Ratio	0.58	0.48			0.77	0.37	0.85	1.05	0.84			
Uniform Delay, d1	44.5	25.1			31.2	25.7	33.7	36.5	22.9			
Progression Factor	0.78	0.48			0.70	0.50	1.00	1.00	1.00			
Incremental Delay, d2	6.9	0.6			2.3	1.4	11.3	52.6	8.2			
Delay (s)	41.6	12.7			24.1	14.2	45.0	89.1	31.1			
Level of Service	D	B			C	B	D	F	C			
Approach Delay (s)		16.8			21.9			54.8			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



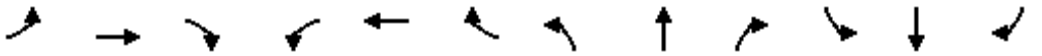
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	531	78	338	99	43	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3189		3353	1455		3336
Flt Permitted	0.96		1.00	1.00		0.88
Satd. Flow (perm)	3189		3353	1455		2960
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	597	88	363	106	46	460
RTOR Reduction (vph)	10	0	0	56	0	0
Lane Group Flow (vph)	675	0	363	50	0	506
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1454		1582	686		1396
v/s Ratio Prot	c0.21		0.11			
v/s Ratio Perm				0.03		c0.17
v/c Ratio	0.46		0.23	0.07		0.36
Uniform Delay, d1	21.4		17.8	16.5		19.2
Progression Factor	0.46		0.19	0.01		1.00
Incremental Delay, d2	1.0		0.3	0.2		0.7
Delay (s)	11.0		3.6	0.3		19.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		2.8			19.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



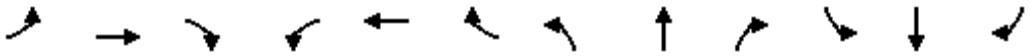
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	81	64	441	472	174	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	100	79	479	513	198	169
RTOR Reduction (vph)	0	18	0	0	0	150
Lane Group Flow (vph)	100	61	479	513	198	19
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	13.3	87.9	71.1	93.7	19.1	13.3
Effective Green, g (s)	12.8	87.4	70.6	93.2	18.6	12.8
Actuated g/C Ratio	0.11	0.77	0.62	0.82	0.16	0.11
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1150	2013	1442	287	168
v/s Ratio Prot	c0.06	0.04	0.15	c0.29	c0.11	0.01
v/s Ratio Perm						
v/c Ratio	0.53	0.05	0.24	0.36	0.69	0.11
Uniform Delay, d1	47.8	3.2	9.7	2.7	45.0	45.5
Progression Factor	1.49	4.53	0.17	0.13	1.00	1.00
Incremental Delay, d2	2.9	0.0	0.2	0.6	6.8	0.3
Delay (s)	73.8	14.7	1.9	0.9	51.7	45.8
Level of Service	E	B	A	A	D	D
Approach Delay (s)	47.7			1.4	49.0	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



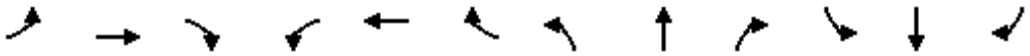
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	701	642	231	876	122	140	37	103	169	165	639
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3065	1365	1676	3353	1480	1593	1629	1479		1721	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3065	1365	1676	3353	1480	1593	1629	1479		1721	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	393	806	738	241	912	127	156	41	114	188	183	710
RTOR Reduction (vph)	0	26	114	0	0	52	0	0	101	0	0	72
Lane Group Flow (vph)	393	1046	358	241	912	75	98	99	13	0	371	638
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	989	592	249	1102	486	177	181	164		452	1106
v/s Ratio Prot	0.12	c0.34	c0.26	0.14	c0.27		0.06	0.06			c0.22	0.24
v/s Ratio Perm						0.05			0.01			
v/c Ratio	0.78	1.06	0.61	0.97	0.83	0.15	0.55	0.55	0.08		0.82	0.58
Uniform Delay, d1	46.2	38.6	24.8	48.2	35.3	27.0	48.0	47.9	45.4		39.5	25.4
Progression Factor	0.95	0.70	0.41	0.82	0.75	0.56	1.00	1.00	1.00		0.89	0.48
Incremental Delay, d2	8.7	42.0	1.1	41.4	5.8	0.5	3.0	2.7	0.1		14.4	2.0
Delay (s)	52.7	69.1	11.4	80.7	32.2	15.6	50.9	50.6	45.5		49.6	14.1
Level of Service	D	E	B	F	C	B	D	D	D		D	B
Approach Delay (s)		51.7			39.7			48.9			26.3	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	118	618	51	0	108	0	752	40	0	239	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3197	2250	1676		1463		3320			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3197	2250	1676		1463		3320			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	134	702	62	0	132	0	817	43	0	278	0
RTOR Reduction (vph)	0	0	482	0	0	120	0	3	0	0	0	0
Lane Group Flow (vph)	71	148	220	62	0	12	0	857	0	0	278	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.8	11.8	36.8	10.7		10.7		55.1			30.3	
Effective Green, g (s)	10.8	10.8	35.8	10.2		10.2		54.6			29.8	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.26	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	144	302	706	149		130		1590			876	
v/s Ratio Prot	c0.05	0.05	0.10	c0.04				c0.26			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.49	0.49	0.31	0.42		0.09		0.54			0.32	
Uniform Delay, d1	49.0	49.0	29.7	49.1		47.6		20.9			33.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.47	
Incremental Delay, d2	1.9	0.9	0.2	1.4		0.2		1.3			0.9	
Delay (s)	50.9	49.9	29.9	50.5		47.9		22.2			17.0	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.8			48.7			22.2			17.0	
Approach LOS		C			D			C			B	

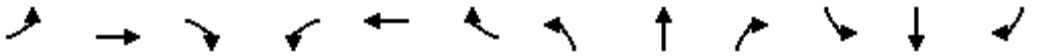
Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	78	2	79	10	700	103	99	769	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3311	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3311	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	101	3	103	10	714	105	103	801	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	60	0	3	0
Lane Group Flow (vph)	0	29	1	101	24	0	10	714	45	103	836	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.7	31.7	8.7	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.2	32.2	8.2	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1439	620	183	1726	
v/s Ratio Prot		c0.02			0.02		0.01	0.21		c0.06	c0.25	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.26	0.08		0.34	0.50	0.07	0.56	0.48	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	15.5	12.6	31.7	11.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	1.2	0.2	2.4	1.0	
Delay (s)		35.8	34.2	25.4	24.4		39.0	16.7	12.8	34.1	12.5	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			16.5			14.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	558	226	103	443	66	385	444	60	152	310	258
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3162		1676	3251		1676	1723		1666	1765	1454
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.47	1.00	1.00
Satd. Flow (perm)	1676	3162		1676	3251		1676	1723		826	1765	1454
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	168	641	260	107	461	69	397	458	62	167	341	284
RTOR Reduction (vph)	0	39	0	0	10	0	0	4	0	0	0	66
Lane Group Flow (vph)	168	862	0	107	520	0	397	516	0	167	341	218
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	16.8	34.1		10.7	28.0		29.3	43.4		24.9	24.7	41.5
Effective Green, g (s)	16.3	34.6		10.2	28.5		28.8	42.9		24.4	24.2	40.5
Actuated g/C Ratio	0.14	0.30		0.09	0.25		0.25	0.38		0.21	0.21	0.36
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	239	959		149	812		423	648		251	374	516
v/s Ratio Prot	0.10	c0.27		0.06	c0.16		c0.24	0.30		0.06	c0.19	0.06
v/s Ratio Perm										0.08		0.09
v/c Ratio	0.70	0.90		0.72	0.64		0.94	0.80		0.67	0.91	0.42
Uniform Delay, d1	46.5	38.0		50.5	38.2		41.7	31.6		41.4	43.9	27.9
Progression Factor	0.56	0.68		1.00	1.00		1.01	1.13		1.00	1.00	1.00
Incremental Delay, d2	3.1	4.1		15.2	1.7		27.0	9.1		6.5	28.8	0.6
Delay (s)	29.1	30.0		65.7	39.9		69.1	45.0		47.9	72.7	28.4
Level of Service	C	C		E	D		E	D		D	E	C
Approach Delay (s)		29.9			44.2			55.4			51.6	
Approach LOS		C			D			E			D	

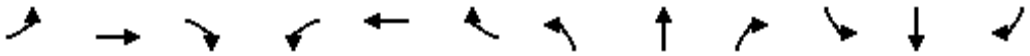
Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	730	0	0	511	0	110
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	793	0	0	555	0	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			793		1071	397
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			793		1071	397
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	80
cM capacity (veh/h)			823		216	603

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	397	397	278	278	120
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	120
cSH	1700	1700	1700	1700	603
Volume to Capacity	0.23	0.23	0.16	0.16	0.20
Queue Length 95th (ft)	0	0	0	0	18
Control Delay (s)	0.0	0.0	0.0	0.0	12.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.4
Approach LOS					B

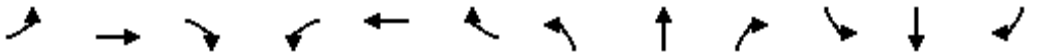
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	77	0	27	1	264	123	20	149	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
Hourly flow rate (vph)	1	1	5	84	0	29	1	287	134	22	162	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	84	29	1	421	185
Volume Left (vph)	1	84	0	1	0	22
Volume Right (vph)	5	0	29	0	134	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.19	0.05
Departure Headway (s)	5.9	6.5	5.3	5.6	4.9	5.4
Degree Utilization, x	0.01	0.15	0.04	0.00	0.57	0.28
Capacity (veh/h)	535	503	608	623	723	638
Control Delay (s)	9.0	9.5	7.4	7.4	12.9	10.5
Approach Delay (s)	9.0	9.0		12.9		10.5
Approach LOS	A	A		B		B

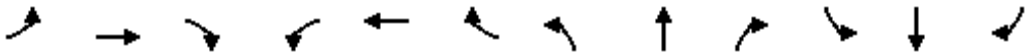
Intersection Summary				
Delay	11.7			
Level of Service	B			
Intersection Capacity Utilization	44.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	54	37	21	9	45	28	712	67	61	518	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.97			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.97	1.00			1.00			1.00	1.00
Frt	1.00	0.94		1.00	0.88			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1660	1609		1634	1499			3252			1712	1459
Flt Permitted	0.71	1.00		0.68	1.00			0.93			0.85	1.00
Satd. Flow (perm)	1241	1609		1175	1499			3017			1456	1459
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	156	68	47	28	12	60	33	838	79	64	540	60
RTOR Reduction (vph)	0	37	0	0	48	0	0	7	0	0	0	7
Lane Group Flow (vph)	156	78	0	28	24	0	0	943	0	0	604	53
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	12.3	12.3		12.3	12.3			37.5			37.5	37.5
Effective Green, g (s)	11.8	11.8		11.8	11.8			37.0			37.0	37.0
Actuated g/C Ratio	0.21	0.21		0.21	0.21			0.65			0.65	0.65
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	256	333		243	310			1958			945	947
v/s Ratio Prot		0.05			0.02							
v/s Ratio Perm	c0.13			0.02				0.31			c0.41	0.04
v/c Ratio	0.61	0.23		0.12	0.08			0.48			0.64	0.06
Uniform Delay, d1	20.5	18.8		18.4	18.2			5.1			6.0	3.6
Progression Factor	1.00	1.00		1.00	1.00			0.65			0.78	0.62
Incremental Delay, d2	3.4	0.3		0.2	0.1			0.8			1.6	0.1
Delay (s)	24.0	19.1		18.5	18.3			4.1			6.3	2.3
Level of Service	C	B		B	B			A			A	A
Approach Delay (s)		21.9			18.4			4.1			5.9	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

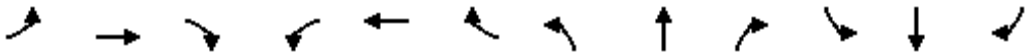
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	51	0	10	0	375	28	17	225	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
Hourly flow rate (vph)	0	0	0	55	0	11	0	408	30	18	245	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	66	438	263
Volume Left (vph)	0	55	0	18
Volume Right (vph)	0	11	30	0
Hadj (s)	0.00	0.10	-0.01	0.05
Departure Headway (s)	5.6	5.6	4.4	4.6
Degree Utilization, x	0.00	0.10	0.53	0.34
Capacity (veh/h)	562	573	805	754
Control Delay (s)	8.6	9.2	12.3	9.9
Approach Delay (s)	0.0	9.2	12.3	9.9
Approach LOS	A	A	B	A

Intersection Summary				
Delay	11.2			
Level of Service	B			
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	22	5	36	24	83	7	642	25	63	493	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.97		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1658	1695		1641	1512		1662	1751		1664	1702	
Flt Permitted	0.65	1.00		0.73	1.00		0.41	1.00		0.31	1.00	
Satd. Flow (perm)	1127	1695		1260	1512		709	1751		544	1702	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	53	34	8	49	32	112	8	721	28	70	548	34
RTOR Reduction (vph)	0	7	0	0	96	0	0	1	0	0	2	0
Lane Group Flow (vph)	53	35	0	49	48	0	8	748	0	70	580	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	8.7	8.7		8.7	8.7		41.1	41.1		41.1	41.1	
Effective Green, g (s)	8.2	8.2		8.2	8.2		40.6	40.6		40.6	40.6	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.71	0.71		0.71	0.71	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	162	243		181	217		505	1247		387	1212	
v/s Ratio Prot		0.02			0.03			c0.43			0.34	
v/s Ratio Perm	c0.05			0.04			0.01			0.13		
v/c Ratio	0.33	0.14		0.27	0.22		0.02	0.60		0.18	0.48	
Uniform Delay, d1	21.9	21.3		21.7	21.6		2.4	4.1		2.7	3.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.51	0.79	
Incremental Delay, d2	0.4	0.1		0.3	0.2		0.1	2.1		0.9	1.2	
Delay (s)	22.4	21.4		22.0	21.8		2.4	6.3		2.3	4.0	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		21.9			21.8			6.2			3.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	0	33	0	0	3	36	313	0	1	240	65
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	72	0	36	0	0	3	39	340	0	1	261	71
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	720	717	296	753	752	340	332			340		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	720	717	296	753	752	340	332			340		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	78	100	95	100	100	100	97			100		
cM capacity (veh/h)	333	344	743	303	328	702	1228			1219		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	108	3	379	333
Volume Left	72	0	39	1
Volume Right	36	3	0	71
cSH	408	702	1228	1219
Volume to Capacity	0.26	0.00	0.03	0.00
Queue Length 95th (ft)	26	0	2	0
Control Delay (s)	17.0	10.2	1.1	0.0
Lane LOS	C	B	A	A
Approach Delay (s)	17.0	10.2	1.1	0.0
Approach LOS	C	B		

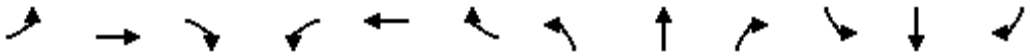
Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	59.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	38	29	321	38	33	242
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	32	349	41	36	263

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	73	390	299
Volume Left (vph)	41	0	36
Volume Right (vph)	32	41	0
Hadj (s)	-0.11	-0.03	0.06
Departure Headway (s)	5.3	4.4	4.6
Degree Utilization, x	0.11	0.48	0.38
Capacity (veh/h)	600	798	760
Control Delay (s)	9.0	11.4	10.4
Approach Delay (s)	9.0	11.4	10.4
Approach LOS	A	B	B

Intersection Summary			
Delay	10.7		
Level of Service	B		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	34	45	14	35	39	73	11	561	30	78	447	9
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
Hourly flow rate (vph)	37	49	15	38	42	79	12	610	33	85	486	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	101	160	654	580
Volume Left (vph)	37	38	12	85
Volume Right (vph)	15	79	33	10
Hadj (s)	0.02	-0.22	0.01	0.05
Departure Headway (s)	7.8	7.3	6.0	6.0
Degree Utilization, x	0.22	0.32	1.0	0.97
Capacity (veh/h)	442	474	600	594
Control Delay (s)	12.9	13.7	87.9	53.7
Approach Delay (s)	12.9	13.7	87.9	53.7
Approach LOS	B	B	F	F

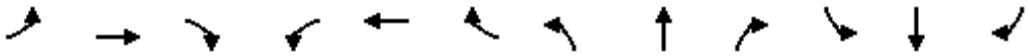
Intersection Summary				
Delay	61.6			
Level of Service	F			
Intersection Capacity Utilization	85.5%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	31	0	0	22	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	0	0	24	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	12	12			24	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	12	12			24	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	1008	1069			1591	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	24	0
Volume Left	34	0	0
Volume Right	0	24	0
cSH	1008	1700	1700
Volume to Capacity	0.03	0.01	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

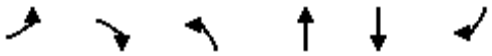
Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	25	2	7	24	8	7	33	8	9	26	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	3	27	2	8	26	9	8	36	9	10	28	3
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	35			37			113	93	41	112	90	37
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	35			37			113	93	41	112	90	37
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	95	99	99	96	100
cM capacity (veh/h)	1577			1563			819	786	1019	816	790	1029

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	42	52	41
Volume Left	3	8	8	10
Volume Right	2	9	9	3
cSH	1577	1563	823	811
Volume to Capacity	0.00	0.00	0.06	0.05
Queue Length 95th (ft)	0	0	5	4
Control Delay (s)	0.7	1.3	9.7	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.7	1.3	9.7	9.7
Approach LOS			A	A

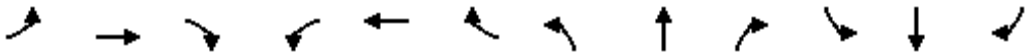
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	41	21	28	324	247	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	23	30	352	268	29
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	710	289	302			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	710	289	302			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	97	98			
cM capacity (veh/h)	386	746	1255			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	67	383	298
Volume Left	45	30	0
Volume Right	23	0	29
cSH	461	1255	1700
Volume to Capacity	0.15	0.02	0.18
Queue Length 95th (ft)	13	2	0
Control Delay (s)	14.1	0.9	0.0
Lane LOS	B	A	
Approach Delay (s)	14.1	0.9	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	77	3	6	0	18	127	12	21	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	84	3	7	0	20	138	13	23	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	20			11			202	200	12	344	197	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			11			202	200	12	344	197	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	97	87	97	97	100
cM capacity (veh/h)	1583			1606			698	653	1065	489	655	1045

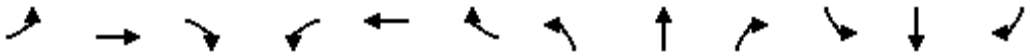
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	93	158	36
Volume Left	1	84	0	13
Volume Right	1	7	138	0
cSH	1583	1606	988	583
Volume to Capacity	0.00	0.05	0.16	0.06
Queue Length 95th (ft)	0	4	14	5
Control Delay (s)	0.8	6.6	9.3	11.6
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	6.6	9.3	11.6
Approach LOS			A	B

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	133	19	12	81	31	5	12	23	20	12	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	8	145	21	13	88	34	5	13	25	22	13	5
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	139			171			325	341	168	357	334	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	139			171			325	341	168	357	334	128
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	98	97	96	98	99
cM capacity (veh/h)	1424			1399			592	562	867	545	566	905

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	173	135	43	40
Volume Left	8	13	5	22
Volume Right	21	34	25	5
cSH	1424	1399	710	584
Volume to Capacity	0.01	0.01	0.06	0.07
Queue Length 95th (ft)	0	1	5	6
Control Delay (s)	0.4	0.8	10.4	11.6
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	0.8	10.4	11.6
Approach LOS			B	B

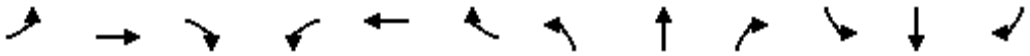
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	87	73	30	34	52	39	33	211	40	72	202	36
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
Hourly flow rate (vph)	95	79	33	37	57	42	36	229	43	78	220	39

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	207	136	309	337
Volume Left (vph)	95	37	36	78
Volume Right (vph)	33	42	43	39
Hadj (s)	0.03	-0.10	-0.03	0.01
Departure Headway (s)	6.0	6.0	5.5	5.5
Degree Utilization, x	0.34	0.23	0.47	0.51
Capacity (veh/h)	536	502	607	617
Control Delay (s)	12.1	10.8	13.3	14.2
Approach Delay (s)	12.1	10.8	13.3	14.2
Approach LOS	B	B	B	B

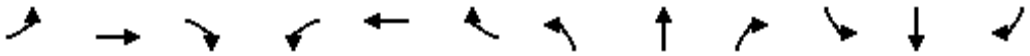
Intersection Summary				
Delay		13.0		
Level of Service		B		
Intersection Capacity Utilization		56.1%	ICU Level of Service	B
Analysis Period (min)		15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	123	54	29	63	127	24	432	22	60	411	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1654			1538	1253	1676	1747		1676	1741	
Flt Permitted		0.94			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1563			1328	1253	1676	1747		1676	1741	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	41	148	65	33	72	144	25	450	23	71	484	36
RTOR Reduction (vph)	0	24	0	0	0	113	0	3	0	0	3	0
Lane Group Flow (vph)	0	230	0	0	105	31	25	471	0	71	517	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		12.9			12.9	12.9	1.6	28.5		5.1	32.0	
Effective Green, g (s)		12.4			12.4	12.4	1.1	29.0		4.6	32.5	
Actuated g/C Ratio		0.21			0.21	0.21	0.02	0.50		0.08	0.56	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		334			283	267	31	873		132	975	
v/s Ratio Prot							0.01	0.27		c0.04	c0.30	
v/s Ratio Perm		c0.15			0.08	0.02						
v/c Ratio		0.69			0.37	0.12	0.81	0.54		0.54	0.53	
Uniform Delay, d1		21.0			19.5	18.4	28.3	9.9		25.7	8.0	
Progression Factor		1.00			1.00	1.00	1.22	0.96		1.00	1.00	
Incremental Delay, d2		4.6			0.3	0.1	77.2	2.1		4.2	2.1	
Delay (s)		25.7			19.8	18.4	111.8	11.7		29.8	10.0	
Level of Service		C			B	B	F	B		C	B	
Approach Delay (s)		25.7			19.0			16.7			12.4	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	559	184	156	540	54	278	187	124	74	181	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3055		1676	3353	1401	1676	1848			1528	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3055		1676	3353	1401	1676	1848			1528	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	46	614	202	164	568	57	335	225	149	76	187	18
RTOR Reduction (vph)	0	26	0	0	0	35	0	20	0	0	2	0
Lane Group Flow (vph)	46	790	0	164	568	22	335	354	0	0	279	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	6.6	35.0		14.4	42.8	42.8	25.4	25.4			24.7	
Effective Green, g (s)	7.1	36.0		14.9	43.8	43.8	24.9	24.9			24.2	
Actuated g/C Ratio	0.06	0.31		0.13	0.38	0.38	0.21	0.21			0.21	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	102	948		215	1266	528	359	396			318	
v/s Ratio Prot	0.03	c0.26		c0.10	0.17		c0.20	0.19			c0.18	
v/s Ratio Perm						0.02						
v/c Ratio	0.45	0.83		0.76	0.45	0.04	0.93	0.89			0.88	
Uniform Delay, d1	52.6	37.2		48.8	27.1	22.8	44.7	44.3			44.4	
Progression Factor	1.00	1.00		1.52	0.49	0.13	1.00	1.00			1.00	
Incremental Delay, d2	2.3	8.6		13.3	1.1	0.1	30.7	21.5			22.4	
Delay (s)	54.9	45.8		87.7	14.3	3.0	75.5	65.8			66.9	
Level of Service	D	D		F	B	A	E	E			E	
Approach Delay (s)		46.3			28.7			70.4			66.9	
Approach LOS		D			C			E			E	

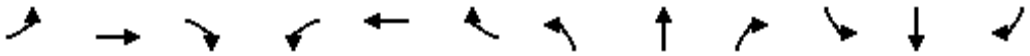
Intersection Summary			
HCM 2000 Control Delay	49.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	639	89	108	615	156	79	278	83	130	327	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3208		1676	3353	1363	1676	1765	1440	1676	1739	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3208		1676	3353	1363	1676	1765	1440	1676	1739	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	680	95	110	628	159	82	290	86	137	344	29
RTOR Reduction (vph)	0	8	0	0	0	66	0	0	68	0	3	0
Lane Group Flow (vph)	46	767	0	110	628	93	82	290	18	137	370	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	47.6		12.3	51.5	51.5	8.3	25.1	25.1	14.3	31.1	
Effective Green, g (s)	7.9	47.6		11.8	51.5	51.5	7.8	24.6	24.6	13.8	30.6	
Actuated g/C Ratio	0.07	0.41		0.10	0.44	0.44	0.07	0.21	0.21	0.12	0.26	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1316		170	1488	605	112	374	305	199	458	
v/s Ratio Prot	0.03	c0.24		c0.07	0.19		0.05	0.16		c0.08	c0.21	
v/s Ratio Perm						0.07			0.01			
v/c Ratio	0.40	0.58		0.65	0.42	0.15	0.73	0.78	0.06	0.69	0.81	
Uniform Delay, d1	51.8	26.5		50.1	22.1	19.2	53.1	43.1	36.5	49.0	40.0	
Progression Factor	0.64	0.51		1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.96	
Incremental Delay, d2	0.9	1.0		7.3	0.9	0.5	20.6	9.3	0.1	7.8	8.8	
Delay (s)	34.0	14.5		57.4	22.9	19.8	73.6	52.4	36.5	56.5	47.2	
Level of Service	C	B		E	C	B	E	D	D	E	D	
Approach Delay (s)		15.6			26.6			53.2			49.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

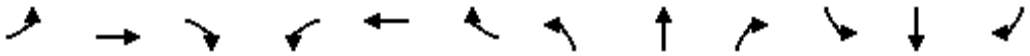
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	767	79	67	801	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3125		1676	3179			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3125		1676	3179			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	783	81	69	826	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	858	0	69	875	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1212		121	1367			376	324		309	
v/s Ratio Prot	0.01	c0.27		c0.04	0.28			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.71		0.57	0.64			0.92	0.36		0.76	
Uniform Delay, d1	55.3	30.0		52.1	26.0			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.16	0.34			1.00	1.00		1.00	
Incremental Delay, d2	4.4	3.5		2.0	0.9			27.3	0.5		9.6	
Delay (s)	59.7	33.5		62.4	9.8			71.6	38.5		54.7	
Level of Service	E	C		E	A			E	D		D	
Approach Delay (s)		34.1			13.6			55.6			54.7	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

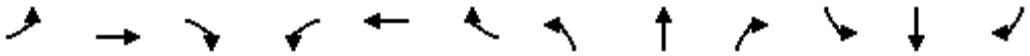
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	632	276	56	484	189	344	860	32	219	866	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	3047		1676	3116		3252	3245		1676	3221	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	3047		1676	3116		3252	3245		1676	3221	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	658	288	67	576	225	362	905	34	235	931	97
RTOR Reduction (vph)	0	42	0	0	36	0	0	2	0	0	7	0
Lane Group Flow (vph)	220	904	0	67	765	0	362	937	0	235	1021	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.2	38.2		8.8	27.8		16.0	37.1		18.7	38.8	
Effective Green, g (s)	19.2	38.2		8.8	27.8		17.0	38.1		18.7	39.8	
Actuated g/C Ratio	0.17	0.33		0.08	0.24		0.15	0.33		0.16	0.34	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	277	1003		127	746		476	1065		270	1105	
v/s Ratio Prot	0.13	c0.30		0.04	c0.25		0.11	c0.29		0.14	c0.32	
v/s Ratio Perm												
v/c Ratio	0.79	0.90		0.53	1.03		0.76	0.88		0.87	0.92	
Uniform Delay, d1	46.5	37.1		51.6	44.1		47.5	36.8		47.5	36.7	
Progression Factor	0.64	0.53		1.00	1.00		1.00	1.00		1.06	0.65	
Incremental Delay, d2	10.4	8.6		1.8	39.7		6.4	10.4		22.8	13.0	
Delay (s)	40.0	28.2		53.4	83.8		53.9	47.2		73.3	36.9	
Level of Service	D	C		D	F		D	D		E	D	
Approach Delay (s)		30.4			81.4			49.0			43.7	
Approach LOS		C			F			D			D	

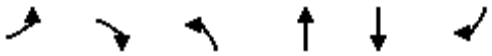
Intersection Summary			
HCM 2000 Control Delay	49.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	10	137	5	3	10	75	1145	11	2	1007	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.99	
Flpb, ped/bikes		0.95	1.00		0.99		0.97	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1628	3340			3272	
Flt Permitted		0.72	1.00		0.90		0.21	1.00			0.95	
Satd. Flow (perm)		1215	1360		1409		367	3340			3121	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	270	12	169	13	8	26	81	1231	12	2	1028	72
RTOR Reduction (vph)	0	0	78	0	19	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	282	91	0	28	0	81	1242	0	0	1098	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.5	29.5		29.0		79.5	79.5			79.5	
Effective Green, g (s)		29.5	29.5		29.5		80.5	80.5			80.5	
Actuated g/C Ratio		0.25	0.25		0.25		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		308	345		358		254	2317			2165	
v/s Ratio Prot								c0.37				
v/s Ratio Perm		c0.23	0.07		0.02		0.22				0.35	
v/c Ratio		0.92	0.27		0.08		0.32	0.54			0.51	
Uniform Delay, d1		42.0	34.6		32.9		7.0	8.7			8.4	
Progression Factor		1.00	1.00		1.00		0.50	0.50			2.04	
Incremental Delay, d2		29.8	0.2		0.0		1.5	0.4			0.8	
Delay (s)		71.8	34.7		32.9		5.0	4.7			17.9	
Level of Service		E	C		C		A	A			B	
Approach Delay (s)		57.9			32.9			4.7			17.9	
Approach LOS		E			C			A			B	

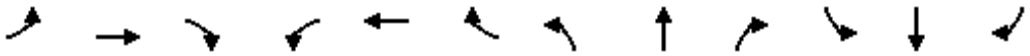
Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	112	143	1241	1028	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1560		1622	3279	3320	
Flt Permitted	0.98		0.24	1.00	1.00	
Satd. Flow (perm)	1560		403	3279	3320	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	64	127	152	1320	1049	28
RTOR Reduction (vph)	69	0	0	0	1	0
Lane Group Flow (vph)	122	0	152	1320	1076	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	294		306	2490	2521	
v/s Ratio Prot	c0.08			c0.40	0.32	
v/s Ratio Perm			0.38			
v/c Ratio	0.42		0.50	0.53	0.43	
Uniform Delay, d1	41.4		5.4	5.6	5.0	
Progression Factor	1.00		0.71	0.57	1.00	
Incremental Delay, d2	0.3		4.7	0.7	0.5	
Delay (s)	41.8		8.5	3.9	5.5	
Level of Service	D		A	A	A	
Approach Delay (s)	41.8			4.4	5.5	
Approach LOS	D			A	A	

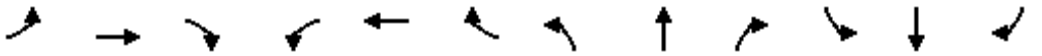
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



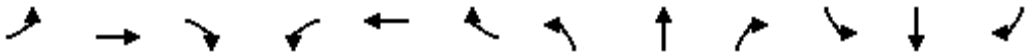
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	23	102	10	16	9	54	1261	22	19	1020	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1702	1424		1664		1676	3334		1676	3316	
Flt Permitted		0.79	1.00		0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1389	1424		1551		1676	3334		1676	3316	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	76	28	124	16	25	14	59	1386	24	20	1062	52
RTOR Reduction (vph)	0	0	103	0	12	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	104	21	0	43	0	59	1409	0	20	1112	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.8	18.8		18.8		13.2	82.3		4.4	73.5	
Effective Green, g (s)		19.3	19.3		19.3		13.2	83.3		4.4	74.5	
Actuated g/C Ratio		0.17	0.17		0.17		0.11	0.72		0.04	0.64	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		231	236		258		190	2394		63	2129	
v/s Ratio Prot							0.04	c0.42		0.01	c0.34	
v/s Ratio Perm		c0.07	0.01		0.03							
v/c Ratio		0.45	0.09		0.17		0.31	0.59		0.32	0.52	
Uniform Delay, d1		43.6	40.9		41.5		47.2	8.0		54.3	11.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		0.1		0.3	1.1		1.1	0.9	
Delay (s)		44.1	41.0		41.6		47.6	9.1		55.4	12.1	
Level of Service		D	D		D		D	A		E	B	
Approach Delay (s)		42.4			41.6			10.6			12.9	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	272	153	0	374	1225	0	0	0	770	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.95			0.91	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3102			2831	1365				2515		1430
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3102			2831	1365				2515		1430
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	283	159	0	382	1250	0	0	0	837	0	175
RTOR Reduction (vph)	0	60	0	0	189	475	0	0	0	0	0	107
Lane Group Flow (vph)	106	382	0	0	693	275	0	0	0	837	0	68
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	61.4			41.4	41.4				44.1		44.1
Effective Green, g (s)	16.0	61.4			41.4	41.4				44.6		44.6
Actuated g/C Ratio	0.14	0.54			0.36	0.36				0.39		0.39
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1670			1028	495				983		559
v/s Ratio Prot	c0.06	0.12			c0.24	0.20				c0.33		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.23			0.67	0.56				0.85		0.12
Uniform Delay, d1	45.0	13.8			30.6	29.0				31.7		22.2
Progression Factor	1.00	1.00			0.83	4.18				1.00		1.00
Incremental Delay, d2	0.5	0.3			2.8	1.1				7.1		0.1
Delay (s)	45.5	14.2			28.3	122.2				38.8		22.3
Level of Service	D	B			C	F				D		C
Approach Delay (s)		20.2			71.5			0.0			35.9	
Approach LOS		C			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	51.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



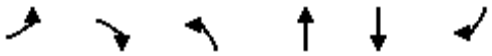
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	967	0	0	1157	479	452	58	970	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.93	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1402	1593	1405	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1402	1593	1405	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1051	0	0	1258	521	466	60	1000	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	267	0	85	35	0	0	0
Lane Group Flow (vph)	92	1051	0	0	1258	254	419	472	515	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	60.0			55.6	55.6	38.0	38.0	46.0			
Effective Green, g (s)	8.4	60.0			55.6	55.6	38.0	38.0	46.0			
Actuated g/C Ratio	0.07	0.53			0.49	0.49	0.33	0.33	0.40			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2535			2349	683	531	468	575			
v/s Ratio Prot	c0.05	0.22			c0.26		0.26	c0.34	c0.36			
v/s Ratio Perm						0.18						
v/c Ratio	0.75	0.41			0.54	0.37	0.79	1.01	0.90			
Uniform Delay, d1	51.8	16.4			20.2	18.3	34.4	38.0	31.8			
Progression Factor	1.38	0.29			0.86	0.80	1.00	1.00	1.00			
Incremental Delay, d2	15.9	0.4			0.7	1.2	7.7	43.9	16.4			
Delay (s)	87.6	5.2			18.0	15.8	42.0	81.9	48.1			
Level of Service	F	A			B	B	D	F	D			
Approach Delay (s)		11.8			17.4			58.8			0.0	
Approach LOS		B			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



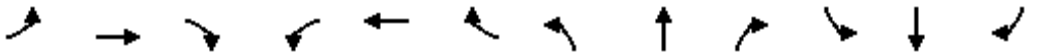
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	894	66	279	156	42	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	3217		3353	1427		3323
Flt Permitted	0.96		1.00	1.00		0.86
Satd. Flow (perm)	3217		3353	1427		2892
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	922	68	321	179	49	321
RTOR Reduction (vph)	6	0	0	81	0	0
Lane Group Flow (vph)	984	0	321	98	0	370
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	43.7		63.1	63.1		63.1
Effective Green, g (s)	43.2		62.6	62.6		62.6
Actuated g/C Ratio	0.38		0.55	0.55		0.55
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1219		1841	783		1588
v/s Ratio Prot	c0.31		0.10			
v/s Ratio Perm				0.07		c0.13
v/c Ratio	0.81		0.17	0.13		0.23
Uniform Delay, d1	31.7		12.8	12.4		13.3
Progression Factor	0.28		0.25	0.00		1.00
Incremental Delay, d2	3.3		0.2	0.3		0.3
Delay (s)	12.1		3.4	0.3		13.6
Level of Service	B		A	A		B
Approach Delay (s)	12.1		2.3			13.6
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



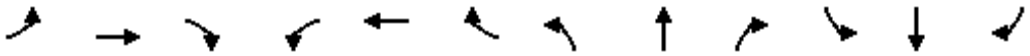
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	138	68	738	590	269	215
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	175	86	761	608	299	239
RTOR Reduction (vph)	0	36	0	0	0	204
Lane Group Flow (vph)	175	50	761	608	299	35
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	17.3	67.3	46.5	89.7	39.7	17.3
Effective Green, g (s)	16.8	66.8	46.0	89.2	39.2	16.8
Actuated g/C Ratio	0.15	0.59	0.40	0.78	0.34	0.15
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	878	1312	1381	606	221
v/s Ratio Prot	c0.10	0.03	c0.23	0.34	c0.17	0.02
v/s Ratio Perm						
v/c Ratio	0.71	0.06	0.58	0.44	0.49	0.16
Uniform Delay, d1	46.3	10.1	26.5	4.1	29.6	42.4
Progression Factor	1.41	6.00	0.51	0.13	1.00	1.00
Incremental Delay, d2	9.2	0.0	1.3	0.7	2.9	0.3
Delay (s)	74.4	60.7	14.7	1.2	32.4	42.8
Level of Service	E	E	B	A	C	D
Approach Delay (s)	69.9			8.7	37.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	547	1057	294	588	138	205	24	104	169	208	772
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.94	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2871	1365	1676	3353	1470	1593	1613	1444		1726	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2871	1365	1676	3353	1470	1593	1613	1444		1726	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	330	553	1068	363	726	170	220	26	112	172	212	788
RTOR Reduction (vph)	0	88	61	0	0	54	0	0	99	0	0	55
Lane Group Flow (vph)	330	839	633	363	726	116	123	123	13	0	384	733
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	919	592	249	1014	444	181	183	164		454	1169
v/s Ratio Prot	0.10	0.29	c0.46	c0.22	0.22		0.08	0.08			c0.22	0.28
v/s Ratio Perm						0.08			0.01			
v/c Ratio	0.57	0.91	1.07	1.46	0.72	0.26	0.68	0.67	0.08		0.85	0.63
Uniform Delay, d1	42.7	37.2	32.2	48.5	35.4	30.1	48.5	48.5	45.1		39.8	24.5
Progression Factor	0.92	0.75	0.68	0.71	0.62	0.48	1.00	1.00	1.00		0.69	0.38
Incremental Delay, d2	2.9	11.6	52.0	223.5	3.6	1.2	8.9	8.5	0.1		15.7	2.3
Delay (s)	42.3	39.3	74.0	258.1	25.7	15.6	57.4	57.0	45.3		43.3	11.7
Level of Service	D	D	E	F	C	B	E	E	D		D	B
Approach Delay (s)		52.2			91.3			53.4			22.0	
Approach LOS		D			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	55.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

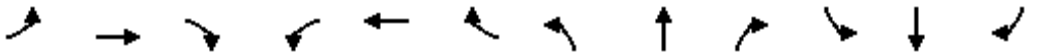


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	257	930	74	0	194	0	1056	71	0	344	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3307			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3307			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	268	969	77	0	202	0	1100	74	0	395	0
RTOR Reduction (vph)	0	0	625	0	0	183	0	4	0	0	0	0
Lane Group Flow (vph)	126	268	344	77	0	19	0	1170	0	0	395	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.6	15.6	40.6	11.2		11.2		52.4			27.6	
Effective Green, g (s)	14.6	14.6	39.6	10.7		10.7		51.9			27.1	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	195	411	781	157		138		1505			797	
v/s Ratio Prot	0.08	c0.08	0.15	c0.05				c0.35			0.12	
v/s Ratio Perm						0.01						
v/c Ratio	0.65	0.65	0.44	0.49		0.14		0.78			0.50	
Uniform Delay, d1	47.2	47.3	28.7	49.1		47.4		26.2			37.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.40			0.52	
Incremental Delay, d2	6.4	3.3	0.3	1.8		0.3		3.3			2.1	
Delay (s)	53.6	50.6	29.0	50.8		47.7		13.9			21.7	
Level of Service	D	D	C	D		D		B			C	
Approach Delay (s)		35.5			48.6			13.9			21.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	106	1	161	15	969	134	221	1107	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2355	1458		1676	3353	1375	1676	3314	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1832	1458		1676	3353	1375	1676	3314	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	125	1	189	16	1053	146	235	1178	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	42	0	1	0
Lane Group Flow (vph)	0	28	1	125	28	0	16	1053	104	235	1203	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.5	16.5		4.2	57.2	57.2	20.3	73.3	
Effective Green, g (s)		4.0	4.0	16.5	16.5		3.7	57.7	57.7	19.8	73.8	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	265	211		54	1697	695	291	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.31		c0.14	0.36	
v/s Ratio Perm			0.00	c0.07					0.08			
v/c Ratio		0.47	0.02	0.47	0.13		0.30	0.62	0.15	0.81	0.56	
Uniform Delay, d1		54.0	53.1	44.7	42.5		53.9	20.3	15.0	45.3	11.1	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.93	1.24	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.7	0.5	11.5	0.8	
Delay (s)		56.2	53.2	45.2	42.6		55.0	22.0	15.5	53.7	14.7	
Level of Service		E	D	D	D		D	C	B	D	B	
Approach Delay (s)		55.1			43.7			21.6			21.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	474	224	81	603	39	270	187	42	40	207	137
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3165		1676	3313		1676	1706		1667	1765	1479
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.60	1.00	1.00
Satd. Flow (perm)	1676	3165		1676	3313		1676	1706		1061	1765	1479
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	515	243	88	655	42	293	203	46	43	225	149
RTOR Reduction (vph)	0	49	0	0	4	0	0	7	0	0	0	94
Lane Group Flow (vph)	108	709	0	88	693	0	293	242	0	43	225	55
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	13.1	35.3		10.0	32.2		24.3	45.1		29.4	29.2	42.3
Effective Green, g (s)	13.1	35.3		10.0	32.2		24.3	45.1		29.4	29.2	42.3
Actuated g/C Ratio	0.11	0.31		0.09	0.28		0.21	0.40		0.26	0.26	0.37
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	980		147	935		357	674		318	452	548
v/s Ratio Prot	0.06	c0.22		0.05	c0.21		c0.17	0.14		0.01	c0.13	0.01
v/s Ratio Perm										0.02		0.03
v/c Ratio	0.56	0.72		0.60	0.74		0.82	0.36		0.14	0.50	0.10
Uniform Delay, d1	47.7	35.0		50.1	37.1		42.8	24.3		32.7	36.1	23.4
Progression Factor	0.74	1.04		1.00	1.00		1.00	1.11		1.00	1.00	1.00
Incremental Delay, d2	2.1	1.5		6.4	3.2		13.9	1.5		0.2	3.9	0.1
Delay (s)	37.7	37.9		56.5	40.3		56.8	28.5		32.9	40.0	23.5
Level of Service	D	D		E	D		E	C		C	D	C
Approach Delay (s)		37.9			42.1			43.8			33.4	
Approach LOS		D			D			D			C	

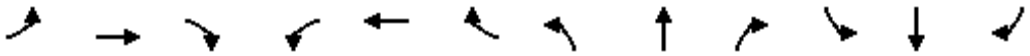
Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	506	0	0	669	0	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	550	0	0	727	0	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			550		914	275
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			550		914	275
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			1016		273	722

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	275	275	364	364	38
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	38
cSH	1700	1700	1700	1700	722
Volume to Capacity	0.16	0.16	0.21	0.21	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

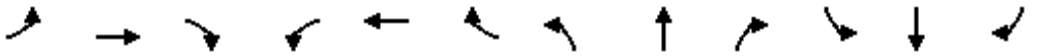
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	24.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	48	0	9	0	72	56	4	53	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
Hourly flow rate (vph)	1	0	0	52	0	10	0	78	61	4	58	0

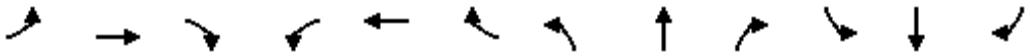
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	52	10	0	139	62
Volume Left (vph)	1	52	0	0	0	4
Volume Right (vph)	0	0	10	0	61	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.27	0.05
Departure Headway (s)	5.3	5.5	4.3	4.7	4.5	4.9
Degree Utilization, x	0.00	0.08	0.01	0.00	0.17	0.08
Capacity (veh/h)	637	620	789	762	789	725
Control Delay (s)	8.3	7.8	6.2	6.5	7.2	8.3
Approach Delay (s)	8.3	7.5		7.2		8.3
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	17.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	9	7	11	6	43	9	401	21	53	424	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98			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	0.93		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1676	1608		1672	1500			3319			1755	1473
Flt Permitted	0.72	1.00		0.75	1.00			0.95			0.92	1.00
Satd. Flow (perm)	1274	1608		1312	1500			3146			1621	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	10	8	12	7	47	10	436	23	58	461	41
RTOR Reduction (vph)	0	7	0	0	40	0	0	3	0	0	0	4
Lane Group Flow (vph)	53	11	0	12	14	0	0	466	0	0	519	37
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	183	231		188	215			2296			1183	1075
v/s Ratio Prot		0.01			0.01							
v/s Ratio Perm	c0.04			0.01				0.15			c0.32	0.02
v/c Ratio	0.29	0.05		0.06	0.06			0.20			0.44	0.03
Uniform Delay, d1	21.8	21.0		21.1	21.1			2.4			3.1	2.1
Progression Factor	1.00	1.00		1.00	1.00			0.52			1.00	0.87
Incremental Delay, d2	0.6	0.1		0.1	0.1			0.2			1.0	0.0
Delay (s)	22.4	21.1		21.2	21.2			1.5			4.0	1.9
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		22.1			21.2			1.5			3.9	
Approach LOS		C			C			A			A	

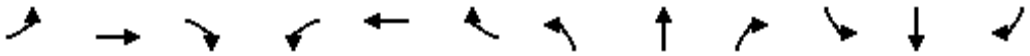
Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	22	0	4	0	124	19	4	102	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
Hourly flow rate (vph)	0	0	0	24	0	4	0	135	21	4	111	0

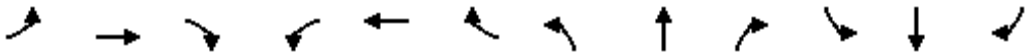
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	28	155	115
Volume Left (vph)	0	24	0	4
Volume Right (vph)	0	4	21	0
Hadj (s)	0.00	0.11	-0.05	0.04
Departure Headway (s)	4.5	4.6	4.0	4.2
Degree Utilization, x	0.00	0.04	0.17	0.13
Capacity (veh/h)	760	730	872	851
Control Delay (s)	7.5	7.8	7.9	7.8
Approach Delay (s)	0.0	7.8	7.9	7.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.8			
Level of Service	A			
Intersection Capacity Utilization	19.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	7	1	13	5	59	3	350	20	69	351	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.86		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1730		1669	1463		1670	1747		1669	1749	
Flt Permitted	0.71	1.00		0.75	1.00		0.52	1.00		0.52	1.00	
Satd. Flow (perm)	1255	1730		1321	1463		915	1747		915	1749	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	8	1	14	5	64	3	380	22	75	382	20
RTOR Reduction (vph)	0	1	0	0	56	0	0	2	0	0	2	0
Lane Group Flow (vph)	20	8	0	14	13	0	3	400	0	75	400	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Effective Green, g (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	154	212		162	179		687	1311		687	1313	
v/s Ratio Prot		0.00			0.01			c0.23			0.23	
v/s Ratio Perm	c0.02			0.01			0.00			0.08		
v/c Ratio	0.13	0.04		0.09	0.07		0.00	0.31		0.11	0.30	
Uniform Delay, d1	22.3	22.0		22.2	22.1		1.8	2.3		1.9	2.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.16	1.60	
Incremental Delay, d2	0.1	0.0		0.1	0.1		0.0	0.6		0.3	0.6	
Delay (s)	22.4	22.1		22.2	22.2		1.8	2.9		2.5	4.2	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		22.3			22.2			2.9			4.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	0	19	0	0	0	22	88	1	1	66	59
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	61	0	21	0	0	0	24	96	1	1	72	64
Pedestrians					4			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	250	255	105	276	286	100	136			101		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	250	255	105	276	286	100	136			101		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	100	98	100	100	100	98			100		
cM capacity (veh/h)	692	636	949	649	611	952	1448			1487		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	82	0	121	137
Volume Left	61	0	24	1
Volume Right	21	0	1	64
cSH	743	1700	1448	1487
Volume to Capacity	0.11	0.00	0.02	0.00
Queue Length 95th (ft)	9	0	1	0
Control Delay (s)	10.4	0.0	1.6	0.1
Lane LOS	B	A	A	A
Approach Delay (s)	10.4	0.0	1.6	0.1
Approach LOS	B	A		

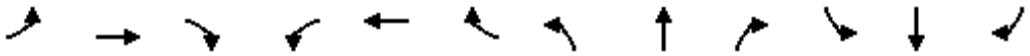
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	29.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	16	10	101	31	9	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	11	110	34	10	85

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	28	143	95
Volume Left (vph)	17	0	10
Volume Right (vph)	11	34	0
Hadj (s)	-0.07	-0.11	0.05
Departure Headway (s)	4.3	3.9	4.2
Degree Utilization, x	0.03	0.16	0.11
Capacity (veh/h)	785	891	852
Control Delay (s)	7.5	7.7	7.7
Approach Delay (s)	7.5	7.7	7.7
Approach LOS	A	A	A

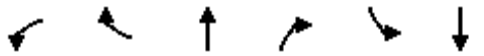
Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	17	2	19	15	47	5	305	18	44	318	11
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
Hourly flow rate (vph)	25	18	2	21	16	51	5	332	20	48	346	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	46	88	357	405
Volume Left (vph)	25	21	5	48
Volume Right (vph)	2	51	20	12
Hadj (s)	0.11	-0.27	0.00	0.04
Departure Headway (s)	6.0	5.5	4.8	4.8
Degree Utilization, x	0.08	0.14	0.48	0.54
Capacity (veh/h)	512	564	725	730
Control Delay (s)	9.5	9.4	12.1	13.2
Approach Delay (s)	9.5	9.4	12.1	13.2
Approach LOS	A	A	B	B

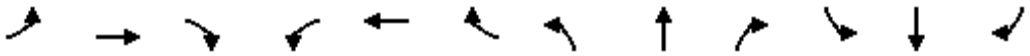
Intersection Summary				
Delay	12.2			
Level of Service	B			
Intersection Capacity Utilization	55.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	6	14	16	8	13
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	7	15	17	9	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	55	24			33	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55	24			33	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	947	1053			1579	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	33	23
Volume Left	15	0	9
Volume Right	7	17	0
cSH	976	1700	1579
Volume to Capacity	0.02	0.02	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.8	0.0	2.8
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	2.8
Approach LOS	A		

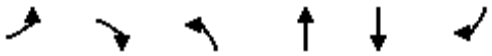
Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	23	2	11	14	5	6	20	5	6	20	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	25	2	12	15	5	7	22	5	7	22	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			36			93	80	45	94	78	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			36			93	80	45	94	78	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	97	99	99	97	100
cM capacity (veh/h)	1595			1563			852	798	1009	849	800	1050

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	27	33	34	28
Volume Left	0	12	7	7
Volume Right	2	5	5	0
cSH	1595	1563	837	811
Volume to Capacity	0.00	0.01	0.04	0.03
Queue Length 95th (ft)	0	1	3	3
Control Delay (s)	0.0	2.7	9.5	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.7	9.5	9.6
Approach LOS			A	A

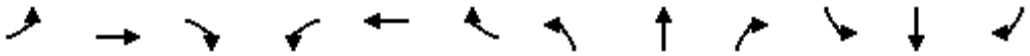
Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	24	23	103	71	21
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	26	25	112	77	23
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	262	102	108			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	262	102	108			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	98			
cM capacity (veh/h)	708	943	1473			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	53	137	100
Volume Left	27	25	0
Volume Right	26	0	23
cSH	807	1473	1700
Volume to Capacity	0.07	0.02	0.06
Queue Length 95th (ft)	5	1	0
Control Delay (s)	9.8	1.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	1.5	0.0
Approach LOS	A		

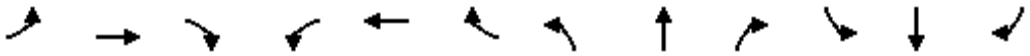
Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	27	0	8	25	24	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	29	0	9	27	26	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	37			5			90	102	5	117	88	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	37			5			90	102	5	117	88	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	97	99	100
cM capacity (veh/h)	1568			1613			867	769	1077	811	782	1044

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	62	36	35
Volume Left	0	30	0	26
Volume Right	1	29	27	0
cSH	1568	1613	981	804
Volume to Capacity	0.00	0.02	0.04	0.04
Queue Length 95th (ft)	0	1	3	3
Control Delay (s)	0.0	3.6	8.8	9.7
Lane LOS		A	A	A
Approach Delay (s)	0.0	3.6	8.8	9.7
Approach LOS			A	A

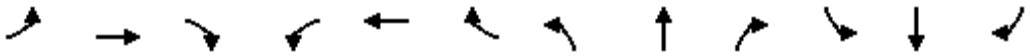
Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	45	14	8	53	20	6	7	10	15	16	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	49	15	9	58	22	7	8	11	16	17	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	89			68			159	167	67	173	164	81
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	89			68			159	167	67	173	164	81
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	99	99	98	98	100
cM capacity (veh/h)	1493			1528			776	713	989	754	716	968

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	64	88	25	35
Volume Left	0	9	7	16
Volume Right	15	22	11	1
cSH	1493	1528	831	740
Volume to Capacity	0.00	0.01	0.03	0.05
Queue Length 95th (ft)	0	0	2	4
Control Delay (s)	0.0	0.8	9.5	10.1
Lane LOS		A	A	B
Approach Delay (s)	0.0	0.8	9.5	10.1
Approach LOS			A	B

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	23.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	43	27	30	42	23	30	94	36	29	50	12
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
Hourly flow rate (vph)	8	47	29	33	46	25	33	102	39	32	54	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	84	103	174	99
Volume Left (vph)	8	33	33	32
Volume Right (vph)	29	25	39	13
Hadj (s)	-0.16	-0.05	-0.06	0.02
Departure Headway (s)	4.5	4.6	4.4	4.6
Degree Utilization, x	0.10	0.13	0.21	0.13
Capacity (veh/h)	738	729	780	741
Control Delay (s)	8.0	8.3	8.6	8.2
Approach Delay (s)	8.0	8.3	8.6	8.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	30.6%	ICU Level of Service	A	
Analysis Period (min)	15			

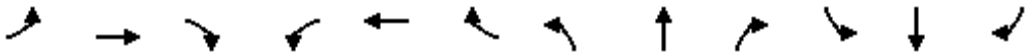
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	62	37	24	61	55	25	238	8	28	293	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1654			1735	1453	1676	1753		1676	1737	
Flt Permitted		0.91			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1523			1610	1453	1676	1753		1676	1737	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	67	40	26	66	60	27	259	9	30	318	27
RTOR Reduction (vph)	0	30	0	0	0	51	0	1	0	0	3	0
Lane Group Flow (vph)	0	110	0	0	92	9	27	267	0	30	342	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.9			8.9	8.9	1.6	34.4		3.2	36.0	
Effective Green, g (s)		8.9			8.9	8.9	1.6	34.4		3.2	36.0	
Actuated g/C Ratio		0.15			0.15	0.15	0.03	0.59		0.06	0.62	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		233			247	222	46	1039		92	1078	
v/s Ratio Prot							c0.02	0.15		0.02	c0.20	
v/s Ratio Perm		c0.07			0.06	0.01						
v/c Ratio		0.47			0.37	0.04	0.59	0.26		0.33	0.32	
Uniform Delay, d1		22.4			22.0	20.9	27.9	5.7		26.4	5.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			0.3	0.0	17.7	0.6		2.1	0.8	
Delay (s)		22.9			22.4	20.9	45.5	6.3		28.4	6.0	
Level of Service		C			C	C	D	A		C	A	
Approach Delay (s)		22.9			21.8			9.9			7.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	777	255	206	690	25	274	87	201	28	60	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.90			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3019		1676	3353	1334	1676	1706			1473	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3019		1676	3353	1334	1676	1706			1473	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	47	827	271	226	758	27	298	95	218	34	72	30
RTOR Reduction (vph)	0	23	0	0	0	16	0	72	0	0	9	0
Lane Group Flow (vph)	47	1075	0	226	758	11	298	241	0	0	127	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	7.4	38.6		18.7	49.9	49.9	24.9	24.9			21.3	
Effective Green, g (s)	7.9	39.6		19.2	50.9	50.9	24.4	24.4			20.8	
Actuated g/C Ratio	0.07	0.33		0.16	0.42	0.42	0.20	0.20			0.17	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	110	996		268	1422	565	340	346			255	
v/s Ratio Prot	0.03	c0.36		c0.13	0.23		c0.18	0.14			c0.09	
v/s Ratio Perm						0.01						
v/c Ratio	0.43	1.08		0.84	0.53	0.02	0.88	0.70			0.50	
Uniform Delay, d1	53.9	40.2		48.9	25.7	20.1	46.3	44.4			44.9	
Progression Factor	1.00	1.00		1.43	0.46	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.9	52.3		18.5	1.3	0.1	21.3	5.6			1.1	
Delay (s)	55.8	92.5		88.7	13.0	20.1	67.7	49.9			46.0	
Level of Service	E	F		F	B	C	E	D			D	
Approach Delay (s)		91.0			30.1			58.6			46.0	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

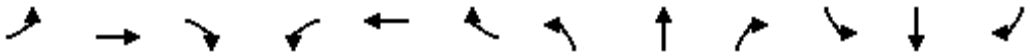
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	842	106	175	754	85	90	132	123	66	226	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.89	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3199		1676	3353	1271	1676	1765	1449	1676	1683	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3199		1676	3353	1271	1676	1765	1449	1676	1683	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	877	110	182	785	89	96	140	131	74	254	83
RTOR Reduction (vph)	0	7	0	0	0	46	0	0	98	0	10	0
Lane Group Flow (vph)	61	980	0	182	785	43	96	140	33	74	327	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.5		16.7	54.8	54.8	12.4	30.4	30.4	9.7	27.7	
Effective Green, g (s)	7.9	46.5		16.2	54.8	54.8	11.9	29.9	29.9	9.2	27.2	
Actuated g/C Ratio	0.07	0.39		0.13	0.46	0.46	0.10	0.25	0.25	0.08	0.23	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1239		226	1531	580	166	439	361	128	381	
v/s Ratio Prot	0.04	c0.31		c0.11	0.23		c0.06	c0.08		0.04	c0.19	
v/s Ratio Perm						0.03			0.02			
v/c Ratio	0.55	0.79		0.81	0.51	0.07	0.58	0.32	0.09	0.58	0.86	
Uniform Delay, d1	54.3	32.5		50.4	23.1	18.3	51.7	36.7	34.6	53.5	44.5	
Progression Factor	0.56	0.40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	1.5		18.0	1.2	0.3	4.0	0.3	0.1	5.1	16.9	
Delay (s)	31.8	14.6		68.4	24.4	18.6	55.6	37.1	34.7	58.6	61.5	
Level of Service	C	B		E	C	B	E	D	C	E	E	
Approach Delay (s)		15.6			31.5			41.1			61.0	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

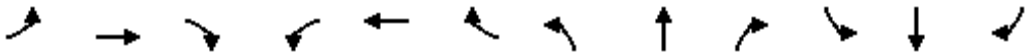
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	991	80	117	984	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3143		1676	3184			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3143		1676	3184			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	1077	87	121	1014	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1160	0	121	1061	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1361		173	1668			310	266		245	
v/s Ratio Prot	0.01	c0.37		c0.07	0.33			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.85		0.70	0.64			0.84	0.12		0.49	
Uniform Delay, d1	58.9	30.6		52.0	20.4			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.35			1.00	1.00		1.00	
Incremental Delay, d2	13.6	6.9		4.7	0.8			17.4	0.1		1.1	
Delay (s)	72.5	37.5		63.7	7.9			64.8	40.8		48.2	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		37.8			13.6			55.3			48.2	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

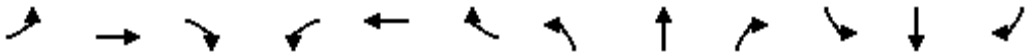
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	618	382	49	465	166	502	583	30	165	675	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	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	1.00	
Frt	1.00	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2954		1676	3162		3252	3236		1676	3115	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2954		1676	3162		3252	3236		1676	3115	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	679	420	59	560	200	564	655	34	177	726	197
RTOR Reduction (vph)	0	77	0	0	31	0	0	3	0	0	20	0
Lane Group Flow (vph)	160	1022	0	59	729	0	564	686	0	177	903	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.6	41.6		8.8	30.8		21.0	40.9		15.5	34.4	
Effective Green, g (s)	19.6	41.6		8.8	30.8		22.0	41.9		15.5	35.4	
Actuated g/C Ratio	0.16	0.35		0.07	0.26		0.18	0.35		0.13	0.29	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	273	1024		122	811		596	1129		216	918	
v/s Ratio Prot	0.10	c0.35		0.04	c0.23		c0.17	0.21		0.11	c0.29	
v/s Ratio Perm												
v/c Ratio	0.59	1.00		0.48	0.90		0.95	0.61		0.82	0.98	
Uniform Delay, d1	46.4	39.2		53.4	43.1		48.4	32.3		50.9	42.0	
Progression Factor	0.52	0.36		1.00	1.00		1.00	1.00		0.92	0.92	
Incremental Delay, d2	1.3	21.2		1.1	12.4		23.9	2.4		19.4	25.0	
Delay (s)	25.2	35.4		54.5	55.5		72.3	34.7		66.2	63.5	
Level of Service	C	D		D	E		E	C		E	E	
Approach Delay (s)		34.1			55.4			51.6			63.9	
Approach LOS		C			E			D			E	

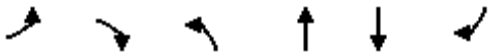
Intersection Summary			
HCM 2000 Control Delay	50.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	0	103	8	2	1	107	846	5	1	911	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.97	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1618	3346			3263	
Flt Permitted		0.80	1.00		0.82		0.25	1.00			0.95	
Satd. Flow (perm)		1387	1410		1383		429	3346			3115	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	106	0	108	17	4	2	116	920	5	1	969	80
RTOR Reduction (vph)	0	0	92	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	106	16	0	21	0	116	925	0	0	1047	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.4	17.4		16.9		95.6	95.6			95.6	
Effective Green, g (s)		17.4	17.4		17.4		96.6	96.6			96.6	
Actuated g/C Ratio		0.14	0.14		0.14		0.80	0.80			0.80	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		201	204		200		345	2693			2507	
v/s Ratio Prot								0.28				
v/s Ratio Perm		c0.08	0.01		0.02		0.27				c0.34	
v/c Ratio		0.53	0.08		0.11		0.34	0.34			0.42	
Uniform Delay, d1		47.5	44.4		44.5		3.1	3.2			3.4	
Progression Factor		1.00	1.00		1.00		0.54	0.55			1.00	
Incremental Delay, d2		1.2	0.1		0.1		2.0	0.3			0.5	
Delay (s)		48.6	44.4		44.6		3.7	2.0			4.0	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.5			44.6			2.2			4.0	
Approach LOS		D			D			A			A	

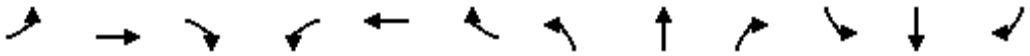
Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	55	93	868	951	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.98	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1554		1638	3279	3336	
Flt Permitted	0.99		0.25	1.00	1.00	
Satd. Flow (perm)	1554		438	3279	3336	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	26	72	100	933	991	17
RTOR Reduction (vph)	58	0	0	0	1	0
Lane Group Flow (vph)	40	0	100	933	1007	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	309		324	2429	2471	
v/s Ratio Prot	c0.03			0.28	c0.30	
v/s Ratio Perm			0.23			
v/c Ratio	0.13		0.31	0.38	0.41	
Uniform Delay, d1	32.9		4.3	4.7	4.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		2.5	0.5	0.5	
Delay (s)	33.0		6.8	5.1	5.3	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.3	5.3	
Approach LOS	C			A	A	

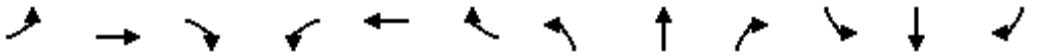
Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



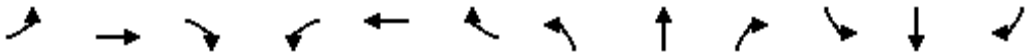
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	6	50	13	5	11	29	849	8	22	937	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1692	1461		1615		1676	3346		1676	3336	
Flt Permitted		0.80	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1415	1461		1456		1676	3346		1676	3336	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	49	8	64	17	6	14	31	894	8	24	1018	26
RTOR Reduction (vph)	0	0	56	0	12	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	57	8	0	25	0	31	902	0	24	1043	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		7.8	73.1		4.4	69.7	
Effective Green, g (s)		12.5	12.5		12.5		7.8	74.1		4.4	70.7	
Actuated g/C Ratio		0.12	0.12		0.12		0.08	0.74		0.04	0.71	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		176	182		182		130	2479		73	2358	
v/s Ratio Prot							0.02	c0.27		0.01	c0.31	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.32	0.04		0.14		0.24	0.36		0.33	0.44	
Uniform Delay, d1		39.9	38.5		38.9		43.3	4.6		46.4	6.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		0.1		0.3	0.4		1.0	0.6	
Delay (s)		40.3	38.5		39.1		43.7	5.0		47.3	6.9	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		39.4			39.1			6.3			7.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	272	153	0	374	1225	0	0	0	770	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.95			0.91	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3102			2831	1365				2515		1430
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3102			2831	1365				2515		1430
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	283	159	0	382	1250	0	0	0	837	0	175
RTOR Reduction (vph)	0	60	0	0	189	475	0	0	0	0	0	107
Lane Group Flow (vph)	106	382	0	0	693	275	0	0	0	837	0	68
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	61.4			41.4	41.4				44.1		44.1
Effective Green, g (s)	16.0	61.4			41.4	41.4				44.6		44.6
Actuated g/C Ratio	0.14	0.54			0.36	0.36				0.39		0.39
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1670			1028	495				983		559
v/s Ratio Prot	c0.06	0.12			c0.24	0.20				c0.33		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.23			0.67	0.56				0.85		0.12
Uniform Delay, d1	45.0	13.8			30.6	29.0				31.7		22.2
Progression Factor	1.00	1.00			0.83	4.18				1.00		1.00
Incremental Delay, d2	0.5	0.3			2.8	1.1				7.1		0.1
Delay (s)	45.5	14.2			28.3	122.2				38.8		22.3
Level of Service	D	B			C	F				D		C
Approach Delay (s)		20.2			71.5			0.0			35.9	
Approach LOS		C			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	51.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



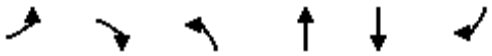
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	967	0	0	1157	479	452	58	970	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.93	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1402	1593	1405	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1402	1593	1405	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1051	0	0	1258	521	466	60	1000	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	267	0	85	35	0	0	0
Lane Group Flow (vph)	92	1051	0	0	1258	254	419	472	515	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	60.0			55.6	55.6	38.0	38.0	46.0			
Effective Green, g (s)	8.4	60.0			55.6	55.6	38.0	38.0	46.0			
Actuated g/C Ratio	0.07	0.53			0.49	0.49	0.33	0.33	0.40			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2535			2349	683	531	468	575			
v/s Ratio Prot	c0.05	0.22			c0.26		0.26	c0.34	c0.36			
v/s Ratio Perm						0.18						
v/c Ratio	0.75	0.41			0.54	0.37	0.79	1.01	0.90			
Uniform Delay, d1	51.8	16.4			20.2	18.3	34.4	38.0	31.8			
Progression Factor	1.38	0.29			0.86	0.80	1.00	1.00	1.00			
Incremental Delay, d2	15.9	0.4			0.7	1.2	7.7	43.9	16.4			
Delay (s)	87.6	5.2			18.0	15.8	42.0	81.9	48.1			
Level of Service	F	A			B	B	D	F	D			
Approach Delay (s)		11.8			17.4			58.8			0.0	
Approach LOS		B			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



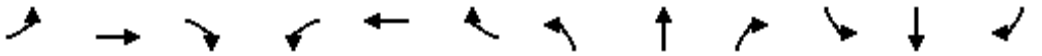
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	894	66	279	156	42	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	3217		3353	1427		3323
Flt Permitted	0.96		1.00	1.00		0.86
Satd. Flow (perm)	3217		3353	1427		2892
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	922	68	321	179	49	321
RTOR Reduction (vph)	6	0	0	81	0	0
Lane Group Flow (vph)	984	0	321	98	0	370
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	43.7		63.1	63.1		63.1
Effective Green, g (s)	43.2		62.6	62.6		62.6
Actuated g/C Ratio	0.38		0.55	0.55		0.55
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1219		1841	783		1588
v/s Ratio Prot	c0.31		0.10			
v/s Ratio Perm				0.07		c0.13
v/c Ratio	0.81		0.17	0.13		0.23
Uniform Delay, d1	31.7		12.8	12.4		13.3
Progression Factor	0.28		0.25	0.00		1.00
Incremental Delay, d2	3.3		0.2	0.3		0.3
Delay (s)	12.1		3.4	0.3		13.6
Level of Service	B		A	A		B
Approach Delay (s)	12.1		2.3			13.6
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



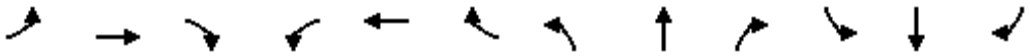
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	138	68	738	590	269	215
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	175	86	761	608	299	239
RTOR Reduction (vph)	0	36	0	0	0	204
Lane Group Flow (vph)	175	50	761	608	299	35
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	17.3	67.3	46.5	89.7	39.7	17.3
Effective Green, g (s)	16.8	66.8	46.0	89.2	39.2	16.8
Actuated g/C Ratio	0.15	0.59	0.40	0.78	0.34	0.15
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	878	1312	1381	606	221
v/s Ratio Prot	c0.10	0.03	c0.23	0.34	c0.17	0.02
v/s Ratio Perm						
v/c Ratio	0.71	0.06	0.58	0.44	0.49	0.16
Uniform Delay, d1	46.3	10.1	26.5	4.1	29.6	42.4
Progression Factor	1.41	6.00	0.51	0.13	1.00	1.00
Incremental Delay, d2	9.2	0.0	1.3	0.7	2.9	0.3
Delay (s)	74.4	60.7	14.7	1.2	32.4	42.8
Level of Service	E	E	B	A	C	D
Approach Delay (s)	69.9			8.7	37.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	547	1057	294	588	138	205	24	104	169	208	772
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.94	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2871	1365	1676	3353	1470	1593	1613	1444		1726	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2871	1365	1676	3353	1470	1593	1613	1444		1726	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	330	553	1068	363	726	170	220	26	112	172	212	788
RTOR Reduction (vph)	0	88	61	0	0	54	0	0	99	0	0	55
Lane Group Flow (vph)	330	839	633	363	726	116	123	123	13	0	384	733
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	919	592	249	1014	444	181	183	164		454	1169
v/s Ratio Prot	0.10	0.29	c0.46	c0.22	0.22		0.08	0.08			c0.22	0.28
v/s Ratio Perm						0.08			0.01			
v/c Ratio	0.57	0.91	1.07	1.46	0.72	0.26	0.68	0.67	0.08		0.85	0.63
Uniform Delay, d1	42.7	37.2	32.2	48.5	35.4	30.1	48.5	48.5	45.1		39.8	24.5
Progression Factor	0.92	0.75	0.68	0.71	0.62	0.48	1.00	1.00	1.00		0.69	0.38
Incremental Delay, d2	2.9	11.6	52.0	223.5	3.6	1.2	8.9	8.5	0.1		15.7	2.3
Delay (s)	42.3	39.3	74.0	258.1	25.7	15.7	57.4	57.0	45.3		43.3	11.7
Level of Service	D	D	E	F	C	B	E	E	D		D	B
Approach Delay (s)		52.2			91.3			53.4			22.0	
Approach LOS		D			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	55.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

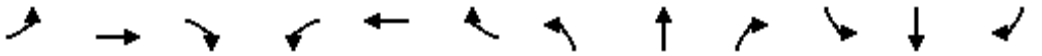


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	257	930	74	0	194	0	1056	71	0	344	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3307			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3307			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	268	969	77	0	202	0	1100	74	0	395	0
RTOR Reduction (vph)	0	0	625	0	0	183	0	4	0	0	0	0
Lane Group Flow (vph)	126	268	344	77	0	19	0	1170	0	0	395	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.6	15.6	40.6	11.2		11.2		52.4			27.6	
Effective Green, g (s)	14.6	14.6	39.6	10.7		10.7		51.9			27.1	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	195	411	781	157		138		1505			797	
v/s Ratio Prot	0.08	c0.08	0.15	c0.05				c0.35			0.12	
v/s Ratio Perm						0.01						
v/c Ratio	0.65	0.65	0.44	0.49		0.14		0.78			0.50	
Uniform Delay, d1	47.2	47.3	28.7	49.1		47.4		26.2			37.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.40			0.52	
Incremental Delay, d2	6.4	3.3	0.3	1.8		0.3		3.3			2.1	
Delay (s)	53.6	50.6	29.0	50.8		47.7		13.9			21.7	
Level of Service	D	D	C	D		D		B			C	
Approach Delay (s)		35.5			48.6			13.9			21.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	106	1	161	15	969	134	221	1107	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2355	1458		1676	3353	1375	1676	3314	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1832	1458		1676	3353	1375	1676	3314	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	125	1	189	16	1053	146	235	1178	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	42	0	1	0
Lane Group Flow (vph)	0	28	1	125	28	0	16	1053	104	235	1203	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.5	16.5		4.2	57.2	57.2	20.3	73.3	
Effective Green, g (s)		4.0	4.0	16.5	16.5		3.7	57.7	57.7	19.8	73.8	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	265	211		54	1697	695	291	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.31		c0.14	0.36	
v/s Ratio Perm			0.00	c0.07					0.08			
v/c Ratio		0.47	0.02	0.47	0.13		0.30	0.62	0.15	0.81	0.56	
Uniform Delay, d1		54.0	53.1	44.7	42.5		53.9	20.3	15.0	45.3	11.1	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.93	1.24	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.7	0.5	11.5	0.8	
Delay (s)		56.2	53.2	45.2	42.6		55.0	22.0	15.5	53.7	14.7	
Level of Service		E	D	D	D		D	C	B	D	B	
Approach Delay (s)		55.1			43.7			21.6			21.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	474	224	82	603	39	270	186	43	40	206	137
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3165		1676	3313		1676	1705		1667	1765	1479
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.60	1.00	1.00
Satd. Flow (perm)	1676	3165		1676	3313		1676	1705		1061	1765	1479
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	515	243	89	655	42	293	202	47	43	224	149
RTOR Reduction (vph)	0	49	0	0	4	0	0	7	0	0	0	94
Lane Group Flow (vph)	108	709	0	89	693	0	293	242	0	43	224	55
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	13.1	35.3		10.0	32.2		24.3	45.1		29.4	29.2	42.3
Effective Green, g (s)	13.1	35.3		10.0	32.2		24.3	45.1		29.4	29.2	42.3
Actuated g/C Ratio	0.11	0.31		0.09	0.28		0.21	0.40		0.26	0.26	0.37
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	980		147	935		357	674		318	452	548
v/s Ratio Prot	0.06	c0.22		0.05	c0.21		c0.17	0.14		0.01	c0.13	0.01
v/s Ratio Perm										0.02		0.03
v/c Ratio	0.56	0.72		0.61	0.74		0.82	0.36		0.14	0.50	0.10
Uniform Delay, d1	47.7	35.0		50.1	37.1		42.8	24.3		32.7	36.1	23.4
Progression Factor	0.74	1.04		1.00	1.00		1.01	1.11		1.00	1.00	1.00
Incremental Delay, d2	2.1	1.5		6.9	3.2		13.9	1.5		0.2	3.8	0.1
Delay (s)	37.7	37.9		57.0	40.3		57.0	28.3		32.9	40.0	23.5
Level of Service	D	D		E	D		E	C		C	D	C
Approach Delay (s)		37.9			42.2			43.8			33.3	
Approach LOS		D			D			D			C	

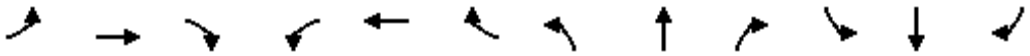
Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	507	0	0	669	0	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	551	0	0	727	0	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			551		915	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			551		915	276
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			1015		272	722

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	276	276	364	364	38
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	38
cSH	1700	1700	1700	1700	722
Volume to Capacity	0.16	0.16	0.21	0.21	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

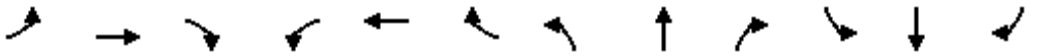
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	24.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	49	0	9	0	73	57	4	54	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
Hourly flow rate (vph)	1	0	0	53	0	10	0	79	62	4	59	0

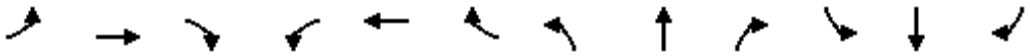
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	53	10	0	141	63
Volume Left (vph)	1	53	0	0	0	4
Volume Right (vph)	0	0	10	0	62	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.27	0.05
Departure Headway (s)	5.3	5.5	4.3	4.7	4.5	4.9
Degree Utilization, x	0.00	0.08	0.01	0.00	0.17	0.09
Capacity (veh/h)	635	619	787	761	788	724
Control Delay (s)	8.3	7.8	6.2	6.5	7.2	8.3
Approach Delay (s)	8.3	7.6		7.2		8.3
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.6			
Level of Service	A			
Intersection Capacity Utilization	18.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	9	7	11	6	44	9	400	21	54	423	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98			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	0.93		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1676	1608		1672	1499			3319			1755	1473
Flt Permitted	0.72	1.00		0.75	1.00			0.95			0.92	1.00
Satd. Flow (perm)	1273	1608		1312	1499			3145			1619	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	10	8	12	7	48	10	435	23	59	460	42
RTOR Reduction (vph)	0	7	0	0	41	0	0	3	0	0	0	4
Lane Group Flow (vph)	53	11	0	12	14	0	0	465	0	0	519	38
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	183	231		188	215			2295			1181	1075
v/s Ratio Prot		0.01			0.01							
v/s Ratio Perm	c0.04			0.01				0.15			c0.32	0.03
v/c Ratio	0.29	0.05		0.06	0.06			0.20			0.44	0.04
Uniform Delay, d1	21.8	21.0		21.1	21.1			2.4			3.1	2.1
Progression Factor	1.00	1.00		1.00	1.00			0.54			1.00	0.87
Incremental Delay, d2	0.6	0.1		0.1	0.1			0.2			1.0	0.1
Delay (s)	22.4	21.1		21.2	21.2			1.5			4.0	1.9
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		22.1			21.2			1.5			3.9	
Approach LOS		C			C			A			A	

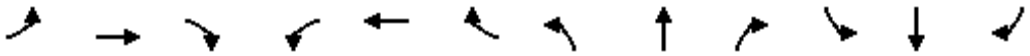
Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	27	0	4	0	125	24	4	104	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
Hourly flow rate (vph)	0	0	0	29	0	4	0	136	26	4	113	0

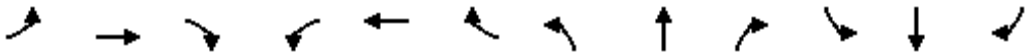
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	34	162	117
Volume Left (vph)	0	29	0	4
Volume Right (vph)	0	4	26	0
Hadj (s)	0.00	0.13	-0.06	0.04
Departure Headway (s)	4.5	4.6	4.0	4.2
Degree Utilization, x	0.00	0.04	0.18	0.14
Capacity (veh/h)	754	723	872	846
Control Delay (s)	7.5	7.8	7.9	7.8
Approach Delay (s)	0.0	7.8	7.9	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.9		
Level of Service	A		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	7	1	13	6	59	3	345	20	69	345	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.86		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1730		1669	1472		1670	1747		1669	1745	
Flt Permitted	0.71	1.00		0.75	1.00		0.52	1.00		0.52	1.00	
Satd. Flow (perm)	1253	1730		1321	1472		918	1747		921	1745	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	8	1	14	7	64	3	375	22	75	375	25
RTOR Reduction (vph)	0	1	0	0	56	0	0	2	0	0	2	0
Lane Group Flow (vph)	24	8	0	14	15	0	3	395	0	75	398	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Effective Green, g (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	153	212		162	180		689	1311		691	1310	
v/s Ratio Prot		0.00			0.01			0.23			c0.23	
v/s Ratio Perm	c0.02			0.01			0.00			0.08		
v/c Ratio	0.16	0.04		0.09	0.08		0.00	0.30		0.11	0.30	
Uniform Delay, d1	22.4	22.0		22.2	22.2		1.8	2.3		1.9	2.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.16	1.60	
Incremental Delay, d2	0.2	0.0		0.1	0.1		0.0	0.6		0.3	0.6	
Delay (s)	22.5	22.1		22.2	22.2		1.8	2.9		2.5	4.2	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		22.4			22.2			2.9			4.0	
Approach LOS		C			C			A			A	

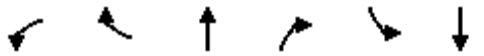
Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	0	23	0	0	0	27	86	1	1	66	68
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	70	0	25	0	0	0	29	93	1	1	72	74
Pedestrians					4			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	264	268	110	294	305	98	146			99		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	264	268	110	294	305	98	146			99		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	100	97	100	100	100	98			100		
cM capacity (veh/h)	676	622	943	627	594	955	1436			1489		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	95	0	124	147
Volume Left	70	0	29	1
Volume Right	25	0	1	74
cSH	731	1700	1436	1489
Volume to Capacity	0.13	0.00	0.02	0.00
Queue Length 95th (ft)	11	0	2	0
Control Delay (s)	10.7	0.0	1.9	0.1
Lane LOS	B	A	A	A
Approach Delay (s)	10.7	0.0	1.9	0.1
Approach LOS	B	A		

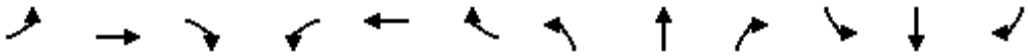
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	30.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	14	12	102	29	10	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	13	111	32	11	87

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	28	142	98
Volume Left (vph)	15	0	11
Volume Right (vph)	13	32	0
Hadj (s)	-0.14	-0.10	0.06
Departure Headway (s)	4.3	4.0	4.2
Degree Utilization, x	0.03	0.16	0.11
Capacity (veh/h)	795	889	852
Control Delay (s)	7.4	7.7	7.7
Approach Delay (s)	7.4	7.7	7.7
Approach LOS	A	A	A

Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	17	2	19	16	47	5	302	18	44	314	9
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
Hourly flow rate (vph)	23	18	2	21	17	51	5	328	20	48	341	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	43	89	353	399
Volume Left (vph)	23	21	5	48
Volume Right (vph)	2	51	20	10
Hadj (s)	0.11	-0.26	0.00	0.04
Departure Headway (s)	6.0	5.5	4.8	4.8
Degree Utilization, x	0.07	0.14	0.47	0.53
Capacity (veh/h)	515	568	728	731
Control Delay (s)	9.4	9.4	12.0	13.0
Approach Delay (s)	9.4	9.4	12.0	13.0
Approach LOS	A	A	B	B

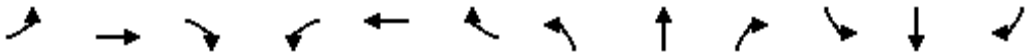
Intersection Summary				
Delay	12.1			
Level of Service	B			
Intersection Capacity Utilization	54.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	0	0	16	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	0	0	17	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9	9			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9	9			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1012	1073			1600	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	17	0
Volume Left	15	0	0
Volume Right	0	17	0
cSH	1012	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

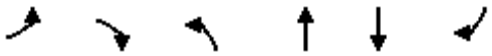
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	16	1	11	11	6	3	26	5	8	26	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	17	1	12	12	7	3	28	5	9	28	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	18			27			85	69	37	87	67	20
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	18			27			85	69	37	87	67	20
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	97	99	99	97	100
cM capacity (veh/h)	1598			1574			857	809	1019	853	812	1053

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	30	37	37
Volume Left	0	12	3	9
Volume Right	1	7	5	0
cSH	1598	1574	838	821
Volume to Capacity	0.00	0.01	0.04	0.05
Queue Length 95th (ft)	0	1	3	4
Control Delay (s)	0.0	2.9	9.5	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.9	9.5	9.6
Approach LOS			A	A

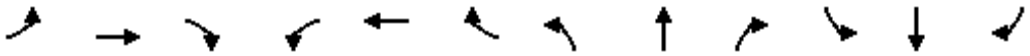
Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	22	22	106	74	19
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	24	24	115	80	21
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	265	104	109			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265	104	109			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	706	941	1471			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	47	139	101
Volume Left	23	24	0
Volume Right	24	0	21
cSH	809	1471	1700
Volume to Capacity	0.06	0.02	0.06
Queue Length 95th (ft)	5	1	0
Control Delay (s)	9.7	1.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	1.4	0.0
Approach LOS	A		

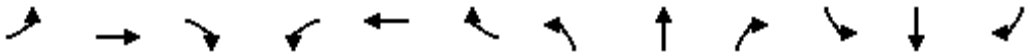
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	13	0	8	25	11	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	14	0	9	27	12	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			5			82	87	5	109	80	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			5			82	87	5	109	80	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	99	99	100
cM capacity (veh/h)	1588			1613			877	783	1077	821	790	1054

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	47	36	21
Volume Left	0	30	0	12
Volume Right	1	14	27	0
cSH	1588	1613	987	808
Volume to Capacity	0.00	0.02	0.04	0.03
Queue Length 95th (ft)	0	1	3	2
Control Delay (s)	0.0	4.8	8.8	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.8	8.8	9.6
Approach LOS			A	A

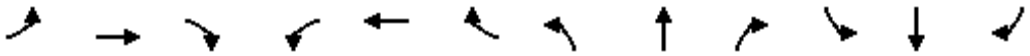
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	35	11	8	43	22	2	10	10	17	20	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	38	12	9	47	24	2	11	11	18	22	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	81			54			139	146	54	152	140	72
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	81			54			139	146	54	152	140	72
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	99	99	98	97	100
cM capacity (veh/h)	1504			1546			796	732	1005	776	738	980

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	79	24	41
Volume Left	0	9	2	18
Volume Right	12	24	11	1
cSH	1504	1546	842	760
Volume to Capacity	0.00	0.01	0.03	0.05
Queue Length 95th (ft)	0	0	2	4
Control Delay (s)	0.0	0.8	9.4	10.0
Lane LOS		A	A	B
Approach Delay (s)	0.0	0.8	9.4	10.0
Approach LOS			A	B

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	25.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	38	24	30	34	25	29	94	36	32	48	12
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
Hourly flow rate (vph)	8	41	26	33	37	27	32	102	39	35	52	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	75	97	173	100
Volume Left (vph)	8	33	32	35
Volume Right (vph)	26	27	39	13
Hadj (s)	-0.15	-0.07	-0.07	0.03
Departure Headway (s)	4.5	4.6	4.4	4.5
Degree Utilization, x	0.09	0.12	0.21	0.13
Capacity (veh/h)	739	734	789	749
Control Delay (s)	8.0	8.2	8.5	8.2
Approach Delay (s)	8.0	8.2	8.5	8.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.3		
Level of Service	A		
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

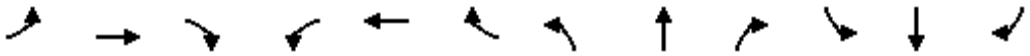
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	60	39	24	59	55	26	238	8	28	293	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1649			1734	1453	1676	1753		1676	1741	
Flt Permitted		0.92			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1534			1610	1453	1676	1753		1676	1741	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	65	42	26	64	60	28	259	9	30	318	23
RTOR Reduction (vph)	0	35	0	0	0	51	0	1	0	0	3	0
Lane Group Flow (vph)	0	101	0	0	90	9	28	267	0	30	338	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.8			8.8	8.8	3.2	34.5		3.2	34.5	
Effective Green, g (s)		8.8			8.8	8.8	3.2	34.5		3.2	34.5	
Actuated g/C Ratio		0.15			0.15	0.15	0.06	0.59		0.06	0.59	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		232			244	220	92	1042		92	1035	
v/s Ratio Prot							0.02	0.15		c0.02	c0.19	
v/s Ratio Perm		c0.07			0.06	0.01						
v/c Ratio		0.44			0.37	0.04	0.30	0.26		0.33	0.33	
Uniform Delay, d1		22.3			22.1	21.0	26.3	5.6		26.4	5.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			0.3	0.0	1.9	0.6		2.1	0.8	
Delay (s)		22.8			22.4	21.0	28.2	6.2		28.4	6.8	
Level of Service		C			C	C	C	A		C	A	
Approach Delay (s)		22.8			21.9			8.3			8.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	777	255	206	689	25	274	87	201	25	59	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.90			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3020		1676	3353	1334	1676	1706			1474	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3020		1676	3353	1334	1676	1706			1474	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	47	827	271	226	757	27	298	95	218	30	71	29
RTOR Reduction (vph)	0	23	0	0	0	16	0	72	0	0	9	0
Lane Group Flow (vph)	47	1075	0	226	757	11	298	241	0	0	121	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	7.4	38.7		18.7	50.0	50.0	24.9	24.9			21.2	
Effective Green, g (s)	7.9	39.7		19.2	51.0	51.0	24.4	24.4			20.7	
Actuated g/C Ratio	0.07	0.33		0.16	0.42	0.42	0.20	0.20			0.17	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	110	999		268	1425	566	340	346			254	
v/s Ratio Prot	0.03	c0.36		c0.13	0.23		c0.18	0.14			c0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.43	1.08		0.84	0.53	0.02	0.88	0.70			0.48	
Uniform Delay, d1	53.9	40.1		48.9	25.6	20.0	46.3	44.4			44.8	
Progression Factor	1.00	1.00		1.44	0.46	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.9	51.1		18.5	1.3	0.1	21.3	5.6			1.0	
Delay (s)	55.8	91.3		88.8	13.0	20.1	67.7	49.9			45.8	
Level of Service	E	F		F	B	C	E	D			D	
Approach Delay (s)		89.8			30.1			58.6			45.8	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	60.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

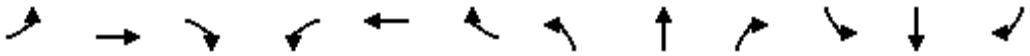
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	840	106	175	752	86	90	133	123	68	227	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.89	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3199		1676	3353	1271	1676	1765	1449	1676	1683	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3199		1676	3353	1271	1676	1765	1449	1676	1683	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	875	110	182	783	90	96	141	131	76	255	83
RTOR Reduction (vph)	0	7	0	0	0	46	0	0	98	0	10	0
Lane Group Flow (vph)	61	978	0	182	783	44	96	141	33	76	328	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.5		16.7	54.8	54.8	12.4	30.4	30.4	9.7	27.7	
Effective Green, g (s)	7.9	46.5		16.2	54.8	54.8	11.9	29.9	29.9	9.2	27.2	
Actuated g/C Ratio	0.07	0.39		0.13	0.46	0.46	0.10	0.25	0.25	0.08	0.23	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1239		226	1531	580	166	439	361	128	381	
v/s Ratio Prot	0.04	c0.31		c0.11	0.23		c0.06	c0.08		0.05	c0.19	
v/s Ratio Perm						0.03			0.02			
v/c Ratio	0.55	0.79		0.81	0.51	0.08	0.58	0.32	0.09	0.59	0.86	
Uniform Delay, d1	54.3	32.4		50.4	23.1	18.4	51.7	36.8	34.6	53.6	44.6	
Progression Factor	0.56	0.40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	1.5		18.0	1.2	0.3	4.0	0.3	0.1	6.0	17.5	
Delay (s)	31.5	14.5		68.4	24.3	18.6	55.6	37.1	34.7	59.6	62.1	
Level of Service	C	B		E	C	B	E	D	C	E	E	
Approach Delay (s)		15.5			31.4			41.1			61.7	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

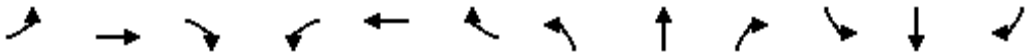
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	991	80	117	983	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3143		1676	3184			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3143		1676	3184			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	1077	87	121	1013	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1160	0	121	1060	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1361		173	1668			310	266		245	
v/s Ratio Prot	0.01	c0.37		c0.07	0.33			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.85		0.70	0.64			0.84	0.12		0.49	
Uniform Delay, d1	58.9	30.6		52.0	20.4			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.35			1.00	1.00		1.00	
Incremental Delay, d2	13.6	6.9		4.7	0.8			17.4	0.1		1.1	
Delay (s)	72.5	37.5		63.7	7.9			64.8	40.8		48.2	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		37.8			13.6			55.3			48.2	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

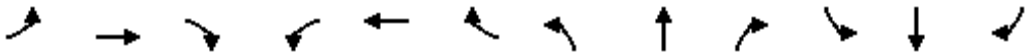
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	618	381	49	464	167	501	583	30	165	675	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	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	1.00	
Frt	1.00	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2954		1676	3161		3252	3236		1676	3115	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2954		1676	3161		3252	3236		1676	3115	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	679	419	59	559	201	563	655	34	177	726	197
RTOR Reduction (vph)	0	76	0	0	31	0	0	3	0	0	20	0
Lane Group Flow (vph)	160	1022	0	59	729	0	563	686	0	177	903	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.6	41.6		8.8	30.8		21.0	40.9		15.5	34.4	
Effective Green, g (s)	19.6	41.6		8.8	30.8		22.0	41.9		15.5	35.4	
Actuated g/C Ratio	0.16	0.35		0.07	0.26		0.18	0.35		0.13	0.29	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	273	1024		122	811		596	1129		216	918	
v/s Ratio Prot	0.10	c0.35		0.04	c0.23		c0.17	0.21		0.11	c0.29	
v/s Ratio Perm												
v/c Ratio	0.59	1.00		0.48	0.90		0.94	0.61		0.82	0.98	
Uniform Delay, d1	46.4	39.2		53.4	43.1		48.4	32.3		50.9	42.0	
Progression Factor	0.52	0.36		1.00	1.00		1.00	1.00		0.92	0.92	
Incremental Delay, d2	1.3	21.2		1.1	12.4		23.6	2.4		19.4	25.0	
Delay (s)	25.2	35.4		54.5	55.5		72.0	34.7		66.2	63.5	
Level of Service	C	D		D	E		E	C		E	E	
Approach Delay (s)		34.1			55.4			51.5			64.0	
Approach LOS		C			E			D			E	

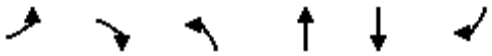
Intersection Summary			
HCM 2000 Control Delay	50.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	0	103	8	2	1	107	847	5	1	911	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.96	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1618	3346			3265	
Flt Permitted		0.80	1.00		0.82		0.25	1.00			0.95	
Satd. Flow (perm)		1387	1410		1384		430	3346			3117	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	104	0	108	17	4	2	116	921	5	1	969	78
RTOR Reduction (vph)	0	0	92	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	104	16	0	21	0	116	926	0	0	1045	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.3	17.3		16.8		95.7	95.7			95.7	
Effective Green, g (s)		17.3	17.3		17.3		96.7	96.7			96.7	
Actuated g/C Ratio		0.14	0.14		0.14		0.81	0.81			0.81	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		199	203		199		346	2696			2511	
v/s Ratio Prot								0.28				
v/s Ratio Perm		c0.07	0.01		0.02		0.27				c0.34	
v/c Ratio		0.52	0.08		0.11		0.34	0.34			0.42	
Uniform Delay, d1		47.5	44.4		44.6		3.1	3.1			3.4	
Progression Factor		1.00	1.00		1.00		0.54	0.55			1.00	
Incremental Delay, d2		1.1	0.1		0.1		2.0	0.3			0.5	
Delay (s)		48.7	44.5		44.7		3.7	2.0			3.9	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.5			44.7			2.2			3.9	
Approach LOS		D			D			A			A	

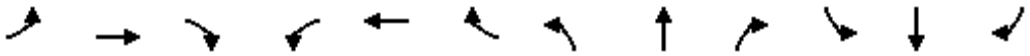
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	55	94	866	949	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.98	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1554		1638	3279	3336	
Flt Permitted	0.99		0.25	1.00	1.00	
Satd. Flow (perm)	1554		439	3279	3336	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	26	72	101	931	989	17
RTOR Reduction (vph)	58	0	0	0	1	0
Lane Group Flow (vph)	40	0	101	931	1005	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	309		325	2429	2471	
v/s Ratio Prot	c0.03			0.28	c0.30	
v/s Ratio Perm			0.23			
v/c Ratio	0.13		0.31	0.38	0.41	
Uniform Delay, d1	32.9		4.4	4.7	4.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		2.5	0.5	0.5	
Delay (s)	33.0		6.8	5.1	5.3	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.3	5.3	
Approach LOS	C			A	A	

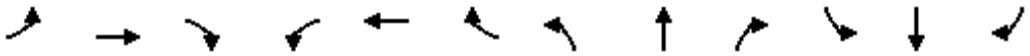
Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	6	50	13	5	11	29	847	8	22	935	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1692	1461		1615		1676	3346		1676	3336	
Flt Permitted		0.80	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1415	1461		1456		1676	3346		1676	3336	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	49	8	64	17	6	14	31	892	8	24	1016	27
RTOR Reduction (vph)	0	0	56	0	12	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	57	8	0	25	0	31	900	0	24	1042	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		7.8	73.1		4.4	69.7	
Effective Green, g (s)		12.5	12.5		12.5		7.8	74.1		4.4	70.7	
Actuated g/C Ratio		0.12	0.12		0.12		0.08	0.74		0.04	0.71	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		176	182		182		130	2479		73	2358	
v/s Ratio Prot							0.02	c0.27		0.01	c0.31	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.32	0.04		0.14		0.24	0.36		0.33	0.44	
Uniform Delay, d1		39.9	38.5		38.9		43.3	4.6		46.4	6.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		0.1		0.3	0.4		1.0	0.6	
Delay (s)		40.3	38.5		39.1		43.7	5.0		47.3	6.8	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		39.4			39.1			6.3			7.8	
Approach LOS		D			D			A			A	

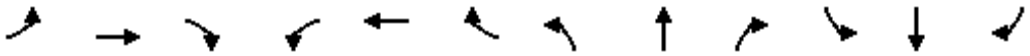
Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	219	5	27	5	129	41	10	71	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
Hourly flow rate (vph)	1	1	1	238	5	29	5	140	45	11	77	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	241	32	5	185	89
Volume Left (vph)	1	238	0	5	0	11
Volume Right (vph)	1	0	29	0	45	1
Hadj (s)	-0.10	0.53	-0.61	0.53	-0.13	0.05
Departure Headway (s)	5.6	5.8	4.6	5.9	5.3	5.6
Degree Utilization, x	0.01	0.39	0.04	0.01	0.27	0.14
Capacity (veh/h)	592	597	735	576	651	605
Control Delay (s)	8.6	11.2	6.7	7.8	9.0	9.5
Approach Delay (s)	8.6	10.7		9.0		9.5
Approach LOS	A	B		A		A

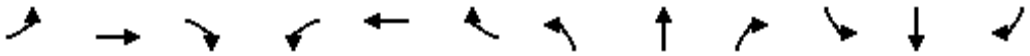
Intersection Summary				
Delay	9.9			
Level of Service	A			
Intersection Capacity Utilization	39.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	19	0	44	0	320	25	26	164	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
Hourly flow rate (vph)	0	0	0	21	0	48	0	348	27	28	178	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	68	375	207
Volume Left (vph)	0	21	0	28
Volume Right (vph)	0	48	27	0
Hadj (s)	0.00	-0.32	-0.01	0.06
Departure Headway (s)	5.3	4.9	4.3	4.5
Degree Utilization, x	0.00	0.09	0.45	0.26
Capacity (veh/h)	604	659	820	766
Control Delay (s)	8.3	8.3	10.7	9.1
Approach Delay (s)	0.0	8.3	10.7	9.1
Approach LOS	A	A	B	A

Intersection Summary			
Delay	10.0		
Level of Service	A		
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	3	0	368	0	0	158	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	0	0	0	0	3	0	400	0	0	172	0
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	576	572	172	572	572	401	172			400		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	576	572	172	572	572	401	172			400		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	99	100			100		
cM capacity (veh/h)	426	430	872	431	430	649	1405			1159		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	3	400	172
Volume Left	0	0	0	0
Volume Right	0	3	0	0
cSH	1700	649	1405	1159
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	10.6	0.0	0.0
Lane LOS	A	B		
Approach Delay (s)	0.0	10.6	0.0	0.0
Approach LOS	A	B		

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	30.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	24	21	350	32	10	151
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	23	380	35	11	164

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	49	415	175
Volume Left (vph)	26	0	11
Volume Right (vph)	23	35	0
Hadj (s)	-0.14	-0.02	0.05
Departure Headway (s)	5.0	4.2	4.5
Degree Utilization, x	0.07	0.48	0.22
Capacity (veh/h)	635	842	772
Control Delay (s)	8.4	11.1	8.7
Approach Delay (s)	8.4	11.1	8.7
Approach LOS	A	B	A

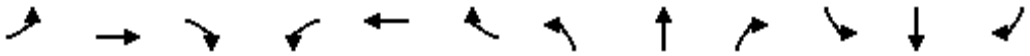
Intersection Summary			
Delay	10.2		
Level of Service	B		
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	12	0	0	10	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	0	0	11	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	5	5			11	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	5	5			11	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	1016	1078			1608	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	11	0
Volume Left	13	0	0
Volume Right	0	11	0
cSH	1016	1700	1700
Volume to Capacity	0.01	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

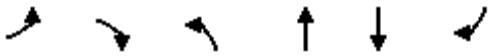
Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	8	2	11	14	0	1	0	6	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	9	2	12	15	0	1	0	7	0	0	0
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	15			16			57	54	15	55	55	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	15			16			57	54	15	55	55	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	100	100	100
cM capacity (veh/h)	1603			1595			925	828	1060	928	826	1058

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	27	8	0
Volume Left	0	12	1	0
Volume Right	2	0	7	0
cSH	1603	1595	1039	1700
Volume to Capacity	0.00	0.01	0.01	0.00
Queue Length 95th (ft)	0	1	1	0
Control Delay (s)	0.0	3.2	8.5	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	3.2	8.5	0.0
Approach LOS			A	A

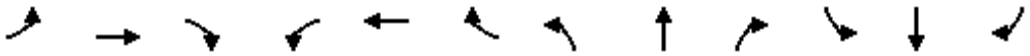
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	7	7	369	144	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	8	8	401	157	32
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	610	194	206			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	610	194	206			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	99			
cM capacity (veh/h)	447	832	1345			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	409	188
Volume Left	18	8	0
Volume Right	8	0	32
cSH	517	1345	1700
Volume to Capacity	0.05	0.01	0.11
Queue Length 95th (ft)	4	0	0
Control Delay (s)	12.3	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	12.3	0.2	0.0
Approach LOS	B		

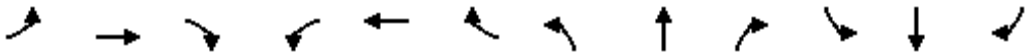
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	51	37	12	21	34	52	24	323	39	13	90	27
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
Hourly flow rate (vph)	55	40	13	23	37	57	26	351	42	14	98	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	109	116	420	141
Volume Left (vph)	55	23	26	14
Volume Right (vph)	13	57	42	29
Hadj (s)	0.06	-0.22	-0.01	-0.07
Departure Headway (s)	5.5	5.2	4.7	5.0
Degree Utilization, x	0.17	0.17	0.55	0.20
Capacity (veh/h)	580	609	740	666
Control Delay (s)	9.6	9.3	13.2	9.2
Approach Delay (s)	9.6	9.3	13.2	9.2
Approach LOS	A	A	B	A

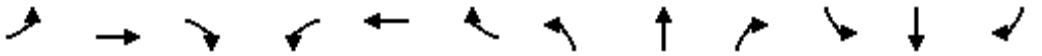
Intersection Summary			
Delay	11.4		
Level of Service	B		
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	260	74	106	244	225	82	143	54	41	66	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3153		1676	3353	1441	1676	1883			1527	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3153		1676	3353	1441	1676	1883			1527	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	22	286	81	112	257	237	99	172	65	42	68	6
RTOR Reduction (vph)	0	22	0	0	0	120	0	14	0	0	3	0
Lane Group Flow (vph)	22	345	0	112	257	117	99	223	0	0	113	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	3.2	38.6		10.5	45.9	45.9	14.6	14.6			14.8	
Effective Green, g (s)	3.7	39.6		11.0	46.9	46.9	14.1	14.1			14.3	
Actuated g/C Ratio	0.04	0.42		0.12	0.49	0.49	0.15	0.15			0.15	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	65	1314		194	1655	711	248	279			229	
v/s Ratio Prot	0.01	c0.11		c0.07	0.08		0.06	c0.12			c0.07	
v/s Ratio Perm						0.08						
v/c Ratio	0.34	0.26		0.58	0.16	0.16	0.40	0.80			0.50	
Uniform Delay, d1	44.5	18.1		39.8	13.2	13.3	36.6	39.1			37.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	2.2	0.5		3.4	0.2	0.5	0.8	14.2			1.2	
Delay (s)	46.7	18.6		43.2	13.4	13.8	37.4	53.2			38.3	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		20.2			19.0			48.6			38.3	
Approach LOS		C			B			D			D	

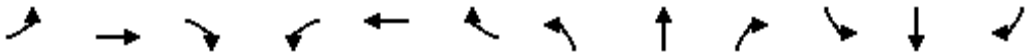
Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	422	399	0	485	1404	0	0	0	594	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3010			2857	1283				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3010			2857	1283				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	440	416	0	505	1462	0	0	0	646	0	273
RTOR Reduction (vph)	0	136	0	0	172	491	0	0	0	0	0	192
Lane Group Flow (vph)	95	720	0	0	918	386	0	0	0	646	0	81
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	72.2			50.2	50.2				33.3		33.3
Effective Green, g (s)	18.0	72.2			50.2	50.2				33.8		33.8
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1906			1258	564				745		428
v/s Ratio Prot	0.06	c0.24			c0.32					c0.26		
v/s Ratio Perm						0.30						0.06
v/c Ratio	0.36	0.38			0.73	0.68				0.87		0.19
Uniform Delay, d1	42.9	10.1			26.3	25.6				38.0		29.9
Progression Factor	1.00	1.00			0.42	6.92				1.00		1.00
Incremental Delay, d2	0.3	0.6			2.1	3.7				10.3		0.2
Delay (s)	43.2	10.6			13.2	180.6				48.3		30.0
Level of Service	D	B			B	F				D		C
Approach Delay (s)		13.9			87.8			0.0			42.9	
Approach LOS		B			F			A			D	

Intersection Summary			
HCM 2000 Control Delay	58.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



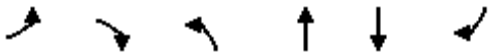
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	871	0	0	1399	408	491	289	784	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.94	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1510	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1510	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	907	0	0	1457	425	540	318	862	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	19	20	0	0	0
Lane Group Flow (vph)	153	907	0	0	1457	216	486	569	626	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	543	750			
v/s Ratio Prot	c0.09	0.19			c0.30		0.31	c0.38	0.44			
v/s Ratio Perm						0.16						
v/c Ratio	0.58	0.47			0.80	0.41	0.85	1.05	0.83			
Uniform Delay, d1	44.5	25.0			31.7	26.2	33.7	36.5	22.8			
Progression Factor	0.77	0.49			0.70	0.49	1.00	1.00	1.00			
Incremental Delay, d2	7.0	0.6			2.5	1.5	11.3	52.0	7.9			
Delay (s)	41.2	12.9			24.8	14.4	45.0	88.5	30.7			
Level of Service	D	B			C	B	D	F	C			
Approach Delay (s)		16.9			22.4			54.5			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



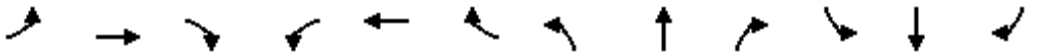
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	523	78	338	99	43	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3188		3353	1455		3336
Flt Permitted	0.96		1.00	1.00		0.88
Satd. Flow (perm)	3188		3353	1455		2960
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	588	88	363	106	46	460
RTOR Reduction (vph)	11	0	0	56	0	0
Lane Group Flow (vph)	665	0	363	50	0	506
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1454		1582	686		1396
v/s Ratio Prot	c0.21		0.11			
v/s Ratio Perm				0.03		c0.17
v/c Ratio	0.46		0.23	0.07		0.36
Uniform Delay, d1	21.3		17.8	16.5		19.2
Progression Factor	0.47		0.20	0.01		1.00
Incremental Delay, d2	1.0		0.3	0.2		0.7
Delay (s)	11.0		3.8	0.3		19.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		3.0			19.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



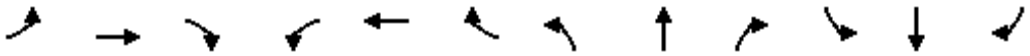
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	81	64	434	466	174	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	100	79	472	507	198	169
RTOR Reduction (vph)	0	18	0	0	0	150
Lane Group Flow (vph)	100	61	472	507	198	19
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	13.3	87.9	71.1	93.7	19.1	13.3
Effective Green, g (s)	12.8	87.4	70.6	93.2	18.6	12.8
Actuated g/C Ratio	0.11	0.77	0.62	0.82	0.16	0.11
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1150	2013	1442	287	168
v/s Ratio Prot	c0.06	0.04	0.15	c0.29	c0.11	0.01
v/s Ratio Perm						
v/c Ratio	0.53	0.05	0.23	0.35	0.69	0.11
Uniform Delay, d1	47.8	3.2	9.7	2.7	45.0	45.5
Progression Factor	1.49	4.52	0.17	0.13	1.00	1.00
Incremental Delay, d2	2.9	0.0	0.2	0.6	6.8	0.3
Delay (s)	74.3	14.6	1.9	0.9	51.7	45.8
Level of Service	E	B	A	A	D	D
Approach Delay (s)	47.9			1.4	49.0	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	697	618	231	961	122	140	37	103	169	165	632
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3071	1365	1676	3353	1480	1593	1629	1479		1721	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3071	1365	1676	3353	1480	1593	1629	1479		1721	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	393	801	710	241	1001	127	156	41	114	188	183	702
RTOR Reduction (vph)	0	24	114	0	0	52	0	0	101	0	0	66
Lane Group Flow (vph)	393	1026	347	241	1001	75	98	99	13	0	371	636
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	991	592	249	1102	486	177	181	164		452	1106
v/s Ratio Prot	0.12	c0.33	c0.25	0.14	c0.30		0.06	0.06			c0.22	0.24
v/s Ratio Perm						0.05			0.01			
v/c Ratio	0.78	1.04	0.59	0.97	0.91	0.15	0.55	0.55	0.08		0.82	0.57
Uniform Delay, d1	46.2	38.6	24.5	48.2	36.6	27.0	48.0	47.9	45.4		39.5	25.3
Progression Factor	0.94	0.71	0.41	0.83	0.77	0.55	1.00	1.00	1.00		0.89	0.49
Incremental Delay, d2	8.8	34.9	1.0	39.9	9.7	0.5	3.0	2.7	0.1		14.4	2.0
Delay (s)	52.3	62.2	11.1	80.1	38.0	15.4	50.9	50.6	45.5		49.6	14.4
Level of Service	D	E	B	F	D	B	D	D	D		D	B
Approach Delay (s)		47.8			43.3			48.9			26.5	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



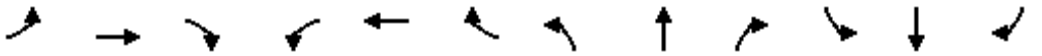
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	118	595	51	0	108	0	739	40	0	239	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3197	2250	1676		1463		3320			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3197	2250	1676		1463		3320			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	134	676	62	0	132	0	803	43	0	278	0
RTOR Reduction (vph)	0	0	464	0	0	120	0	3	0	0	0	0
Lane Group Flow (vph)	71	148	212	62	0	12	0	843	0	0	278	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.8	11.8	36.8	10.7		10.7		55.1			30.3	
Effective Green, g (s)	10.8	10.8	35.8	10.2		10.2		54.6			29.8	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.26	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	144	302	706	149		130		1590			876	
v/s Ratio Prot	c0.05	0.05	0.09	c0.04				c0.25			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.49	0.49	0.30	0.42		0.09		0.53			0.32	
Uniform Delay, d1	49.0	49.0	29.6	49.1		47.6		20.7			33.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.47	
Incremental Delay, d2	1.9	0.9	0.2	1.4		0.2		1.3			0.9	
Delay (s)	50.9	49.9	29.8	50.5		47.9		22.0			17.0	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.8			48.7			22.0			17.0	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	78	2	79	10	687	103	99	745	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3310	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3310	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	101	3	103	10	701	105	103	776	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	60	0	3	0
Lane Group Flow (vph)	0	29	1	101	24	0	10	701	45	103	811	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.7	31.7	8.7	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.2	32.2	8.2	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1439	620	183	1725	
v/s Ratio Prot		c0.02			0.02		0.01	0.21		c0.06	c0.24	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.26	0.08		0.34	0.49	0.07	0.56	0.47	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	15.4	12.6	31.7	11.4	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	1.2	0.2	2.4	0.9	
Delay (s)		35.8	34.2	25.4	24.4		39.0	16.6	12.8	34.1	12.3	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			16.4			14.7	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	558	222	105	443	66	443	515	71	152	310	284
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3165		1676	3251		1676	1723		1668	1765	1455
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.44	1.00	1.00
Satd. Flow (perm)	1676	3165		1676	3251		1676	1723		766	1765	1455
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	168	641	255	109	461	69	457	531	73	167	341	312
RTOR Reduction (vph)	0	38	0	0	10	0	0	4	0	0	0	61
Lane Group Flow (vph)	168	858	0	109	520	0	457	600	0	167	341	251
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	16.8	34.0		10.8	28.0		31.7	43.5		22.5	22.3	39.1
Effective Green, g (s)	16.3	34.5		10.3	28.5		31.2	43.0		22.0	21.8	38.1
Actuated g/C Ratio	0.14	0.30		0.09	0.25		0.27	0.38		0.19	0.19	0.33
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	239	957		151	812		458	649		226	337	486
v/s Ratio Prot	0.10	c0.27		0.07	c0.16		c0.27	0.35		0.06	c0.19	0.07
v/s Ratio Perm										0.08		0.10
v/c Ratio	0.70	0.90		0.72	0.64		1.00	0.92		0.74	1.01	0.52
Uniform Delay, d1	46.5	38.0		50.5	38.2		41.4	33.9		43.2	46.1	30.5
Progression Factor	0.55	0.68		1.00	1.00		1.01	1.08		1.00	1.00	1.00
Incremental Delay, d2	3.3	4.4		15.6	1.7		37.4	18.2		11.9	52.1	0.9
Delay (s)	29.0	30.4		66.1	39.9		79.2	55.0		55.1	98.2	31.5
Level of Service	C	C		E	D		E	D		E	F	C
Approach Delay (s)		30.2			44.4			65.4			64.0	
Approach LOS		C			D			E			E	

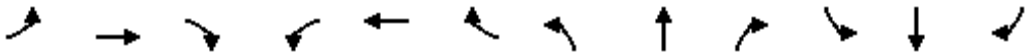
Intersection Summary			
HCM 2000 Control Delay	50.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	742	0	0	515	0	157
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	807	0	0	560	0	171
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			807		1086	403
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			807		1086	403
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	71
cM capacity (veh/h)			814		211	597

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	403	403	280	280	171
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	171
cSH	1700	1700	1700	1700	597
Volume to Capacity	0.24	0.24	0.16	0.16	0.29
Queue Length 95th (ft)	0	0	0	0	29
Control Delay (s)	0.0	0.0	0.0	0.0	13.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.4
Approach LOS					B

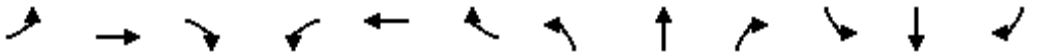
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	79	0	27	1	272	164	20	135	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
Hourly flow rate (vph)	1	1	5	86	0	29	1	296	178	22	147	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	86	29	1	474	170
Volume Left (vph)	1	86	0	1	0	22
Volume Right (vph)	5	0	29	0	178	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.23	0.06
Departure Headway (s)	6.0	6.6	5.4	5.6	4.8	5.5
Degree Utilization, x	0.01	0.16	0.04	0.00	0.64	0.26
Capacity (veh/h)	523	495	596	624	732	629
Control Delay (s)	9.1	9.7	7.5	7.4	14.8	10.4
Approach Delay (s)	9.1	9.1		14.7		10.4
Approach LOS	A	A		B		B

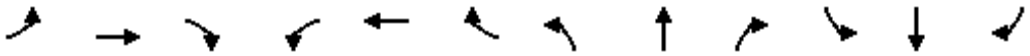
Intersection Summary				
Delay	12.9			
Level of Service	B			
Intersection Capacity Utilization	43.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	94	86	21	9	36	36	764	75	53	504	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.97			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	1.00
Frt	1.00	0.93		1.00	0.88			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	1.00
Satd. Flow (prot)	1660	1588		1642	1514			3249			1713	1458
Flt Permitted	0.72	1.00		0.55	1.00			0.92			0.85	1.00
Satd. Flow (perm)	1254	1588		955	1514			2988			1463	1458
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	280	119	109	28	12	48	42	899	88	55	525	81
RTOR Reduction (vph)	0	72	0	0	34	0	0	9	0	0	0	12
Lane Group Flow (vph)	280	156	0	28	26	0	0	1020	0	0	580	69
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	17.7	17.7		17.7	17.7			32.1			32.1	32.1
Effective Green, g (s)	17.2	17.2		17.2	17.2			31.6			31.6	31.6
Actuated g/C Ratio	0.30	0.30		0.30	0.30			0.55			0.55	0.55
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	378	479		288	456			1656			811	808
v/s Ratio Prot		0.10			0.02							
v/s Ratio Perm	c0.22			0.03				0.34			c0.40	0.05
v/c Ratio	0.74	0.33		0.10	0.06			0.62			0.72	0.09
Uniform Delay, d1	17.9	15.4		14.3	14.1			8.6			9.4	5.9
Progression Factor	1.00	1.00		1.00	1.00			0.80			0.73	0.63
Incremental Delay, d2	7.2	0.3		0.1	0.0			1.5			2.2	0.1
Delay (s)	25.1	15.7		14.4	14.2			8.4			9.1	3.8
Level of Service	C	B		B	B			A			A	A
Approach Delay (s)		20.9			14.3			8.4			8.4	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

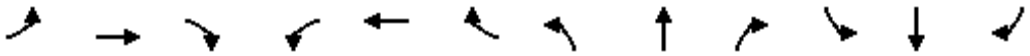
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	24	0	22	0	348	16	51	350	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
Hourly flow rate (vph)	0	0	0	26	0	24	0	378	17	55	380	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	50	396	436
Volume Left (vph)	0	26	0	55
Volume Right (vph)	0	24	17	0
Hadj (s)	0.00	-0.15	0.01	0.06
Departure Headway (s)	5.9	5.6	4.5	4.5
Degree Utilization, x	0.00	0.08	0.50	0.55
Capacity (veh/h)	530	558	777	776
Control Delay (s)	8.9	9.0	11.9	12.9
Approach Delay (s)	0.0	9.0	11.9	12.9
Approach LOS	A	A	B	B

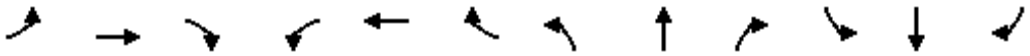
Intersection Summary			
Delay	12.2		
Level of Service	B		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	50	43	36	24	83	14	649	25	63	540	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.97		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.93		1.00	0.88		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1658	1600		1646	1514		1663	1751		1665	1711	
Flt Permitted	0.66	1.00		0.66	1.00		0.37	1.00		0.29	1.00	
Satd. Flow (perm)	1154	1600		1141	1514		643	1751		504	1711	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	150	78	67	49	32	112	16	729	28	70	600	21
RTOR Reduction (vph)	0	55	0	0	92	0	0	2	0	0	2	0
Lane Group Flow (vph)	150	90	0	49	52	0	16	755	0	70	619	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	10.8	10.8		10.8	10.8		39.0	39.0		39.0	39.0	
Effective Green, g (s)	10.3	10.3		10.3	10.3		38.5	38.5		38.5	38.5	
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.68	0.68		0.68	0.68	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	208	289		206	273		434	1182		340	1155	
v/s Ratio Prot		0.06			0.03			c0.43			0.36	
v/s Ratio Perm	c0.13			0.04			0.02			0.14		
v/c Ratio	0.72	0.31		0.24	0.19		0.04	0.64		0.21	0.54	
Uniform Delay, d1	22.0	20.3		20.0	19.8		3.1	5.3		3.5	4.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.47	0.71	
Incremental Delay, d2	10.0	0.2		0.2	0.1		0.2	2.7		1.1	1.4	
Delay (s)	32.0	20.5		20.2	19.9		3.2	7.9		2.8	4.8	
Level of Service	C	C		C	B		A	A		A	A	
Approach Delay (s)		26.3			20.0			7.8			4.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	3	0	341	0	1	401	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	0	0	0	0	3	0	371	0	1	436	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	812	809	436	809	809	371	436			371		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	812	809	436	809	809	371	436			371		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	296	314	620	299	314	675	1124			1188		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	3	371	437
Volume Left	0	0	0	1
Volume Right	0	3	0	0
cSH	1700	675	1124	1188
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	10.4	0.0	0.0
Lane LOS	A	B		A
Approach Delay (s)	0.0	10.4	0.0	0.0
Approach LOS	A	B		

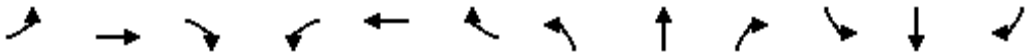
Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	33.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	34	17	325	36	23	380
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	18	353	39	25	413

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	55	392	438
Volume Left (vph)	37	0	25
Volume Right (vph)	18	39	0
Hadj (s)	-0.03	-0.03	0.05
Departure Headway (s)	5.7	4.5	4.5
Degree Utilization, x	0.09	0.49	0.55
Capacity (veh/h)	552	778	775
Control Delay (s)	9.2	11.8	13.0
Approach Delay (s)	9.2	11.8	13.0
Approach LOS	A	B	B

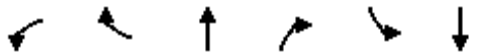
Intersection Summary			
Delay	12.2		
Level of Service	B		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	36	12	35	28	76	8	573	30	94	517	6
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
Hourly flow rate (vph)	35	39	13	38	30	83	9	623	33	102	562	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	87	151	664	671
Volume Left (vph)	35	38	9	102
Volume Right (vph)	13	83	33	7
Hadj (s)	0.02	-0.24	0.01	0.06
Departure Headway (s)	7.8	7.2	5.8	5.9
Degree Utilization, x	0.19	0.30	1.0	1.0
Capacity (veh/h)	445	482	628	615
Control Delay (s)	12.6	13.3	82.5	89.3
Approach Delay (s)	12.6	13.3	82.5	89.3
Approach LOS	B	B	F	F

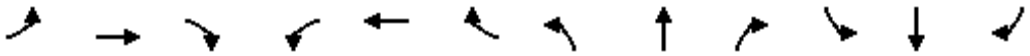
Intersection Summary				
Delay		74.9		
Level of Service		F		
Intersection Capacity Utilization		90.3%	ICU Level of Service	E
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	27	0	0	18	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	0	0	20	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	10	10			20	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	10	10			20	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	1010	1072			1597	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	29	20	0
Volume Left	29	0	0
Volume Right	0	20	0
cSH	1010	1700	1700
Volume to Capacity	0.03	0.01	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

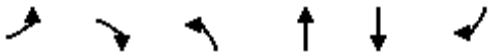
Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	24	2	2	23	0	7	0	6	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	26	2	2	25	0	8	0	7	0	0	0
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	25			36			72	65	40	68	66	32
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			36			72	65	40	68	66	32
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	99	100	100	100
cM capacity (veh/h)	1589			1564			903	820	1020	909	818	1036

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	28	27	14	0
Volume Left	0	2	8	0
Volume Right	2	0	7	0
cSH	1589	1564	953	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	0.6	8.8	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.6	8.8	0.0
Approach LOS			A	A

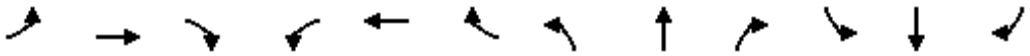
Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	39	5	2	328	385	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	5	2	357	418	25
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	806	437	447			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	806	437	447			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	99	100			
cM capacity (veh/h)	347	616	1109			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	48	359	443
Volume Left	42	2	0
Volume Right	5	0	25
cSH	365	1109	1700
Volume to Capacity	0.13	0.00	0.26
Queue Length 95th (ft)	11	0	0
Control Delay (s)	16.4	0.1	0.0
Lane LOS	C	A	
Approach Delay (s)	16.4	0.1	0.0
Approach LOS	C		

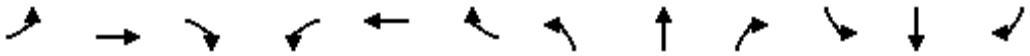
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	83	3	6	0	14	124	12	17	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	90	3	7	0	15	135	13	18	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	20			11			213	213	12	352	210	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			11			213	213	12	352	210	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	98	87	97	97	100
cM capacity (veh/h)	1583			1606			688	640	1065	486	642	1045

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	100	150	32
Volume Left	1	90	0	13
Volume Right	1	7	135	0
cSH	1583	1606	998	567
Volume to Capacity	0.00	0.06	0.15	0.06
Queue Length 95th (ft)	0	4	13	4
Control Delay (s)	0.8	6.7	9.2	11.7
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	6.7	9.2	11.7
Approach LOS			A	B

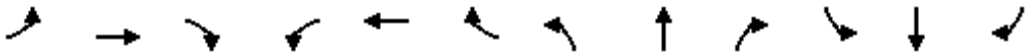
Intersection Summary				
Average Delay	8.4			
Intersection Capacity Utilization	31.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	135	19	12	91	11	5	1	23	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	3	147	21	13	99	12	5	1	25	5	0	1
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	128			173			308	324	170	344	328	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	128			173			308	324	170	344	328	128
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	100	97	99	100	100
cM capacity (veh/h)	1437			1396			623	576	864	566	573	905

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	171	124	32	7
Volume Left	3	13	5	5
Volume Right	21	12	25	1
cSH	1437	1396	797	604
Volume to Capacity	0.00	0.01	0.04	0.01
Queue Length 95th (ft)	0	1	3	1
Control Delay (s)	0.2	0.9	9.7	11.0
Lane LOS	A	A	A	B
Approach Delay (s)	0.2	0.9	9.7	11.0
Approach LOS			A	B

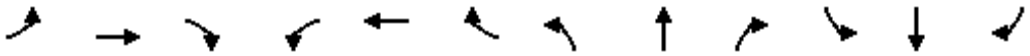
Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	25.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	89	66	22	34	49	16	17	209	40	56	328	46
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
Hourly flow rate (vph)	97	72	24	37	53	17	18	227	43	61	357	50

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	192	108	289	467
Volume Left (vph)	97	37	18	61
Volume Right (vph)	24	17	43	50
Hadj (s)	0.06	0.01	-0.04	0.00
Departure Headway (s)	6.3	6.4	5.6	5.4
Degree Utilization, x	0.33	0.19	0.45	0.70
Capacity (veh/h)	503	463	596	648
Control Delay (s)	12.4	11.0	13.1	19.7
Approach Delay (s)	12.4	11.0	13.1	19.7
Approach LOS	B	B	B	C

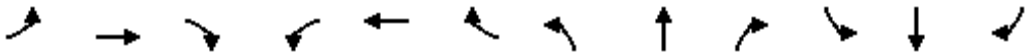
Intersection Summary			
Delay	15.7		
Level of Service	C		
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	117	37	29	49	127	12	442	22	60	479	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1671			1531	1252	1676	1747		1676	1744	
Flt Permitted		0.93			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1572			1320	1252	1676	1747		1676	1744	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	41	141	45	33	56	144	12	460	23	71	564	36
RTOR Reduction (vph)	0	17	0	0	0	114	0	2	0	0	3	0
Lane Group Flow (vph)	0	210	0	0	89	30	12	481	0	71	597	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		12.4			12.4	12.4	1.6	28.9		5.2	32.5	
Effective Green, g (s)		11.9			11.9	11.9	1.1	29.4		4.7	33.0	
Actuated g/C Ratio		0.21			0.21	0.21	0.02	0.51		0.08	0.57	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		322			270	256	31	885		135	992	
v/s Ratio Prot							0.01	0.28		c0.04	c0.34	
v/s Ratio Perm		c0.13			0.07	0.02						
v/c Ratio		0.65			0.33	0.12	0.39	0.54		0.53	0.60	
Uniform Delay, d1		21.1			19.6	18.8	28.1	9.7		25.6	8.2	
Progression Factor		1.00			1.00	1.00	1.16	0.95		1.00	1.00	
Incremental Delay, d2		3.6			0.3	0.1	7.0	2.1		3.7	2.7	
Delay (s)		24.7			19.9	18.8	39.5	11.3		29.2	10.9	
Level of Service		C			B	B	D	B		C	B	
Approach Delay (s)		24.7			19.2			12.0			12.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	559	184	156	529	67	278	180	124	183	193	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3054		1676	3353	1400	1676	1845			1522	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3054		1676	3353	1400	1676	1845			1522	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	21	614	202	164	557	71	335	217	149	189	199	16
RTOR Reduction (vph)	0	27	0	0	0	45	0	21	0	0	1	0
Lane Group Flow (vph)	21	789	0	164	557	26	335	345	0	0	403	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	3.3	30.3		14.2	41.2	41.2	25.4	25.4			29.6	
Effective Green, g (s)	3.8	31.3		14.7	42.2	42.2	24.9	24.9			29.1	
Actuated g/C Ratio	0.03	0.27		0.13	0.36	0.36	0.21	0.21			0.25	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	54	824		212	1219	509	359	396			381	
v/s Ratio Prot	0.01	c0.26		c0.10	0.17		c0.20	0.19			c0.26	
v/s Ratio Perm						0.02						
v/c Ratio	0.39	0.96		0.77	0.46	0.05	0.93	0.87			1.06	
Uniform Delay, d1	55.0	41.7		49.0	28.2	23.9	44.7	44.0			43.5	
Progression Factor	1.00	1.00		1.50	0.50	0.11	1.00	1.00			1.00	
Incremental Delay, d2	3.4	22.6		14.4	1.1	0.2	30.7	18.3			61.8	
Delay (s)	58.3	64.3		87.9	15.3	2.8	75.5	62.3			105.2	
Level of Service	E	E		F	B	A	E	E			F	
Approach Delay (s)		64.1			29.2			68.6			105.2	
Approach LOS		E			C			E			F	

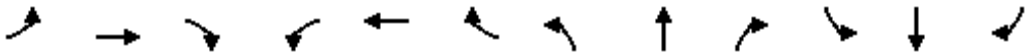
Intersection Summary			
HCM 2000 Control Delay	61.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	750	87	108	619	155	77	276	83	162	346	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3221		1676	3353	1363	1676	1765	1439	1676	1740	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3221		1676	3353	1363	1676	1765	1439	1676	1740	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	798	93	110	632	158	80	288	86	171	364	29
RTOR Reduction (vph)	0	7	0	0	0	67	0	0	68	0	3	0
Lane Group Flow (vph)	46	884	0	110	632	91	80	288	18	171	390	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.9		12.3	50.8	50.8	8.3	24.7	24.7	15.4	31.8	
Effective Green, g (s)	7.9	46.9		11.8	50.8	50.8	7.8	24.2	24.2	14.9	31.3	
Actuated g/C Ratio	0.07	0.40		0.10	0.44	0.44	0.07	0.21	0.21	0.13	0.27	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1302		170	1468	596	112	368	300	215	469	
v/s Ratio Prot	0.03	c0.27		c0.07	0.19		0.05	0.16		c0.10	c0.22	
v/s Ratio Perm						0.07			0.01			
v/c Ratio	0.40	0.68		0.65	0.43	0.15	0.71	0.78	0.06	0.80	0.83	
Uniform Delay, d1	51.8	28.4		50.1	22.6	19.6	53.0	43.4	36.8	49.1	39.9	
Progression Factor	0.70	0.59		1.00	1.00	1.00	1.00	1.00	1.00	1.02	0.95	
Incremental Delay, d2	0.5	0.9		7.3	0.9	0.5	18.2	10.0	0.1	15.4	10.2	
Delay (s)	36.6	17.7		57.4	23.5	20.2	71.2	53.4	36.8	65.4	48.3	
Level of Service	D	B		E	C	C	E	D	D	E	D	
Approach Delay (s)		18.6			27.1			53.4			53.5	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

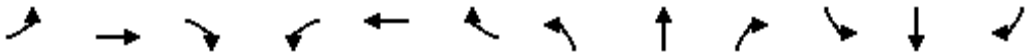
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	911	79	67	803	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3139		1676	3179			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3139		1676	3179			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	930	81	69	828	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	1006	0	69	877	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1217		121	1367			376	324		309	
v/s Ratio Prot	0.01	c0.32		c0.04	0.28			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.83		0.57	0.64			0.92	0.36		0.76	
Uniform Delay, d1	55.3	32.0		52.1	26.0			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.15	0.34			1.00	1.00		1.00	
Incremental Delay, d2	4.4	6.5		2.0	0.9			27.3	0.5		9.6	
Delay (s)	59.7	38.5		61.9	9.7			71.6	38.5		54.7	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		39.0			13.5			55.6			54.7	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	35.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

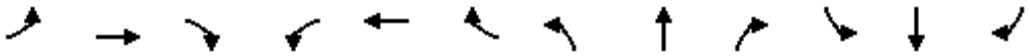
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	678	374	56	476	186	355	852	32	231	906	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2997		1676	3116		3252	3244		1676	3224	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2997		1676	3116		3252	3244		1676	3224	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	706	390	67	567	221	374	897	34	248	974	97
RTOR Reduction (vph)	0	63	0	0	35	0	0	2	0	0	7	0
Lane Group Flow (vph)	220	1033	0	67	753	0	374	929	0	248	1064	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.6	39.6		8.8	27.8		16.0	35.2		19.2	37.4	
Effective Green, g (s)	20.6	39.6		8.8	27.8		17.0	36.2		19.2	38.4	
Actuated g/C Ratio	0.18	0.34		0.08	0.24		0.15	0.31		0.17	0.33	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	297	1023		127	746		476	1012		277	1067	
v/s Ratio Prot	0.13	c0.34		0.04	c0.24		0.11	c0.29		0.15	c0.33	
v/s Ratio Perm												
v/c Ratio	0.74	1.01		0.53	1.01		0.79	0.92		0.90	1.00	
Uniform Delay, d1	45.2	38.2		51.6	44.1		47.7	38.5		47.4	38.8	
Progression Factor	0.59	0.46		1.00	1.00		1.00	1.00		1.08	0.70	
Incremental Delay, d2	5.6	25.2		1.8	35.3		7.7	14.3		26.1	25.4	
Delay (s)	32.0	42.7		53.4	79.4		55.4	52.8		77.1	52.5	
Level of Service	C	D		D	E		E	D		E	D	
Approach Delay (s)		40.9			77.4			53.6			57.1	
Approach LOS		D			E			D			E	

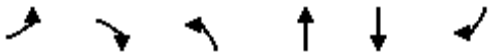
Intersection Summary			
HCM 2000 Control Delay	55.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	10	131	5	3	10	61	1147	11	2	1065	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.99	
Flpb, ped/bikes		0.95	1.00		0.99		0.97	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1634	3340			3276	
Flt Permitted		0.72	1.00		0.90		0.20	1.00			0.95	
Satd. Flow (perm)		1215	1360		1409		340	3340			3125	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	270	12	162	13	8	26	66	1233	12	2	1087	72
RTOR Reduction (vph)	0	0	69	0	19	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	282	93	0	28	0	66	1244	0	0	1157	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.5	29.5		29.0		79.5	79.5			79.5	
Effective Green, g (s)		29.5	29.5		29.5		80.5	80.5			80.5	
Actuated g/C Ratio		0.25	0.25		0.25		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		308	345		358		235	2317			2168	
v/s Ratio Prot								c0.37				
v/s Ratio Perm		c0.23	0.07		0.02		0.19				0.37	
v/c Ratio		0.92	0.27		0.08		0.28	0.54			0.53	
Uniform Delay, d1		42.0	34.6		32.9		6.7	8.7			8.6	
Progression Factor		1.00	1.00		1.00		0.51	0.49			2.03	
Incremental Delay, d2		29.8	0.2		0.0		1.3	0.4			0.9	
Delay (s)		71.8	34.8		32.9		4.7	4.6			18.3	
Level of Service		E	C		C		A	A			B	
Approach Delay (s)		58.3			32.9			4.7			18.3	
Approach LOS		E			C			A			B	

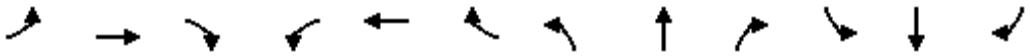
Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	55	121	137	1249	1076	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1555		1627	3279	3324	
Flt Permitted	0.98		0.22	1.00	1.00	
Satd. Flow (perm)	1555		381	3279	3324	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	62	138	146	1329	1098	26
RTOR Reduction (vph)	77	0	0	0	1	0
Lane Group Flow (vph)	123	0	146	1329	1123	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	293		289	2490	2524	
v/s Ratio Prot	c0.08			c0.41	0.34	
v/s Ratio Perm			0.38			
v/c Ratio	0.42		0.51	0.53	0.44	
Uniform Delay, d1	41.5		5.4	5.6	5.1	
Progression Factor	1.00		0.73	0.58	1.00	
Incremental Delay, d2	0.4		5.1	0.7	0.6	
Delay (s)	41.8		9.1	3.9	5.6	
Level of Service	D		A	A	A	
Approach Delay (s)	41.8			4.5	5.6	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

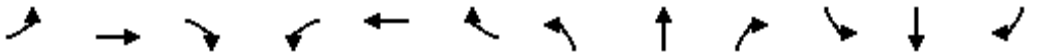
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	22	134	10	15	9	60	1263	22	19	1035	45
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.96		1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1703	1424		1660		1676	3334		1676	3320	
Flt Permitted		0.80	1.00		0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1408	1424		1545		1676	3334		1676	3320	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	72	27	163	16	23	14	66	1388	24	20	1078	47
RTOR Reduction (vph)	0	0	136	0	12	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	99	27	0	41	0	66	1411	0	20	1123	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.6	18.6		18.6		13.2	82.5		4.4	73.7	
Effective Green, g (s)		19.1	19.1		19.1		13.2	83.5		4.4	74.7	
Actuated g/C Ratio		0.16	0.16		0.16		0.11	0.72		0.04	0.64	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		231	234		254		190	2399		63	2137	
v/s Ratio Prot							0.04	c0.42		0.01	c0.34	
v/s Ratio Perm		c0.07	0.02		0.03							
v/c Ratio		0.43	0.11		0.16		0.35	0.59		0.32	0.53	
Uniform Delay, d1		43.5	41.3		41.6		47.4	7.9		54.3	11.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		0.1		0.4	1.1		1.1	0.9	
Delay (s)		44.0	41.3		41.7		47.8	9.0		55.4	12.0	
Level of Service		D	D		D		D	A		E	B	
Approach Delay (s)		42.3			41.7			10.7			12.8	
Approach LOS		D			D			B			B	

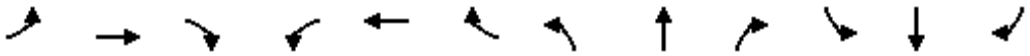
Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



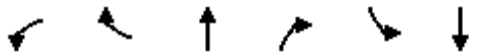
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	270	153	0	372	1209	0	0	0	756	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.95			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3102			2833	1365				2515		1430
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3102			2833	1365				2515		1430
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	281	159	0	380	1234	0	0	0	822	0	175
RTOR Reduction (vph)	0	60	0	0	185	468	0	0	0	0	0	107
Lane Group Flow (vph)	106	380	0	0	689	272	0	0	0	822	0	68
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	61.9			41.9	41.9				43.6		43.6
Effective Green, g (s)	16.0	61.9			41.9	41.9				44.1		44.1
Actuated g/C Ratio	0.14	0.54			0.37	0.37				0.39		0.39
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1684			1041	501				972		553
v/s Ratio Prot	c0.06	0.12			c0.24	0.20				c0.33		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.23			0.66	0.54				0.85		0.12
Uniform Delay, d1	45.0	13.6			30.1	28.5				31.8		22.5
Progression Factor	1.00	1.00			0.84	4.10				1.00		1.00
Incremental Delay, d2	0.5	0.3			2.7	1.0				6.8		0.1
Delay (s)	45.5	13.9			27.9	117.6				38.6		22.6
Level of Service	D	B			C	F				D		C
Approach Delay (s)		20.0			69.0			0.0			35.8	
Approach LOS		C			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	50.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



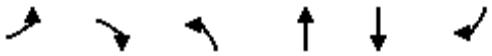
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	951	0	0	1140	477	452	58	964	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.93	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1402	1593	1406	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1402	1593	1406	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1034	0	0	1239	518	466	60	994	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	265	0	87	37	0	0	0
Lane Group Flow (vph)	92	1034	0	0	1239	253	419	467	510	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	60.0			55.6	55.6	38.0	38.0	46.0			
Effective Green, g (s)	8.4	60.0			55.6	55.6	38.0	38.0	46.0			
Actuated g/C Ratio	0.07	0.53			0.49	0.49	0.33	0.33	0.40			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2535			2349	683	531	468	575			
v/s Ratio Prot	c0.05	0.21			c0.26		0.26	c0.33	c0.36			
v/s Ratio Perm						0.18						
v/c Ratio	0.75	0.41			0.53	0.37	0.79	1.00	0.89			
Uniform Delay, d1	51.8	16.3			20.1	18.3	34.4	38.0	31.6			
Progression Factor	1.38	0.29			0.86	0.83	1.00	1.00	1.00			
Incremental Delay, d2	16.1	0.4			0.6	1.2	7.7	40.9	15.3			
Delay (s)	87.7	5.2			18.0	16.3	42.0	78.9	46.9			
Level of Service	F	A			B	B	D	E	D			
Approach Delay (s)		11.9			17.5			57.2			0.0	
Approach LOS		B			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



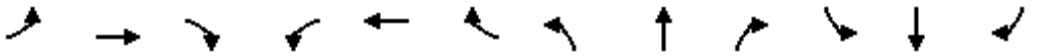
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	879	66	279	156	42	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	3216		3353	1427		3323
Flt Permitted	0.96		1.00	1.00		0.86
Satd. Flow (perm)	3216		3353	1427		2893
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	906	68	321	179	49	321
RTOR Reduction (vph)	7	0	0	80	0	0
Lane Group Flow (vph)	967	0	321	99	0	370
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	43.0		63.8	63.8		63.8
Effective Green, g (s)	42.5		63.3	63.3		63.3
Actuated g/C Ratio	0.37		0.56	0.56		0.56
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1198		1861	792		1606
v/s Ratio Prot	c0.30		0.10			
v/s Ratio Perm				0.07		c0.13
v/c Ratio	0.81		0.17	0.13		0.23
Uniform Delay, d1	32.1		12.5	12.1		12.9
Progression Factor	0.29		0.25	0.00		1.00
Incremental Delay, d2	3.4		0.2	0.3		0.3
Delay (s)	12.5		3.3	0.3		13.3
Level of Service	B		A	A		B
Approach Delay (s)	12.5		2.2			13.3
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



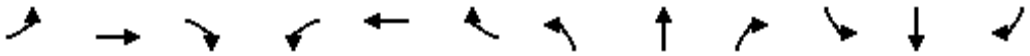
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	138	68	724	583	269	215
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	175	86	746	601	299	239
RTOR Reduction (vph)	0	36	0	0	0	204
Lane Group Flow (vph)	175	50	746	601	299	35
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	17.3	67.3	46.5	89.7	39.7	17.3
Effective Green, g (s)	16.8	66.8	46.0	89.2	39.2	16.8
Actuated g/C Ratio	0.15	0.59	0.40	0.78	0.34	0.15
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	878	1312	1381	606	221
v/s Ratio Prot	c0.10	0.03	c0.23	0.34	c0.17	0.02
v/s Ratio Perm						
v/c Ratio	0.71	0.06	0.57	0.44	0.49	0.16
Uniform Delay, d1	46.3	10.1	26.3	4.1	29.6	42.4
Progression Factor	1.39	5.88	0.51	0.13	1.00	1.00
Incremental Delay, d2	9.2	0.0	1.2	0.7	2.9	0.3
Delay (s)	73.7	59.5	14.7	1.2	32.4	42.8
Level of Service	E	E	B	A	C	D
Approach Delay (s)	69.0			8.7	37.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	547	1035	294	583	138	205	24	104	169	208	757
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.94	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2875	1365	1676	3353	1470	1593	1613	1444		1726	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2875	1365	1676	3353	1470	1593	1613	1444		1726	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	330	553	1045	363	720	170	220	26	112	172	212	772
RTOR Reduction (vph)	0	83	61	0	0	54	0	0	99	0	0	55
Lane Group Flow (vph)	330	836	618	363	720	116	123	123	13	0	384	717
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	920	592	249	1014	444	181	183	164		454	1169
v/s Ratio Prot	0.10	0.29	c0.45	c0.22	0.21		0.08	0.08			c0.22	0.27
v/s Ratio Perm						0.08			0.01			
v/c Ratio	0.57	0.91	1.04	1.46	0.71	0.26	0.68	0.67	0.08		0.85	0.61
Uniform Delay, d1	42.7	37.2	32.2	48.5	35.3	30.1	48.5	48.5	45.1		39.8	24.3
Progression Factor	0.92	0.74	0.67	0.71	0.62	0.47	1.00	1.00	1.00		0.68	0.37
Incremental Delay, d2	2.9	11.3	44.0	223.6	3.5	1.2	8.9	8.5	0.1		15.8	2.2
Delay (s)	42.2	38.7	65.6	258.1	25.3	15.3	57.4	57.0	45.3		42.8	11.2
Level of Service	D	D	E	F	C	B	E	E	D		D	B
Approach Delay (s)		48.8			91.4			53.4			21.7	
Approach LOS		D			F			D			C	

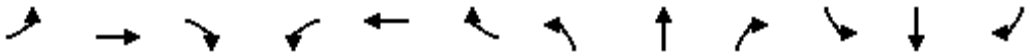
Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	257	908	74	0	194	0	1035	71	0	344	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3306			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3306			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	268	946	77	0	202	0	1078	74	0	395	0
RTOR Reduction (vph)	0	0	617	0	0	183	0	4	0	0	0	0
Lane Group Flow (vph)	126	268	329	77	0	19	0	1148	0	0	395	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.6	15.6	40.6	11.2		11.2		52.4			27.6	
Effective Green, g (s)	14.6	14.6	39.6	10.7		10.7		51.9			27.1	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	195	411	781	157		138		1505			797	
v/s Ratio Prot	0.08	c0.08	0.15	c0.05				c0.35			0.12	
v/s Ratio Perm						0.01						
v/c Ratio	0.65	0.65	0.42	0.49		0.14		0.76			0.50	
Uniform Delay, d1	47.2	47.3	28.4	49.1		47.4		25.9			37.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.41			0.52	
Incremental Delay, d2	6.4	3.3	0.3	1.8		0.3		3.1			2.1	
Delay (s)	53.6	50.6	28.7	50.8		47.7		13.8			21.7	
Level of Service	D	D	C	D		D		B			C	
Approach Delay (s)		35.4			48.6			13.8			21.7	
Approach LOS		D			D			B			C	

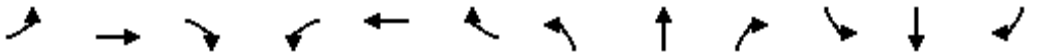
Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	106	1	161	15	948	134	221	1085	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2355	1458		1676	3353	1375	1676	3314	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1832	1458		1676	3353	1375	1676	3314	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	125	1	189	16	1030	146	235	1154	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	43	0	1	0
Lane Group Flow (vph)	0	28	1	125	28	0	16	1030	103	235	1179	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.5	16.5		4.2	57.2	57.2	20.3	73.3	
Effective Green, g (s)		4.0	4.0	16.5	16.5		3.7	57.7	57.7	19.8	73.8	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	265	211		54	1697	695	291	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.31		c0.14	0.36	
v/s Ratio Perm			0.00	c0.07					0.07			
v/c Ratio		0.47	0.02	0.47	0.13		0.30	0.61	0.15	0.81	0.55	
Uniform Delay, d1		54.0	53.1	44.7	42.5		53.9	20.1	15.0	45.3	11.0	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.93	1.24	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.6	0.5	11.6	0.8	
Delay (s)		56.2	53.2	45.2	42.6		55.0	21.7	15.5	53.7	14.5	
Level of Service		E	D	D	D		D	C	B	D	B	
Approach Delay (s)		55.1			43.7			21.4			21.0	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	474	223	81	603	39	260	191	42	40	205	143
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3166		1676	3313		1676	1707		1667	1765	1479
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.60	1.00	1.00
Satd. Flow (perm)	1676	3166		1676	3313		1676	1707		1056	1765	1479
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	515	242	88	655	42	283	208	46	43	223	155
RTOR Reduction (vph)	0	49	0	0	4	0	0	7	0	0	0	97
Lane Group Flow (vph)	108	708	0	88	693	0	283	247	0	43	223	58
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	13.1	35.3		10.0	32.2		23.8	45.1		29.9	29.7	42.8
Effective Green, g (s)	13.1	35.3		10.0	32.2		23.8	45.1		29.9	29.7	42.8
Actuated g/C Ratio	0.11	0.31		0.09	0.28		0.21	0.40		0.26	0.26	0.38
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	980		147	935		349	675		321	459	555
v/s Ratio Prot	0.06	c0.22		0.05	c0.21		c0.17	0.14		0.01	c0.13	0.01
v/s Ratio Perm										0.03		0.03
v/c Ratio	0.56	0.72		0.60	0.74		0.81	0.37		0.13	0.49	0.10
Uniform Delay, d1	47.7	35.0		50.1	37.1		43.0	24.4		32.3	35.7	23.1
Progression Factor	0.74	1.04		1.00	1.00		1.01	1.11		1.00	1.00	1.00
Incremental Delay, d2	2.1	1.5		6.4	3.2		13.2	1.5		0.2	3.6	0.1
Delay (s)	37.4	37.8		56.5	40.3		56.4	28.6		32.5	39.3	23.2
Level of Service	D	D		E	D		E	C		C	D	C
Approach Delay (s)		37.8			42.1			43.3			32.7	
Approach LOS		D			D			D			C	

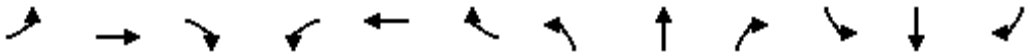
Intersection Summary			
HCM 2000 Control Delay	39.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	507	0	0	670	0	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	551	0	0	728	0	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			551		915	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			551		915	276
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			1015		272	722

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	276	276	364	364	39
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	39
cSH	1700	1700	1700	1700	722
Volume to Capacity	0.16	0.16	0.21	0.21	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

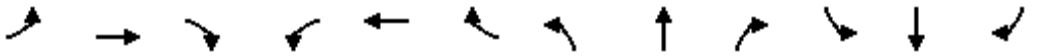
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	24.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	51	0	9	0	64	33	4	40	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
Hourly flow rate (vph)	1	0	0	55	0	10	0	70	36	4	43	0

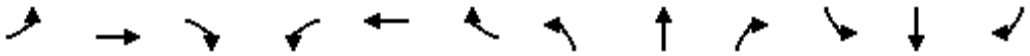
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	55	10	0	105	48
Volume Left (vph)	1	55	0	0	0	4
Volume Right (vph)	0	0	10	0	36	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.20	0.05
Departure Headway (s)	5.2	5.4	4.2	4.7	4.5	4.8
Degree Utilization, x	0.00	0.08	0.01	0.00	0.13	0.06
Capacity (veh/h)	666	637	818	762	777	728
Control Delay (s)	8.2	7.7	6.1	6.5	7.0	8.2
Approach Delay (s)	8.2	7.5		7.0		8.2
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.4			
Level of Service	A			
Intersection Capacity Utilization	16.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	10	10	11	6	36	12	405	20	46	411	56
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98			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	0.93		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1676	1589		1672	1506			3320			1756	1473
Flt Permitted	0.73	1.00		0.74	1.00			0.94			0.93	1.00
Satd. Flow (perm)	1283	1589		1308	1506			3136			1640	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	11	11	12	7	39	13	440	22	50	447	61
RTOR Reduction (vph)	0	9	0	0	33	0	0	3	0	0	0	6
Lane Group Flow (vph)	49	13	0	12	13	0	0	472	0	0	497	55
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	184	228		188	216			2288			1196	1075
v/s Ratio Prot		0.01			0.01							
v/s Ratio Perm	c0.04			0.01				0.15			c0.30	0.04
v/c Ratio	0.27	0.06		0.06	0.06			0.21			0.42	0.05
Uniform Delay, d1	21.7	21.1		21.1	21.1			2.4			3.0	2.2
Progression Factor	1.00	1.00		1.00	1.00			0.56			0.99	0.90
Incremental Delay, d2	0.6	0.1		0.1	0.1			0.2			0.9	0.1
Delay (s)	22.3	21.1		21.2	21.1			1.6			3.8	2.0
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		21.9			21.2			1.6			3.6	
Approach LOS		C			C			A			A	

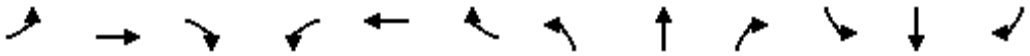
Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	1	0	7	0	93	7	7	78	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
Hourly flow rate (vph)	0	0	0	1	0	8	0	101	8	8	85	0

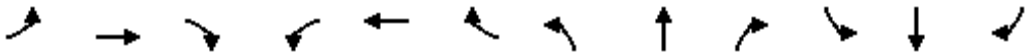
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	9	109	92
Volume Left (vph)	0	1	0	8
Volume Right (vph)	0	8	8	0
Hadj (s)	0.00	-0.47	-0.01	0.05
Departure Headway (s)	4.3	3.9	4.0	4.1
Degree Utilization, x	0.00	0.01	0.12	0.10
Capacity (veh/h)	799	882	884	875
Control Delay (s)	7.3	6.9	7.5	7.5
Approach Delay (s)	0.0	6.9	7.5	7.5
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.5			
Level of Service	A			
Intersection Capacity Utilization	20.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	5	4	13	3	59	6	347	20	69	347	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.86		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1627		1669	1455		1670	1747		1669	1753	
Flt Permitted	0.71	1.00		0.75	1.00		0.53	1.00		0.52	1.00	
Satd. Flow (perm)	1257	1627		1321	1455		928	1747		918	1753	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	5	4	14	3	64	7	377	22	75	377	14
RTOR Reduction (vph)	0	4	0	0	56	0	0	2	0	0	1	0
Lane Group Flow (vph)	30	5	0	14	11	0	7	397	0	75	390	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Effective Green, g (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	154	199		162	178		696	1311		689	1316	
v/s Ratio Prot		0.00			0.01			c0.23			0.22	
v/s Ratio Perm	c0.02			0.01			0.01			0.08		
v/c Ratio	0.19	0.03		0.09	0.06		0.01	0.30		0.11	0.30	
Uniform Delay, d1	22.5	22.0		22.2	22.1		1.8	2.3		1.9	2.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.17	1.60	
Incremental Delay, d2	0.2	0.0		0.1	0.1		0.0	0.6		0.3	0.5	
Delay (s)	22.7	22.0		22.2	22.1		1.8	2.9		2.6	4.2	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		22.5			22.2			2.9			3.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	0	0	0	0	101	1	1	81	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
Hourly flow rate (vph)	0	0	0	0	0	0	0	110	1	1	88	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	0	111	89
Volume Left (vph)	0	0	0	1
Volume Right (vph)	0	0	1	0
Hadj (s)	0.00	0.00	0.03	0.04
Departure Headway (s)	4.3	4.3	4.0	4.0
Degree Utilization, x	0.00	0.00	0.12	0.10
Capacity (veh/h)	802	802	883	883
Control Delay (s)	7.3	7.3	7.6	7.5
Approach Delay (s)	0.0	0.0	7.6	7.5
Approach LOS	A	A	A	A

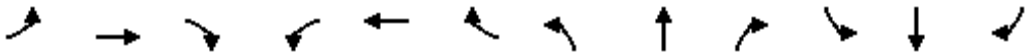
Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	11	2	100	26	3	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	2	109	28	3	87

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	14	137	90
Volume Left (vph)	12	0	3
Volume Right (vph)	2	28	0
Hadj (s)	0.11	-0.09	0.04
Departure Headway (s)	4.5	3.9	4.1
Degree Utilization, x	0.02	0.15	0.10
Capacity (veh/h)	760	899	866
Control Delay (s)	7.6	7.6	7.6
Approach Delay (s)	7.6	7.6	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	10	1	19	6	48	4	307	18	45	319	7
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
Hourly flow rate (vph)	21	11	1	21	7	52	4	334	20	49	347	8

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	33	79	358	403
Volume Left (vph)	21	21	4	49
Volume Right (vph)	1	52	20	8
Hadj (s)	0.14	-0.31	0.00	0.05
Departure Headway (s)	6.0	5.4	4.7	4.7
Degree Utilization, x	0.05	0.12	0.47	0.53
Capacity (veh/h)	515	575	741	743
Control Delay (s)	9.3	9.1	11.8	12.8
Approach Delay (s)	9.3	9.1	11.8	12.8
Approach LOS	A	A	B	B

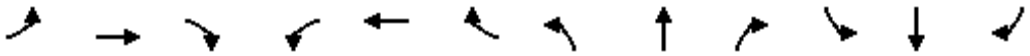
Intersection Summary			
Delay	11.9		
Level of Service	B		
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	0	0	16	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	0	0	17	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9	9			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9	9			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1012	1073			1600	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	17	0
Volume Left	15	0	0
Volume Right	0	17	0
cSH	1012	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

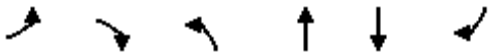
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	16	1	4	11	0	3	0	5	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	17	1	4	12	0	3	0	5	0	0	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	12			27			53	48	37	54	48	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	12			27			53	48	37	54	48	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	100	100	100
cM capacity (veh/h)	1607			1574			928	835	1019	924	835	1057

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	16	9	0
Volume Left	0	4	3	0
Volume Right	1	0	5	0
cSH	1607	1574	983	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	2.0	8.7	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.0	8.7	0.0
Approach LOS			A	A

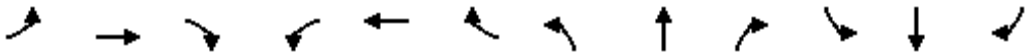
Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	18.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	18	7	2	104	74	16
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	8	2	113	80	17
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	218	102	106			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	218	102	106			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	763	943	1475			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	27	115	98
Volume Left	20	2	0
Volume Right	8	0	17
cSH	806	1475	1700
Volume to Capacity	0.03	0.00	0.06
Queue Length 95th (ft)	3	0	0
Control Delay (s)	9.6	0.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.2	0.0
Approach LOS	A		

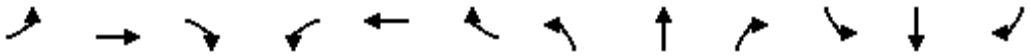
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	19.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	13	0	8	25	11	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	14	0	9	27	12	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			5			82	87	5	109	80	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			5			82	87	5	109	80	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	99	99	100
cM capacity (veh/h)	1588			1613			877	783	1077	821	790	1054

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	47	36	21
Volume Left	0	30	0	12
Volume Right	1	14	27	0
cSH	1588	1613	987	808
Volume to Capacity	0.00	0.02	0.04	0.03
Queue Length 95th (ft)	0	1	3	2
Control Delay (s)	0.0	4.8	8.8	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.8	8.8	9.6
Approach LOS			A	A

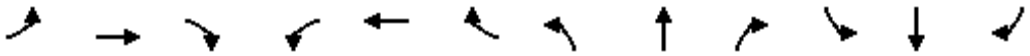
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	35	11	8	43	3	2	2	10	4	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	38	12	9	47	3	2	2	11	4	0	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	60			54			118	125	54	138	130	61
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	60			54			118	125	54	138	130	61
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	99	100	100
cM capacity (veh/h)	1531			1546			841	752	1005	801	748	993

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	59	15	5
Volume Left	0	9	2	4
Volume Right	12	3	11	1
cSH	1531	1546	934	833
Volume to Capacity	0.00	0.01	0.02	0.01
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.0	1.1	8.9	9.4
Lane LOS		A	A	A
Approach Delay (s)	0.0	1.1	8.9	9.4
Approach LOS			A	A

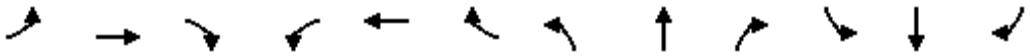
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	31	18	30	31	7	14	90	36	13	52	12
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
Hourly flow rate (vph)	8	34	20	33	34	8	15	98	39	14	57	13

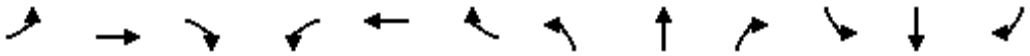
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	61	74	152	84
Volume Left (vph)	8	33	15	14
Volume Right (vph)	20	8	39	13
Hadj (s)	-0.13	0.06	-0.10	-0.03
Departure Headway (s)	4.4	4.6	4.2	4.4
Degree Utilization, x	0.07	0.09	0.18	0.10
Capacity (veh/h)	773	738	821	784
Control Delay (s)	7.7	8.0	8.1	7.8
Approach Delay (s)	7.7	8.0	8.1	7.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.0			
Level of Service	A			
Intersection Capacity Utilization	27.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	49	24	24	47	55	16	242	8	28	297	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1665			1728	1453	1676	1753		1676	1742	
Flt Permitted		0.90			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1526			1612	1453	1676	1753		1676	1742	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	53	26	26	51	60	17	263	9	30	323	23
RTOR Reduction (vph)	0	22	0	0	0	51	0	1	0	0	3	0
Lane Group Flow (vph)	0	86	0	0	77	9	17	271	0	30	343	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.6			8.6	8.6	1.6	34.7		3.2	36.3	
Effective Green, g (s)		8.6			8.6	8.6	1.6	34.7		3.2	36.3	
Actuated g/C Ratio		0.15			0.15	0.15	0.03	0.60		0.06	0.63	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		226			239	215	46	1048		92	1090	
v/s Ratio Prot							0.01	0.15		c0.02	c0.20	
v/s Ratio Perm		c0.06			0.05	0.01						
v/c Ratio		0.38			0.32	0.04	0.37	0.26		0.33	0.32	
Uniform Delay, d1		22.3			22.1	21.2	27.7	5.5		26.4	5.1	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			0.3	0.0	5.0	0.6		2.1	0.8	
Delay (s)		22.7			22.4	21.2	32.7	6.1		28.4	5.8	
Level of Service		C			C	C	C	A		C	A	
Approach Delay (s)		22.7			21.9			7.7			7.6	
Approach LOS		C			C			A			A	

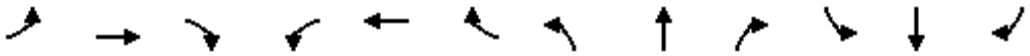
Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	777	255	206	681	29	274	84	201	27	57	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.89			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (prot)	1676	3020		1676	3353	1335	1676	1703			1475	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.99	
Satd. Flow (perm)	1676	3020		1676	3353	1335	1676	1703			1475	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	23	827	271	226	748	32	298	91	218	33	69	28
RTOR Reduction (vph)	0	23	0	0	0	18	0	75	0	0	9	0
Lane Group Flow (vph)	23	1075	0	226	748	14	298	234	0	0	121	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	38.7		18.7	52.4	52.4	24.9	24.9			21.2	
Effective Green, g (s)	5.5	39.7		19.2	53.4	53.4	24.4	24.4			20.7	
Actuated g/C Ratio	0.05	0.33		0.16	0.44	0.44	0.20	0.20			0.17	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	76	999		268	1492	594	340	346			254	
v/s Ratio Prot	0.01	c0.36		c0.13	0.22		c0.18	0.14			c0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.30	1.08		0.84	0.50	0.02	0.88	0.68			0.48	
Uniform Delay, d1	55.4	40.1		48.9	23.8	18.7	46.3	44.2			44.8	
Progression Factor	1.00	1.00		1.44	0.44	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.6	51.1		18.5	1.1	0.1	21.3	4.7			1.0	
Delay (s)	57.0	91.3		88.8	11.6	18.7	67.7	48.9			45.8	
Level of Service	E	F		F	B	B	E	D			D	
Approach Delay (s)		90.6			29.2			58.1			45.8	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	60.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

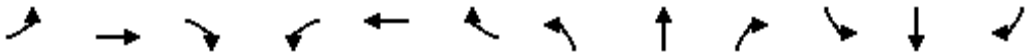
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	842	106	175	750	80	89	133	123	57	227	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.89	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3199		1676	3353	1271	1676	1765	1450	1676	1683	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3199		1676	3353	1271	1676	1765	1450	1676	1683	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	877	110	182	781	83	95	141	131	64	255	83
RTOR Reduction (vph)	0	7	0	0	0	45	0	0	98	0	10	0
Lane Group Flow (vph)	61	980	0	182	781	38	95	141	33	64	328	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.5		16.7	54.8	54.8	12.3	30.8	30.8	9.3	27.8	
Effective Green, g (s)	7.9	46.5		16.2	54.8	54.8	11.8	30.3	30.3	8.8	27.3	
Actuated g/C Ratio	0.07	0.39		0.13	0.46	0.46	0.10	0.25	0.25	0.07	0.23	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1239		226	1531	580	164	445	366	122	382	
v/s Ratio Prot	0.04	c0.31		c0.11	0.23		c0.06	c0.08		0.04	c0.19	
v/s Ratio Perm						0.03			0.02			
v/c Ratio	0.55	0.79		0.81	0.51	0.07	0.58	0.32	0.09	0.52	0.86	
Uniform Delay, d1	54.3	32.5		50.4	23.1	18.3	51.7	36.4	34.3	53.6	44.5	
Progression Factor	0.56	0.40		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	1.5		18.0	1.2	0.2	4.0	0.3	0.1	3.1	16.9	
Delay (s)	31.8	14.5		68.4	24.3	18.5	55.8	36.7	34.4	56.7	61.4	
Level of Service	C	B		E	C	B	E	D	C	E	E	
Approach Delay (s)		15.5			31.5			40.8			60.7	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

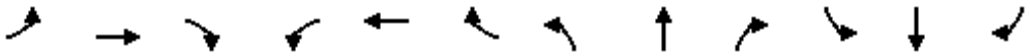
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	982	80	117	976	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3142		1676	3184			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3142		1676	3184			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	1067	87	121	1006	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1150	0	121	1053	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1361		173	1668			310	266		245	
v/s Ratio Prot	0.01	c0.37		c0.07	0.33			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.84		0.70	0.63			0.84	0.12		0.49	
Uniform Delay, d1	58.9	30.4		52.0	20.3			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.35			1.00	1.00		1.00	
Incremental Delay, d2	13.6	6.6		4.9	0.8			17.4	0.1		1.1	
Delay (s)	72.5	37.0		63.7	7.9			64.8	40.8		48.2	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		37.3			13.7			55.3			48.2	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

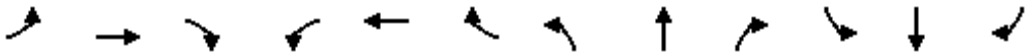
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	608	382	49	456	164	502	572	30	164	664	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	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	1.00	
Frt	1.00	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2950		1676	3160		3252	3235		1676	3113	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2950		1676	3160		3252	3235		1676	3113	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	668	420	59	549	198	564	643	34	176	714	197
RTOR Reduction (vph)	0	80	0	0	31	0	0	3	0	0	21	0
Lane Group Flow (vph)	160	1008	0	59	716	0	564	674	0	176	890	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.0	41.6		8.8	30.4		21.0	40.9		15.5	34.4	
Effective Green, g (s)	20.0	41.6		8.8	30.4		22.0	41.9		15.5	35.4	
Actuated g/C Ratio	0.17	0.35		0.07	0.25		0.18	0.35		0.13	0.29	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	279	1022		122	800		596	1129		216	918	
v/s Ratio Prot	0.10	c0.34		0.04	c0.23		c0.17	0.21		0.10	c0.29	
v/s Ratio Perm												
v/c Ratio	0.57	0.99		0.48	0.89		0.95	0.60		0.81	0.97	
Uniform Delay, d1	46.1	38.9		53.4	43.3		48.4	32.1		50.9	41.8	
Progression Factor	0.51	0.36		1.00	1.00		1.00	1.00		0.92	0.91	
Incremental Delay, d2	1.1	18.8		1.1	12.2		23.9	2.3		19.0	22.3	
Delay (s)	24.8	32.8		54.5	55.4		72.3	34.4		65.7	60.5	
Level of Service	C	C		D	E		E	C		E	E	
Approach Delay (s)		31.8			55.4			51.6			61.3	
Approach LOS		C			E			D			E	

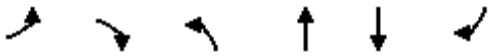
Intersection Summary			
HCM 2000 Control Delay	49.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	97.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	0	92	8	2	1	95	844	5	1	911	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.96	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1618	3346			3265	
Flt Permitted		0.80	1.00		0.82		0.25	1.00			0.95	
Satd. Flow (perm)		1387	1410		1384		430	3346			3117	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	104	0	97	17	4	2	103	917	5	1	969	78
RTOR Reduction (vph)	0	0	83	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	104	14	0	21	0	103	922	0	0	1045	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.3	17.3		16.8		95.7	95.7			95.7	
Effective Green, g (s)		17.3	17.3		17.3		96.7	96.7			96.7	
Actuated g/C Ratio		0.14	0.14		0.14		0.81	0.81			0.81	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		199	203		199		346	2696			2511	
v/s Ratio Prot								0.28				
v/s Ratio Perm		c0.07	0.01		0.02		0.24				c0.34	
v/c Ratio		0.52	0.07		0.11		0.30	0.34			0.42	
Uniform Delay, d1		47.5	44.4		44.6		3.0	3.1			3.4	
Progression Factor		1.00	1.00		1.00		0.53	0.55			1.00	
Incremental Delay, d2		1.1	0.1		0.1		1.7	0.3			0.5	
Delay (s)		48.7	44.4		44.7		3.3	2.0			3.9	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.6			44.7			2.1			3.9	
Approach LOS		D			D			A			A	

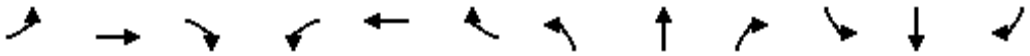
Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	19	51	87	870	952	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.98	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1555		1638	3279	3337	
Flt Permitted	0.99		0.25	1.00	1.00	
Satd. Flow (perm)	1555		438	3279	3337	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	25	67	94	935	992	16
RTOR Reduction (vph)	54	0	0	0	1	0
Lane Group Flow (vph)	38	0	94	935	1007	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	309		324	2429	2472	
v/s Ratio Prot	c0.02			0.29	c0.30	
v/s Ratio Perm			0.21			
v/c Ratio	0.12		0.29	0.38	0.41	
Uniform Delay, d1	32.9		4.3	4.7	4.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		2.3	0.5	0.5	
Delay (s)	33.0		6.5	5.2	5.3	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.3	5.3	
Approach LOS	C			A	A	

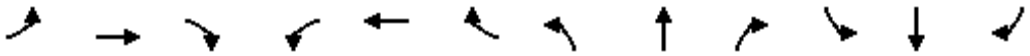
Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	5	52	13	4	11	31	848	8	22	935	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1690	1461		1611		1676	3346		1676	3338	
Flt Permitted		0.76	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1337	1461		1452		1676	3346		1676	3338	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	45	6	67	17	5	14	33	893	8	24	1016	23
RTOR Reduction (vph)	0	0	59	0	12	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	51	8	0	24	0	33	901	0	24	1038	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		7.8	73.1		4.4	69.7	
Effective Green, g (s)		12.5	12.5		12.5		7.8	74.1		4.4	70.7	
Actuated g/C Ratio		0.12	0.12		0.12		0.08	0.74		0.04	0.71	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		167	182		181		130	2479		73	2359	
v/s Ratio Prot							0.02	c0.27		0.01	c0.31	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.31	0.05		0.13		0.25	0.36		0.33	0.44	
Uniform Delay, d1		39.8	38.5		38.9		43.4	4.6		46.4	6.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		0.1		0.4	0.4		1.0	0.6	
Delay (s)		40.2	38.5		39.0		43.7	5.0		47.3	6.8	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		39.2			39.0			6.4			7.7	
Approach LOS		D			D			A			A	

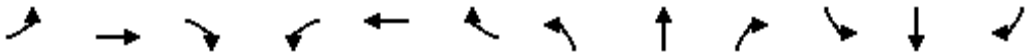
Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	244	5	27	5	138	66	10	88	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
Hourly flow rate (vph)	1	1	1	265	5	29	5	150	72	11	96	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	268	32	5	222	108
Volume Left (vph)	1	265	0	5	0	11
Volume Right (vph)	1	0	29	0	72	1
Hadj (s)	-0.10	0.53	-0.61	0.53	-0.19	0.05
Departure Headway (s)	5.8	6.0	4.8	6.1	5.4	5.8
Degree Utilization, x	0.01	0.44	0.04	0.01	0.33	0.17
Capacity (veh/h)	561	580	708	562	642	586
Control Delay (s)	8.9	12.4	6.8	7.9	9.8	10.0
Approach Delay (s)	8.9	11.8		9.7		10.0
Approach LOS	A	B		A		A

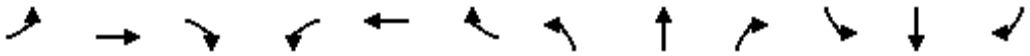
Intersection Summary				
Delay	10.8			
Level of Service	B			
Intersection Capacity Utilization	41.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	27	0	44	0	355	40	26	206	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
Hourly flow rate (vph)	0	0	0	29	0	48	0	386	43	28	224	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	77	429	252
Volume Left (vph)	0	29	0	28
Volume Right (vph)	0	48	43	0
Hadj (s)	0.00	-0.26	-0.03	0.06
Departure Headway (s)	5.6	5.1	4.4	4.6
Degree Utilization, x	0.00	0.11	0.52	0.32
Capacity (veh/h)	565	617	807	750
Control Delay (s)	8.6	8.8	12.0	9.8
Approach Delay (s)	0.0	8.8	12.0	9.8
Approach LOS	A	A	B	A

Intersection Summary			
Delay	11.0		
Level of Service	B		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	21	0	0	3	26	371	0	0	158	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	50	0	23	0	0	3	28	403	0	0	172	54
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	663	659	199	682	686	404	226			403		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	663	659	199	682	686	404	226			403		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	100	97	100	100	99	98			100		
cM capacity (veh/h)	367	376	842	349	362	646	1342			1155		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	3	432	226
Volume Left	50	0	28	0
Volume Right	23	3	0	54
cSH	445	646	1342	1155
Volume to Capacity	0.16	0.01	0.02	0.00
Queue Length 95th (ft)	14	0	2	0
Control Delay (s)	14.7	10.6	0.7	0.0
Lane LOS	B	B	A	
Approach Delay (s)	14.7	10.6	0.7	0.0
Approach LOS	B	B		

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	26	29	371	39	17	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	32	403	42	18	179

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	60	446	198
Volume Left (vph)	28	0	18
Volume Right (vph)	32	42	0
Hadj (s)	-0.19	-0.02	0.05
Departure Headway (s)	5.1	4.3	4.6
Degree Utilization, x	0.08	0.53	0.25
Capacity (veh/h)	623	831	758
Control Delay (s)	8.6	11.9	9.1
Approach Delay (s)	8.6	11.9	9.1
Approach LOS	A	B	A

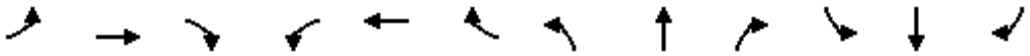
Intersection Summary			
Delay	10.8		
Level of Service	B		
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	15	2	5	13	11	19
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	2	5	14	12	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57	12			20	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57	12			20	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			99	
cM capacity (veh/h)	943	1068			1597	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	18	20	33
Volume Left	16	0	12
Volume Right	2	14	0
cSH	956	1700	1597
Volume to Capacity	0.02	0.01	0.01
Queue Length 95th (ft)	1	0	1
Control Delay (s)	8.8	0.0	2.7
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	2.7
Approach LOS	A		

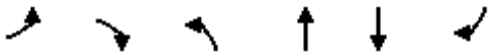
Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	19	3	20	16	5	2	15	7	8	23	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	21	3	22	17	5	2	16	8	9	25	2
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	23			29			113	98	27	106	97	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	23			29			113	98	27	106	97	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	98	99	99	97	100
cM capacity (veh/h)	1592			1578			824	777	1044	841	778	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	26	45	26	36
Volume Left	2	22	2	9
Volume Right	3	5	8	2
cSH	1592	1578	844	805
Volume to Capacity	0.00	0.01	0.03	0.04
Queue Length 95th (ft)	0	1	2	3
Control Delay (s)	0.6	3.6	9.4	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.6	3.6	9.4	9.7
Approach LOS			A	A

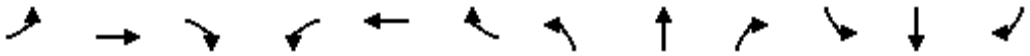
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	18.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	27	30	19	387	159	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	33	21	421	173	34
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	673	212	225			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	673	212	225			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	96	98			
cM capacity (veh/h)	407	813	1324			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	62	441	207
Volume Left	29	21	0
Volume Right	33	0	34
cSH	552	1324	1700
Volume to Capacity	0.11	0.02	0.12
Queue Length 95th (ft)	9	1	0
Control Delay (s)	12.3	0.5	0.0
Lane LOS	B	A	
Approach Delay (s)	12.3	0.5	0.0
Approach LOS	B		

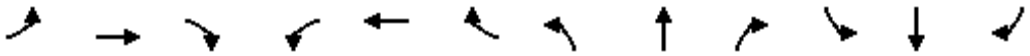
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	51	52	24	21	40	67	33	337	39	33	108	27
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
Hourly flow rate (vph)	55	57	26	23	43	73	36	366	42	36	117	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	138	139	445	183
Volume Left (vph)	55	23	36	36
Volume Right (vph)	26	73	42	29
Hadj (s)	0.00	-0.25	-0.01	-0.02
Departure Headway (s)	5.8	5.6	5.0	5.3
Degree Utilization, x	0.22	0.21	0.62	0.27
Capacity (veh/h)	549	569	692	622
Control Delay (s)	10.4	10.1	15.7	10.3
Approach Delay (s)	10.4	10.1	15.7	10.3
Approach LOS	B	B	C	B

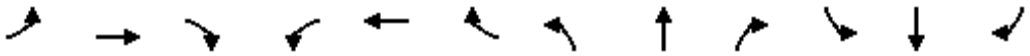
Intersection Summary			
Delay	12.9		
Level of Service	B		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	260	74	106	247	234	82	151	54	57	77	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3152		1676	3353	1441	1676	1888			1522	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3152		1676	3353	1441	1676	1888			1522	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	30	286	81	112	260	246	99	182	65	59	79	9
RTOR Reduction (vph)	0	22	0	0	0	133	0	14	0	0	3	0
Lane Group Flow (vph)	30	345	0	112	260	113	99	233	0	0	144	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	37.2		10.5	42.7	42.7	14.9	14.9			15.9	
Effective Green, g (s)	5.5	38.2		11.0	43.7	43.7	14.4	14.4			15.4	
Actuated g/C Ratio	0.06	0.40		0.12	0.46	0.46	0.15	0.15			0.16	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	97	1267		194	1542	662	254	286			246	
v/s Ratio Prot	0.02	c0.11		c0.07	0.08		0.06	c0.12			c0.09	
v/s Ratio Perm						0.08						
v/c Ratio	0.31	0.27		0.58	0.17	0.17	0.39	0.82			0.58	
Uniform Delay, d1	42.9	19.1		39.8	15.0	15.0	36.3	39.0			36.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.3	0.5		3.4	0.2	0.6	0.7	15.9			2.9	
Delay (s)	44.3	19.6		43.2	15.3	15.6	37.1	54.9			39.7	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		21.5			20.4			49.8			39.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

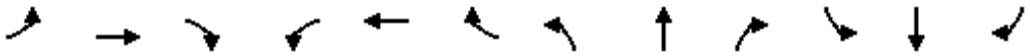
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	1	244	5	27	5	140	67	10	88	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
Hourly flow rate (vph)	1	1	1	265	5	29	5	152	73	11	96	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	3	268	32	5	225	108
Volume Left (vph)	1	265	0	5	0	11
Volume Right (vph)	1	0	29	0	73	1
Hadj (s)	-0.10	0.53	-0.61	0.53	-0.19	0.05
Departure Headway (s)	5.8	6.0	4.8	6.1	5.4	5.8
Degree Utilization, x	0.01	0.44	0.04	0.01	0.33	0.17
Capacity (veh/h)	559	579	706	562	642	585
Control Delay (s)	8.9	12.4	6.8	7.9	9.8	10.0
Approach Delay (s)	8.9	11.8		9.8		10.0
Approach LOS	A	B		A		A

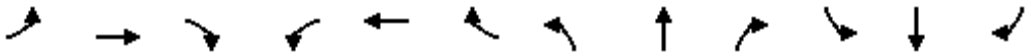
Intersection Summary				
Delay	10.8			
Level of Service	B			
Intersection Capacity Utilization	41.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	28	0	44	0	357	45	26	207	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
Hourly flow rate (vph)	0	0	0	30	0	48	0	388	49	28	225	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	78	437	253
Volume Left (vph)	0	30	0	28
Volume Right (vph)	0	48	49	0
Hadj (s)	0.00	-0.25	-0.03	0.06
Departure Headway (s)	5.6	5.2	4.4	4.6
Degree Utilization, x	0.00	0.11	0.53	0.33
Capacity (veh/h)	562	613	807	748
Control Delay (s)	8.6	8.8	12.2	9.9
Approach Delay (s)	0.0	8.8	12.2	9.9
Approach LOS	A	A	B	A

Intersection Summary			
Delay	11.1		
Level of Service	B		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	0	27	0	0	3	28	368	0	0	158	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	62	0	29	0	0	3	30	400	0	0	172	57
Pedestrians											1	
Lane Width (ft)											12.0	
Walking Speed (ft/s)											4.0	
Percent Blockage											0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	665	661	200	690	689	401	228			400		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	665	661	200	690	689	401	228			400		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	100	97	100	100	99	98			100		
cM capacity (veh/h)	365	374	841	341	360	649	1340			1159		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	91	3	430	228
Volume Left	62	0	30	0
Volume Right	29	3	0	57
cSH	446	649	1340	1159
Volume to Capacity	0.20	0.01	0.02	0.00
Queue Length 95th (ft)	19	0	2	0
Control Delay (s)	15.1	10.6	0.8	0.0
Lane LOS	C	B	A	
Approach Delay (s)	15.1	10.6	0.8	0.0
Approach LOS	C	B		

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	26	30	370	36	18	170
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	33	402	39	20	185

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	61	441	204
Volume Left (vph)	28	0	20
Volume Right (vph)	33	39	0
Hadj (s)	-0.19	-0.02	0.05
Departure Headway (s)	5.1	4.3	4.6
Degree Utilization, x	0.09	0.52	0.26
Capacity (veh/h)	623	828	758
Control Delay (s)	8.6	11.9	9.2
Approach Delay (s)	8.6	11.9	9.2
Approach LOS	A	B	A

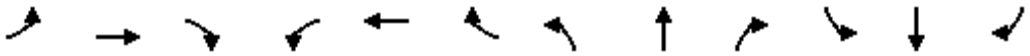
Intersection Summary			
Delay	10.8		
Level of Service	B		
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	16	0	0	13	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	0	0	14	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	7	7			14	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	7	7			14	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1014	1075			1604	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	17	14	0
Volume Left	17	0	0
Volume Right	0	14	0
cSH	1014	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

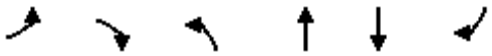
Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	8	2	20	15	6	1	17	7	11	33	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	9	2	22	16	7	1	18	8	12	36	3
Pedestrians		3						5				
Lane Width (ft)		12.0						12.0				
Walking Speed (ft/s)		4.0						4.0				
Percent Blockage		0						0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	23			16			106	85	15	94	83	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	23			16			106	85	15	94	83	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	98	99	99	95	100
cM capacity (veh/h)	1592			1595			823	789	1060	855	792	1052

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	13	45	27	51
Volume Left	2	22	1	12
Volume Right	2	7	8	3
cSH	1592	1595	852	819
Volume to Capacity	0.00	0.01	0.03	0.06
Queue Length 95th (ft)	0	1	2	5
Control Delay (s)	1.2	3.6	9.4	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	1.2	3.6	9.4	9.7
Approach LOS			A	A

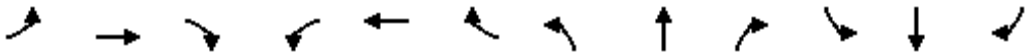
Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	28	19	388	164	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	30	21	422	178	33
Pedestrians	18			4	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	679	217	229			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	679	217	229			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	96	98			
cM capacity (veh/h)	404	808	1319			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	53	442	211
Volume Left	23	21	0
Volume Right	30	0	33
cSH	565	1319	1700
Volume to Capacity	0.09	0.02	0.12
Queue Length 95th (ft)	8	1	0
Control Delay (s)	12.0	0.5	0.0
Lane LOS	B	A	
Approach Delay (s)	12.0	0.5	0.0
Approach LOS	B		

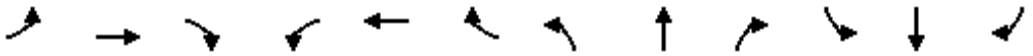
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	51	47	18	21	38	68	33	338	39	38	106	27
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
Hourly flow rate (vph)	55	51	20	23	41	74	36	367	42	41	115	29

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	126	138	446	186
Volume Left (vph)	55	23	36	41
Volume Right (vph)	20	74	42	29
Hadj (s)	0.03	-0.25	-0.01	-0.02
Departure Headway (s)	5.8	5.5	4.9	5.3
Degree Utilization, x	0.20	0.21	0.61	0.27
Capacity (veh/h)	545	573	698	629
Control Delay (s)	10.3	10.0	15.5	10.3
Approach Delay (s)	10.3	10.0	15.5	10.3
Approach LOS	B	A	C	B

Intersection Summary				
Delay	12.8			
Level of Service	B			
Intersection Capacity Utilization	45.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	260	74	106	247	234	82	151	54	52	75	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.96			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3152		1676	3353	1441	1676	1888			1525	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3152		1676	3353	1441	1676	1888			1525	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	30	286	81	112	260	246	99	182	65	54	77	7
RTOR Reduction (vph)	0	22	0	0	0	132	0	14	0	0	3	0
Lane Group Flow (vph)	30	345	0	112	260	114	99	233	0	0	135	0
Confl. Peds. (#/hr)	8		13	13		8	13		10	10		13
Confl. Bikes (#/hr)			8			4			30			24
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	5.0	37.5		10.5	43.0	43.0	14.9	14.9			15.6	
Effective Green, g (s)	5.5	38.5		11.0	44.0	44.0	14.4	14.4			15.1	
Actuated g/C Ratio	0.06	0.41		0.12	0.46	0.46	0.15	0.15			0.16	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	97	1277		194	1552	667	254	286			242	
v/s Ratio Prot	0.02	c0.11		c0.07	0.08		0.06	c0.12			c0.09	
v/s Ratio Perm						0.08						
v/c Ratio	0.31	0.27		0.58	0.17	0.17	0.39	0.82			0.56	
Uniform Delay, d1	42.9	18.9		39.8	14.8	14.9	36.3	39.0			36.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2	1.3	0.5		3.4	0.2	0.6	0.7	15.9			2.2	
Delay (s)	44.3	19.4		43.2	15.1	15.4	37.1	54.9			39.1	
Level of Service	D	B		D	B	B	D	D			D	
Approach Delay (s)		21.3			20.3			49.8			39.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	429	399	0	489	1425	0	0	0	614	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3012			2856	1282				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3012			2856	1282				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	447	416	0	509	1484	0	0	0	667	0	273
RTOR Reduction (vph)	0	136	0	0	176	503	0	0	0	0	0	191
Lane Group Flow (vph)	95	727	0	0	927	387	0	0	0	667	0	82
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	71.6			49.6	49.6				33.9		33.9
Effective Green, g (s)	18.0	71.6			49.6	49.6				34.4		34.4
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1891			1242	557				758		435
v/s Ratio Prot	0.06	c0.24			c0.32					c0.27		
v/s Ratio Perm						0.30						0.06
v/c Ratio	0.36	0.38			0.75	0.70				0.88		0.19
Uniform Delay, d1	42.9	10.4			26.9	26.1				37.8		29.5
Progression Factor	1.00	1.00			0.41	7.37				1.00		1.00
Incremental Delay, d2	0.3	0.6			2.2	3.8				11.3		0.2
Delay (s)	43.2	11.0			13.2	196.0				49.1		29.6
Level of Service	D	B			B	F				D		C
Approach Delay (s)		14.2			94.8			0.0			43.5	
Approach LOS		B			F			A			D	

Intersection Summary			
HCM 2000 Control Delay	62.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	898	0	0	1424	414	491	289	808	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.94	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1509	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1509	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	935	0	0	1483	431	540	318	888	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	19	20	0	0	0
Lane Group Flow (vph)	153	935	0	0	1483	222	486	575	646	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	542	750			
v/s Ratio Prot	c0.09	0.19			c0.31		0.31	c0.38	0.45			
v/s Ratio Perm						0.16						
v/c Ratio	0.58	0.48			0.82	0.43	0.85	1.06	0.86			
Uniform Delay, d1	44.5	25.2			31.9	26.4	33.7	36.5	23.4			
Progression Factor	0.78	0.49			0.71	0.48	1.00	1.00	1.00			
Incremental Delay, d2	6.9	0.6			2.6	1.6	11.3	56.1	9.9			
Delay (s)	41.8	12.9			25.3	14.3	45.0	92.6	33.3			
Level of Service	D	B			C	B	D	F	C			
Approach Delay (s)		16.9			22.8			56.7			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	531	78	338	99	43	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3189		3353	1455		3336
Flt Permitted	0.96		1.00	1.00		0.88
Satd. Flow (perm)	3189		3353	1455		2960
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	597	88	363	106	46	460
RTOR Reduction (vph)	10	0	0	56	0	0
Lane Group Flow (vph)	675	0	363	50	0	506
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1454		1582	686		1396
v/s Ratio Prot	c0.21		0.11			
v/s Ratio Perm				0.03		c0.17
v/c Ratio	0.46		0.23	0.07		0.36
Uniform Delay, d1	21.4		17.8	16.5		19.2
Progression Factor	0.46		0.21	0.01		1.00
Incremental Delay, d2	1.0		0.3	0.2		0.7
Delay (s)	11.0		4.0	0.3		19.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		3.2			19.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

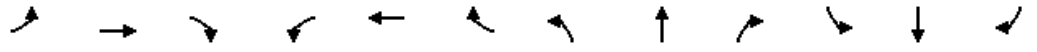


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	81	64	441	472	174	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	100	79	479	513	198	169
RTOR Reduction (vph)	0	18	0	0	0	150
Lane Group Flow (vph)	100	61	479	513	198	19
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	13.3	87.9	71.1	93.7	19.1	13.3
Effective Green, g (s)	12.8	87.4	70.6	93.2	18.6	12.8
Actuated g/C Ratio	0.11	0.77	0.62	0.82	0.16	0.11
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1150	2013	1442	287	168
v/s Ratio Prot	c0.06	0.04	0.15	c0.29	c0.11	0.01
v/s Ratio Perm						
v/c Ratio	0.53	0.05	0.24	0.36	0.69	0.11
Uniform Delay, d1	47.8	3.2	9.7	2.7	45.0	45.5
Progression Factor	1.49	4.53	0.17	0.13	1.00	1.00
Incremental Delay, d2	2.9	0.0	0.2	0.6	6.8	0.3
Delay (s)	74.2	14.7	1.9	0.9	51.7	45.8
Level of Service	E	B	A	A	D	D
Approach Delay (s)	48.0			1.4	49.0	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	725	642	231	983	122	140	37	103	169	165	639
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3072	1365	1676	3353	1480	1593	1629	1479		1721	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3072	1365	1676	3353	1480	1593	1629	1479		1721	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	393	833	738	241	1024	127	156	41	114	188	183	710
RTOR Reduction (vph)	0	24	114	0	0	52	0	0	101	0	0	65
Lane Group Flow (vph)	393	1067	366	241	1024	75	98	99	13	0	371	645
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	991	592	249	1102	486	177	181	164		452	1106
v/s Ratio Prot	0.12	c0.35	c0.27	0.14	c0.31		0.06	0.06			c0.22	0.24
v/s Ratio Perm						0.05			0.01			
v/c Ratio	0.78	1.08	0.62	0.97	0.93	0.15	0.55	0.55	0.08		0.82	0.58
Uniform Delay, d1	46.2	38.6	24.9	48.2	37.0	27.0	48.0	47.9	45.4		39.5	25.4
Progression Factor	0.95	0.71	0.41	0.82	0.75	0.53	1.00	1.00	1.00		0.89	0.49
Incremental Delay, d2	8.6	48.5	1.3	39.0	11.3	0.5	3.0	2.7	0.1		14.4	2.1
Delay (s)	52.5	75.8	11.6	78.5	39.1	14.8	50.9	50.6	45.5		49.6	14.5
Level of Service	D	E	B	E	D	B	D	D	D		D	B
Approach Delay (s)		55.4			43.7			48.9			26.5	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	45.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	118	618	51	0	108	0	752	40	0	239	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3197	2250	1676		1463		3320			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3197	2250	1676		1463		3320			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	134	702	62	0	132	0	817	43	0	278	0
RTOR Reduction (vph)	0	0	482	0	0	120	0	3	0	0	0	0
Lane Group Flow (vph)	71	148	220	62	0	12	0	857	0	0	278	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.8	11.8	36.8	10.7		10.7		55.1			30.3	
Effective Green, g (s)	10.8	10.8	35.8	10.2		10.2		54.6			29.8	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.26	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	144	302	706	149		130		1590			876	
v/s Ratio Prot	c0.05	0.05	0.10	c0.04				c0.26			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.49	0.49	0.31	0.42		0.09		0.54			0.32	
Uniform Delay, d1	49.0	49.0	29.7	49.1		47.6		20.9			33.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.47	
Incremental Delay, d2	1.9	0.9	0.2	1.4		0.2		1.3			0.9	
Delay (s)	50.9	49.9	29.9	50.5		47.9		22.2			17.0	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.8			48.7			22.2			17.0	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	78	2	79	10	700	103	99	769	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3311	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3311	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	101	3	103	10	714	105	103	801	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	60	0	3	0
Lane Group Flow (vph)	0	29	1	101	24	0	10	714	45	103	836	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.7	31.7	8.7	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.2	32.2	8.2	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1439	620	183	1726	
v/s Ratio Prot		c0.02			0.02		0.01	0.21		c0.06	c0.25	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.26	0.08		0.34	0.50	0.07	0.56	0.48	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	15.5	12.6	31.7	11.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	1.2	0.2	2.4	1.0	
Delay (s)		35.8	34.2	25.4	24.4		39.0	16.7	12.8	34.1	12.5	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			16.5			14.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	558	250	114	443	66	466	525	73	152	321	284
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3149		1676	3251		1676	1722		1668	1765	1455
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.43	1.00	1.00
Satd. Flow (perm)	1676	3149		1676	3251		1676	1722		757	1765	1455
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	168	641	287	119	461	69	480	541	75	167	353	312
RTOR Reduction (vph)	0	46	0	0	10	0	0	4	0	0	0	61
Lane Group Flow (vph)	168	882	0	119	520	0	480	612	0	167	353	251
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	16.8	34.6		10.9	28.7		31.0	42.8		22.5	22.3	39.1
Effective Green, g (s)	16.3	35.1		10.4	29.2		30.5	42.3		22.0	21.8	38.1
Actuated g/C Ratio	0.14	0.31		0.09	0.26		0.27	0.37		0.19	0.19	0.33
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	239	969		152	832		448	638		226	337	486
v/s Ratio Prot	0.10	c0.28		c0.07	0.16		c0.29	0.36		0.06	c0.20	0.07
v/s Ratio Perm										0.08		0.10
v/c Ratio	0.70	0.91		0.78	0.63		1.07	0.96		0.74	1.05	0.52
Uniform Delay, d1	46.5	37.9		50.7	37.6		41.8	35.0		43.2	46.1	30.5
Progression Factor	0.56	0.68		1.00	1.00		1.01	1.07		1.00	1.00	1.00
Incremental Delay, d2	2.8	4.3		22.6	1.5		58.8	23.4		11.9	62.0	0.9
Delay (s)	28.8	29.9		73.3	39.0		100.9	60.9		55.1	108.1	31.5
Level of Service	C	C		E	D		F	E		E	F	C
Approach Delay (s)		29.8			45.3			78.4			68.7	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	55.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Volume (veh/h)	743	0	82	522	0	166
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	808	0	89	567	0	180
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			808		1270	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			808		1270	404
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		100	70
cM capacity (veh/h)			813		142	596

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	404	404	278	378	180
Volume Left	0	0	89	0	0
Volume Right	0	0	0	0	180
cSH	1700	1700	813	1700	596
Volume to Capacity	0.24	0.24	0.11	0.22	0.30
Queue Length 95th (ft)	0	0	9	0	32
Control Delay (s)	0.0	0.0	4.0	0.0	13.6
Lane LOS			A		B
Approach Delay (s)	0.0		1.7		13.6
Approach LOS					B

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	46.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	98	0	27	1	291	198	20	148	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
Hourly flow rate (vph)	1	1	5	107	0	29	1	316	215	22	161	1

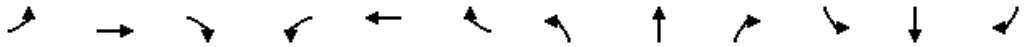
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	107	29	1	532	184
Volume Left (vph)	1	107	0	1	0	22
Volume Right (vph)	5	0	29	0	215	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.25	0.05
Departure Headway (s)	6.3	6.8	5.6	5.7	4.9	5.7
Degree Utilization, x	0.01	0.20	0.05	0.00	0.73	0.29
Capacity (veh/h)	506	480	573	611	711	609
Control Delay (s)	9.4	10.4	7.7	7.5	18.8	11.0
Approach Delay (s)	9.4	9.8		18.8		11.0
Approach LOS	A	A		C		B

Intersection Summary				
Delay	15.6			
Level of Service	C			
Intersection Capacity Utilization	48.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	238	103	86	21	9	45	36	773	75	60	532	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.97			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	1.00
Frt	1.00	0.93		1.00	0.88			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1660	1597		1642	1504			3250			1713	1457
Flt Permitted	0.71	1.00		0.54	1.00			0.92			0.83	1.00
Satd. Flow (perm)	1241	1597		939	1504			2982			1436	1457
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	301	130	109	28	12	60	42	909	88	62	554	94
RTOR Reduction (vph)	0	64	0	0	36	0	0	10	0	0	0	14
Lane Group Flow (vph)	301	175	0	28	36	0	0	1029	0	0	616	80
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	18.5	18.5		18.5	18.5			31.3			31.3	31.3
Effective Green, g (s)	18.0	18.0		18.0	18.0			30.8			30.8	30.8
Actuated g/C Ratio	0.32	0.32		0.32	0.32			0.54			0.54	0.54
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	391	504		296	474			1611			775	787
v/s Ratio Prot		0.11			0.02							
v/s Ratio Perm	c0.24			0.03				0.35			c0.43	0.06
v/c Ratio	0.77	0.35		0.09	0.08			0.64			0.79	0.10
Uniform Delay, d1	17.6	15.0		13.8	13.7			9.2			10.6	6.4
Progression Factor	1.00	1.00		1.00	1.00			0.76			0.79	0.65
Incremental Delay, d2	8.5	0.3		0.1	0.0			1.6			3.0	0.1
Delay (s)	26.1	15.3		13.9	13.7			8.6			11.3	4.3
Level of Service	C	B		B	B			A			B	A
Approach Delay (s)		21.3			13.8			8.6			10.4	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	47	0	22	0	402	25	51	382	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
Hourly flow rate (vph)	0	0	0	51	0	24	0	437	27	55	415	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	75	464	471
Volume Left (vph)	0	51	0	55
Volume Right (vph)	0	24	27	0
Hadj (s)	0.00	-0.02	0.00	0.06
Departure Headway (s)	6.2	6.0	4.7	4.7
Degree Utilization, x	0.00	0.12	0.60	0.62
Capacity (veh/h)	483	521	753	745
Control Delay (s)	9.2	9.8	14.6	15.1
Approach Delay (s)	0.0	9.8	14.6	15.1
Approach LOS	A	A	B	C

Intersection Summary			
Delay	14.5		
Level of Service	B		
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	54	43	36	29	83	14	653	25	63	549	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.93		1.00	0.89		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1658	1608		1646	1526		1665	1751		1666	1700	
Flt Permitted	0.66	1.00		0.66	1.00		0.33	1.00		0.26	1.00	
Satd. Flow (perm)	1148	1608		1139	1526		578	1751		458	1700	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	158	84	67	49	39	112	16	734	28	70	610	41
RTOR Reduction (vph)	0	52	0	0	87	0	0	2	0	0	3	0
Lane Group Flow (vph)	158	99	0	49	64	0	16	760	0	70	648	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	13.1	13.1		13.1	13.1		36.7	36.7		36.7	36.7	
Effective Green, g (s)	12.6	12.6		12.6	12.6		36.2	36.2		36.2	36.2	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.64	0.64		0.64	0.64	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	253	355		251	337		367	1112		290	1079	
v/s Ratio Prot		0.06			0.04			c0.43			0.38	
v/s Ratio Perm	c0.14			0.04			0.03			0.15		
v/c Ratio	0.62	0.28		0.20	0.19		0.04	0.68		0.24	0.60	
Uniform Delay, d1	20.1	18.4		18.1	18.0		3.9	6.7		4.5	6.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.49	0.76	
Incremental Delay, d2	3.4	0.2		0.1	0.1		0.2	3.4		1.5	1.8	
Delay (s)	23.5	18.6		18.2	18.1		4.1	10.1		3.7	6.5	
Level of Service	C	B		B	B		A	B		A	A	
Approach Delay (s)		21.1			18.2			10.0			6.3	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	61	0	30	0	0	3	28	343	0	1	402	54
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	66	0	33	0	0	3	30	373	0	1	437	59
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	905	902	466	935	932	373	496			373		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	905	902	466	935	932	373	496			373		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	74	100	95	100	100	100	97			100		
cM capacity (veh/h)	250	269	596	227	259	673	1068			1186		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	99	3	403	497
Volume Left	66	0	30	1
Volume Right	33	3	0	59
cSH	309	673	1068	1186
Volume to Capacity	0.32	0.00	0.03	0.00
Queue Length 95th (ft)	34	0	2	0
Control Delay (s)	22.0	10.4	0.9	0.0
Lane LOS	C	B	A	A
Approach Delay (s)	22.0	10.4	0.9	0.0
Approach LOS	C	B		

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	60.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	40	27	345	40	32	402
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	29	375	43	35	437

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	73	418	472
Volume Left (vph)	43	0	35
Volume Right (vph)	29	43	0
Hadj (s)	-0.09	-0.03	0.05
Departure Headway (s)	5.8	4.6	4.6
Degree Utilization, x	0.12	0.54	0.61
Capacity (veh/h)	542	759	758
Control Delay (s)	9.6	12.9	14.6
Approach Delay (s)	9.6	12.9	14.6
Approach LOS	A	B	B

Intersection Summary			
Delay	13.5		
Level of Service	B		
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	35	45	13	35	37	76	10	574	30	94	521	12
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
Hourly flow rate (vph)	38	49	14	38	40	83	11	624	33	102	566	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	101	161	667	682
Volume Left (vph)	38	38	11	102
Volume Right (vph)	14	83	33	13
Hadj (s)	0.03	-0.23	0.01	0.05
Departure Headway (s)	7.9	7.3	6.0	6.0
Degree Utilization, x	0.22	0.33	1.0	1.0
Capacity (veh/h)	442	475	607	602
Control Delay (s)	13.1	13.9	93.2	104.6
Approach Delay (s)	13.1	13.9	93.2	104.6
Approach LOS	B	B	F	F

Intersection Summary				
Delay	85.1			
Level of Service	F			
Intersection Capacity Utilization	91.5%	ICU Level of Service	F	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	30	7	22	22	6	9
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	8	24	24	7	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	59	36			48	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	59	36			48	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	99			100	
cM capacity (veh/h)	944	1037			1559	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	40	48	16
Volume Left	33	0	7
Volume Right	8	24	0
cSH	961	1700	1559
Volume to Capacity	0.04	0.03	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.9	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	2.9
Approach LOS	A		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	16.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	30	2	7	28	7	9	24	8	8	22	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	2	33	2	8	30	8	10	26	9	9	24	3
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	38			43			118	99	47	114	97	41
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	38			43			118	99	47	114	97	41
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	97	99	99	97	100
cM capacity (veh/h)	1572			1556			817	781	1012	822	783	1024

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	37	46	45	36
Volume Left	2	8	10	9
Volume Right	2	8	9	3
cSH	1572	1556	825	810
Volume to Capacity	0.00	0.00	0.05	0.04
Queue Length 95th (ft)	0	0	4	3
Control Delay (s)	0.4	1.3	9.6	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.4	1.3	9.6	9.7
Approach LOS			A	A

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	44	22	28	347	406	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	24	30	377	441	33
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	910	464	478			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	910	464	478			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	84	96	97			
cM capacity (veh/h)	293	595	1081			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	72	408	474
Volume Left	48	30	0
Volume Right	24	0	33
cSH	353	1081	1700
Volume to Capacity	0.20	0.03	0.28
Queue Length 95th (ft)	19	2	0
Control Delay (s)	17.8	0.9	0.0
Lane LOS	C	A	
Approach Delay (s)	17.8	0.9	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	87	3	27	0	19	128	21	21	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	95	3	29	0	21	139	23	23	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	43			11			235	244	12	379	230	32
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	43			11			235	244	12	379	230	32
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	97	87	95	96	100
cM capacity (veh/h)	1553			1606			660	613	1065	460	624	1030

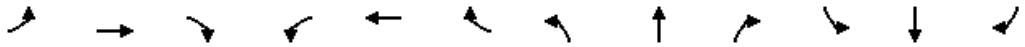
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	127	160	46
Volume Left	1	95	0	23
Volume Right	1	29	139	0
cSH	1553	1606	972	529
Volume to Capacity	0.00	0.06	0.16	0.09
Queue Length 95th (ft)	0	5	15	7
Control Delay (s)	0.8	5.6	9.4	12.4
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	5.6	9.4	12.4
Approach LOS			A	B

Intersection Summary				
Average Delay	8.2			
Intersection Capacity Utilization	38.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	143	20	12	106	28	11	8	23	19	10	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	8	155	22	13	115	30	12	9	25	21	11	4
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	163			183			360	376	179	391	372	153
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	163			183			360	376	179	391	372	153
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	98	97	96	98	100
cM capacity (veh/h)	1396			1385			563	536	854	520	539	876

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	185	159	46	36
Volume Left	8	13	12	21
Volume Right	22	30	25	4
cSH	1396	1385	684	553
Volume to Capacity	0.01	0.01	0.07	0.06
Queue Length 95th (ft)	0	1	5	5
Control Delay (s)	0.4	0.7	10.6	12.0
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	0.7	10.6	12.0
Approach LOS			B	B

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	25.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	89	76	33	34	62	36	36	234	40	77	345	46
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
Hourly flow rate (vph)	97	83	36	37	67	39	39	254	43	84	375	50

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	215	143	337	509
Volume Left (vph)	97	37	39	84
Volume Right (vph)	36	39	43	50
Hadj (s)	0.02	-0.08	-0.02	0.01
Departure Headway (s)	6.8	7.0	6.1	5.9
Degree Utilization, x	0.41	0.28	0.58	0.83
Capacity (veh/h)	472	455	547	592
Control Delay (s)	14.5	12.7	17.1	30.9
Approach Delay (s)	14.5	12.7	17.1	30.9
Approach LOS	B	B	C	D

Intersection Summary				
Delay	21.9			
Level of Service	C			
Intersection Capacity Utilization	65.2%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	132	52	29	68	127	22	444	22	60	481	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1660			1539	1253	1676	1747		1676	1741	
Flt Permitted		0.94			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1569			1333	1253	1676	1747		1676	1741	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	42	159	63	33	77	144	23	462	23	71	566	41
RTOR Reduction (vph)	0	22	0	0	0	112	0	3	0	0	3	0
Lane Group Flow (vph)	0	242	0	0	110	32	23	482	0	71	604	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		13.2			13.2	13.2	1.6	28.2		5.1	31.7	
Effective Green, g (s)		12.7			12.7	12.7	1.1	28.7		4.6	32.2	
Actuated g/C Ratio		0.22			0.22	0.22	0.02	0.49		0.08	0.56	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		343			291	274	31	864		132	966	
v/s Ratio Prot							0.01	0.28		c0.04	c0.35	
v/s Ratio Perm		c0.15			0.08	0.03						
v/c Ratio		0.71			0.38	0.12	0.74	0.56		0.54	0.63	
Uniform Delay, d1		20.9			19.3	18.1	28.3	10.2		25.7	8.8	
Progression Factor		1.00			1.00	1.00	1.17	0.96		1.00	1.00	
Incremental Delay, d2		5.3			0.3	0.1	58.4	2.3		4.2	3.1	
Delay (s)		26.3			19.6	18.2	91.6	12.1		29.8	11.8	
Level of Service		C			B	B	F	B		C	B	
Approach Delay (s)		26.3			18.8			15.7			13.7	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	559	184	156	542	75	278	192	124	198	204	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3054		1676	3353	1400	1676	1851			1520	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3054		1676	3353	1400	1676	1851			1520	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	46	614	202	164	571	79	335	231	149	204	210	19
RTOR Reduction (vph)	0	27	0	0	0	53	0	20	0	0	1	0
Lane Group Flow (vph)	46	789	0	164	571	26	335	360	0	0	432	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	6.6	30.3		14.2	37.9	37.9	25.4	25.4			29.6	
Effective Green, g (s)	7.1	31.3		14.7	38.9	38.9	24.9	24.9			29.1	
Actuated g/C Ratio	0.06	0.27		0.13	0.34	0.34	0.21	0.21			0.25	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	102	824		212	1124	469	359	397			381	
v/s Ratio Prot	0.03	c0.26		c0.10	0.17		c0.20	0.19			c0.28	
v/s Ratio Perm						0.02						
v/c Ratio	0.45	0.96		0.77	0.51	0.06	0.93	0.91			1.13	
Uniform Delay, d1	52.6	41.7		49.0	30.9	26.1	44.7	44.4			43.5	
Progression Factor	1.00	1.00		1.50	0.49	0.12	1.00	1.00			1.00	
Incremental Delay, d2	2.3	22.6		14.3	1.5	0.2	30.7	23.5			87.2	
Delay (s)	54.9	64.3		88.0	16.7	3.3	75.5	67.9			130.7	
Level of Service	D	E		F	B	A	E	E			F	
Approach Delay (s)		63.8			29.8			71.5			130.7	
Approach LOS		E			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	66.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	763	89	108	639	164	79	280	83	176	348	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3221		1676	3353	1363	1676	1765	1439	1676	1740	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3221		1676	3353	1363	1676	1765	1439	1676	1740	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	812	95	110	652	167	82	292	86	185	366	29
RTOR Reduction (vph)	0	7	0	0	0	67	0	0	68	0	3	0
Lane Group Flow (vph)	46	900	0	110	652	100	82	292	18	185	392	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.7		12.3	50.6	50.6	8.3	24.4	24.4	15.9	32.0	
Effective Green, g (s)	7.9	46.7		11.8	50.6	50.6	7.8	23.9	23.9	15.4	31.5	
Actuated g/C Ratio	0.07	0.40		0.10	0.44	0.44	0.07	0.21	0.21	0.13	0.27	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1296		170	1462	594	112	363	296	222	472	
v/s Ratio Prot	0.03	c0.28		c0.07	0.19		0.05	0.17		c0.11	c0.23	
v/s Ratio Perm						0.07			0.01			
v/c Ratio	0.40	0.69		0.65	0.45	0.17	0.73	0.80	0.06	0.83	0.83	
Uniform Delay, d1	51.8	28.7		50.1	22.9	19.9	53.1	43.8	37.0	49.0	39.7	
Progression Factor	0.70	0.60		1.00	1.00	1.00	1.00	1.00	1.00	1.01	0.95	
Incremental Delay, d2	0.4	0.8		7.3	1.0	0.6	20.6	11.9	0.1	19.3	9.9	
Delay (s)	36.9	18.1		57.4	23.9	20.5	73.6	55.7	37.1	69.0	47.6	
Level of Service	D	B		E	C	C	E	E	D	E	D	
Approach Delay (s)		19.0			27.2			55.4			54.4	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	937	79	67	832	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3141		1676	3180			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3141		1676	3180			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	956	81	69	858	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	1032	0	69	907	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1218		121	1367			376	324		309	
v/s Ratio Prot	0.01	c0.33		c0.04	0.29			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.85		0.57	0.66			0.92	0.36		0.76	
Uniform Delay, d1	55.3	32.4		52.1	26.4			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.16	0.33			1.00	1.00		1.00	
Incremental Delay, d2	4.4	7.4		1.7	0.8			27.3	0.5		9.6	
Delay (s)	59.7	39.8		62.0	9.6			71.6	38.5		54.7	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		40.2			13.3			55.6			54.7	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	697	381	56	497	191	363	869	32	235	922	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2999		1676	3119		3252	3245		1676	3225	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2999		1676	3119		3252	3245		1676	3225	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	726	397	67	592	227	382	915	34	253	991	97
RTOR Reduction (vph)	0	61	0	0	34	0	0	2	0	0	7	0
Lane Group Flow (vph)	220	1062	0	67	785	0	382	947	0	253	1081	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.6	39.6		8.8	27.8		16.0	35.1		19.3	37.4	
Effective Green, g (s)	20.6	39.6		8.8	27.8		17.0	36.1		19.3	38.4	
Actuated g/C Ratio	0.18	0.34		0.08	0.24		0.15	0.31		0.17	0.33	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	297	1023		127	747		476	1009		278	1067	
v/s Ratio Prot	0.13	c0.35		0.04	c0.25		0.12	c0.29		0.15	c0.34	
v/s Ratio Perm												
v/c Ratio	0.74	1.04		0.53	1.05		0.80	0.94		0.91	1.01	
Uniform Delay, d1	45.2	38.2		51.6	44.1		47.9	38.9		47.5	38.8	
Progression Factor	0.58	0.45		1.00	1.00		1.00	1.00		1.07	0.72	
Incremental Delay, d2	5.4	32.8		1.8	47.0		8.9	16.9		28.9	29.2	
Delay (s)	31.4	50.1		53.4	91.1		56.8	55.8		79.9	57.1	
Level of Service	C	D		D	F		E	E		E	E	
Approach Delay (s)		47.1			88.3			56.1			61.4	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	10	145	5	3	10	77	1155	11	2	1071	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.99	
Flpb, ped/bikes		0.95	1.00		0.99		0.98	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1635	3340			3272	
Flt Permitted		0.72	1.00		0.90		0.19	1.00			0.95	
Satd. Flow (perm)		1215	1360		1408		335	3340			3122	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	273	12	179	13	8	26	83	1242	12	2	1093	76
RTOR Reduction (vph)	0	0	68	0	19	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	285	111	0	28	0	83	1253	0	0	1167	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.7	29.7		29.2		79.3	79.3			79.3	
Effective Green, g (s)		29.7	29.7		29.7		80.3	80.3			80.3	
Actuated g/C Ratio		0.26	0.26		0.26		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		311	348		360		231	2312			2161	
v/s Ratio Prot								c0.38				
v/s Ratio Perm		c0.23	0.08		0.02		0.25				0.37	
v/c Ratio		0.92	0.32		0.08		0.36	0.54			0.54	
Uniform Delay, d1		41.9	35.0		32.7		7.3	8.8			8.8	
Progression Factor		1.00	1.00		1.00		0.50	0.50			2.00	
Incremental Delay, d2		29.7	0.2		0.0		1.7	0.4			0.9	
Delay (s)		71.7	35.2		32.8		5.3	4.7			18.5	
Level of Service		E	D		C		A	A			B	
Approach Delay (s)		57.6			32.8			4.7			18.5	
Approach LOS		E			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

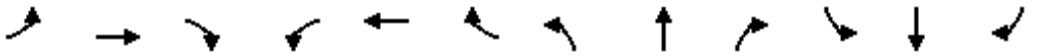
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	127	144	1251	1079	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1555		1627	3279	3323	
Flt Permitted	0.98		0.22	1.00	1.00	
Satd. Flow (perm)	1555		379	3279	3323	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	64	144	153	1331	1101	27
RTOR Reduction (vph)	78	0	0	0	1	0
Lane Group Flow (vph)	130	0	153	1331	1127	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	293		287	2490	2523	
v/s Ratio Prot	c0.08			c0.41	0.34	
v/s Ratio Perm			0.40			
v/c Ratio	0.44		0.53	0.53	0.45	
Uniform Delay, d1	41.7		5.6	5.6	5.1	
Progression Factor	1.00		0.76	0.59	1.00	
Incremental Delay, d2	0.4		5.7	0.7	0.6	
Delay (s)	42.1		10.0	4.0	5.7	
Level of Service	D		A	A	A	
Approach Delay (s)	42.1			4.6	5.7	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

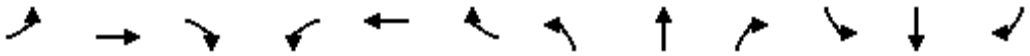
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	23	134	10	16	9	60	1265	22	19	1039	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1703	1424		1664		1676	3334		1676	3317	
Flt Permitted		0.79	1.00		0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1396	1424		1552		1676	3334		1676	3317	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	74	28	163	16	25	14	66	1390	24	20	1082	51
RTOR Reduction (vph)	0	0	136	0	12	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	102	27	0	43	0	66	1413	0	20	1131	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.7	18.7		18.7		13.2	82.4		4.4	73.6	
Effective Green, g (s)		19.2	19.2		19.2		13.2	83.4		4.4	74.6	
Actuated g/C Ratio		0.17	0.17		0.17		0.11	0.72		0.04	0.64	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		231	235		256		190	2397		63	2133	
v/s Ratio Prot							0.04	c0.42		0.01	c0.34	
v/s Ratio Perm		c0.07	0.02		0.03							
v/c Ratio		0.44	0.11		0.17		0.35	0.59		0.32	0.53	
Uniform Delay, d1		43.6	41.2		41.6		47.4	8.0		54.3	11.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		0.1		0.4	1.1		1.1	0.9	
Delay (s)		44.1	41.3		41.7		47.8	9.0		55.4	12.2	
Level of Service		D	D		D		D	A		E	B	
Approach Delay (s)		42.3			41.7			10.8			12.9	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	429	399	0	489	1425	0	0	0	614	0	251
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.97			0.97	0.94				1.00		0.96
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.93			0.92	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3012			2856	1282				2515		1444
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3012			2856	1282				2515		1444
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.92	0.92
Adj. Flow (vph)	95	447	416	0	509	1484	0	0	0	667	0	273
RTOR Reduction (vph)	0	136	0	0	176	503	0	0	0	0	0	191
Lane Group Flow (vph)	95	727	0	0	927	387	0	0	0	667	0	82
Confl. Peds. (#/hr)	32		45	45		32	21					21
Confl. Bikes (#/hr)			19			8						4
Turn Type	Prot	NA			NA	Perm				Prot		Perm
Protected Phases	5	2			6					4		
Permitted Phases						6						4
Actuated Green, G (s)	18.5	71.6			49.6	49.6				33.9		33.9
Effective Green, g (s)	18.0	71.6			49.6	49.6				34.4		34.4
Actuated g/C Ratio	0.16	0.63			0.44	0.44				0.30		0.30
Clearance Time (s)	3.5	4.0			4.0	4.0				4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0	4.0				2.5		2.5
Lane Grp Cap (vph)	264	1891			1242	557				758		435
v/s Ratio Prot	0.06	c0.24			c0.32					c0.27		
v/s Ratio Perm						0.30						0.06
v/c Ratio	0.36	0.38			0.75	0.70				0.88		0.19
Uniform Delay, d1	42.9	10.4			26.9	26.1				37.8		29.5
Progression Factor	1.00	1.00			0.41	7.37				1.00		1.00
Incremental Delay, d2	0.3	0.6			2.2	3.8				11.3		0.2
Delay (s)	43.2	11.0			13.2	195.9				49.1		29.6
Level of Service	D	B			B	F				D		C
Approach Delay (s)		14.2			94.8			0.0			43.5	
Approach LOS		B			F			A			D	

Intersection Summary			
HCM 2000 Control Delay	62.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



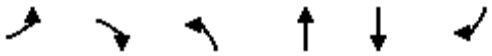
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	898	0	0	1424	414	491	289	808	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.92	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.94	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1383	1593	1509	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1383	1593	1509	1425			
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.96	0.96	0.91	0.91	0.91	1.00	1.00	1.00
Adj. Flow (vph)	153	935	0	0	1483	431	540	318	888	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	209	0	19	20	0	0	0
Lane Group Flow (vph)	153	935	0	0	1483	222	486	575	646	0	0	0
Confl. Peds. (#/hr)	24		54	54		24						
Confl. Bikes (#/hr)			20			9						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	18.5	46.0			43.0	43.0	41.0	41.0	60.0			
Effective Green, g (s)	18.0	46.0			43.0	43.0	41.0	41.0	60.0			
Actuated g/C Ratio	0.16	0.40			0.38	0.38	0.36	0.36	0.53			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	264	1944			1817	521	572	542	750			
v/s Ratio Prot	c0.09	0.19			c0.31		0.31	c0.38	0.45			
v/s Ratio Perm						0.16						
v/c Ratio	0.58	0.48			0.82	0.43	0.85	1.06	0.86			
Uniform Delay, d1	44.5	25.2			31.9	26.4	33.7	36.5	23.4			
Progression Factor	0.78	0.49			0.71	0.48	1.00	1.00	1.00			
Incremental Delay, d2	6.9	0.6			2.6	1.6	11.3	56.1	9.9			
Delay (s)	41.8	12.9			25.3	14.3	45.0	92.6	33.3			
Level of Service	D	B			C	B	D	F	C			
Approach Delay (s)		16.9			22.8			56.7			0.0	
Approach LOS		B			C			E			A	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	531	78	338	99	43	428
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.97		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		1.00
Satd. Flow (prot)	3189		3353	1455		3336
Flt Permitted	0.96		1.00	1.00		0.88
Satd. Flow (perm)	3189		3353	1455		2960
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.93	0.93
Adj. Flow (vph)	597	88	363	106	46	460
RTOR Reduction (vph)	10	0	0	56	0	0
Lane Group Flow (vph)	675	0	363	50	0	506
Confl. Peds. (#/hr)		19		4	4	
Confl. Bikes (#/hr)		9		2		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	52.5		54.3	54.3		54.3
Effective Green, g (s)	52.0		53.8	53.8		53.8
Actuated g/C Ratio	0.46		0.47	0.47		0.47
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1454		1582	686		1396
v/s Ratio Prot	c0.21		0.11			
v/s Ratio Perm				0.03		c0.17
v/c Ratio	0.46		0.23	0.07		0.36
Uniform Delay, d1	21.4		17.8	16.5		19.2
Progression Factor	0.46		0.21	0.01		1.00
Incremental Delay, d2	1.0		0.3	0.2		0.7
Delay (s)	11.0		4.0	0.3		19.9
Level of Service	B		A	A		B
Approach Delay (s)	11.0		3.2			19.9
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



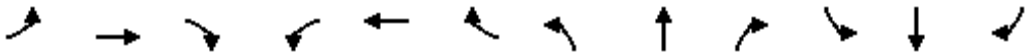
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	81	64	441	472	174	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.81	0.81	0.92	0.92	0.88	0.88
Adj. Flow (vph)	100	79	479	513	198	169
RTOR Reduction (vph)	0	18	0	0	0	150
Lane Group Flow (vph)	100	61	479	513	198	19
Confl. Peds. (#/hr)		7	24			24
Confl. Bikes (#/hr)		1				11
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	13.3	87.9	71.1	93.7	19.1	13.3
Effective Green, g (s)	12.8	87.4	70.6	93.2	18.6	12.8
Actuated g/C Ratio	0.11	0.77	0.62	0.82	0.16	0.11
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1150	2013	1442	287	168
v/s Ratio Prot	c0.06	0.04	0.15	c0.29	c0.11	0.01
v/s Ratio Perm						
v/c Ratio	0.53	0.05	0.24	0.36	0.69	0.11
Uniform Delay, d1	47.8	3.2	9.7	2.7	45.0	45.5
Progression Factor	1.49	4.53	0.17	0.13	1.00	1.00
Incremental Delay, d2	2.9	0.0	0.2	0.6	6.8	0.3
Delay (s)	74.2	14.7	1.9	0.9	51.7	45.8
Level of Service	E	B	A	A	D	D
Approach Delay (s)	48.0			1.4	49.0	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	725	642	231	983	122	140	37	103	169	165	639
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (prot)	3252	3072	1365	1676	3353	1480	1593	1629	1479		1721	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00		0.98	1.00
Satd. Flow (perm)	3252	3072	1365	1676	3353	1480	1593	1629	1479		1721	2640
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	393	833	738	241	1024	127	156	41	114	188	183	710
RTOR Reduction (vph)	0	24	114	0	0	52	0	0	101	0	0	65
Lane Group Flow (vph)	393	1067	366	241	1024	75	98	99	13	0	371	645
Confl. Peds. (#/hr)			11	11			61					61
Confl. Bikes (#/hr)			17			2			1			7
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	18.3	37.3	54.0	17.5	37.0	37.0	13.2	13.2	13.2		30.5	48.8
Effective Green, g (s)	17.8	36.8	49.5	17.0	37.5	37.5	12.7	12.7	12.7		30.0	47.8
Actuated g/C Ratio	0.16	0.32	0.43	0.15	0.33	0.33	0.11	0.11	0.11		0.26	0.42
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	507	991	592	249	1102	486	177	181	164		452	1106
v/s Ratio Prot	0.12	c0.35	c0.27	0.14	c0.31		0.06	0.06			c0.22	0.24
v/s Ratio Perm						0.05			0.01			
v/c Ratio	0.78	1.08	0.62	0.97	0.93	0.15	0.55	0.55	0.08		0.82	0.58
Uniform Delay, d1	46.2	38.6	24.9	48.2	37.0	27.0	48.0	47.9	45.4		39.5	25.4
Progression Factor	0.95	0.71	0.41	0.82	0.75	0.53	1.00	1.00	1.00		0.89	0.49
Incremental Delay, d2	8.6	48.5	1.3	39.0	11.3	0.5	3.0	2.7	0.1		14.4	2.1
Delay (s)	52.5	75.8	11.6	78.5	39.1	14.8	50.9	50.6	45.5		49.6	14.5
Level of Service	D	E	B	E	D	B	D	D	D		D	B
Approach Delay (s)		55.4			43.7			48.9			26.5	
Approach LOS		E			D			D			C	

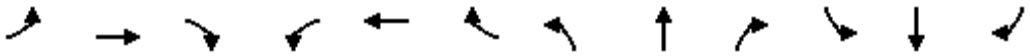
Intersection Summary			
HCM 2000 Control Delay	45.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	118	618	51	0	108	0	752	40	0	239	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3197	2250	1676		1463		3320			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3197	2250	1676		1463		3320			3353	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	85	134	702	62	0	132	0	817	43	0	278	0
RTOR Reduction (vph)	0	0	482	0	0	120	0	3	0	0	0	0
Lane Group Flow (vph)	71	148	220	62	0	12	0	857	0	0	278	0
Confl. Peds. (#/hr)			160	160			29		47	47		29
Confl. Bikes (#/hr)			4			5			9			7
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	11.8	11.8	36.8	10.7		10.7		55.1			30.3	
Effective Green, g (s)	10.8	10.8	35.8	10.2		10.2		54.6			29.8	
Actuated g/C Ratio	0.09	0.09	0.31	0.09		0.09		0.48			0.26	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	144	302	706	149		130		1590			876	
v/s Ratio Prot	c0.05	0.05	0.10	c0.04				c0.26			0.08	
v/s Ratio Perm						0.01						
v/c Ratio	0.49	0.49	0.31	0.42		0.09		0.54			0.32	
Uniform Delay, d1	49.0	49.0	29.7	49.1		47.6		20.9			33.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00		1.00			0.47	
Incremental Delay, d2	1.9	0.9	0.2	1.4		0.2		1.3			0.9	
Delay (s)	50.9	49.9	29.9	50.5		47.9		22.2			17.0	
Level of Service	D	D	C	D		D		C			B	
Approach Delay (s)		34.8			48.7			22.2			17.0	
Approach LOS		C			D			C			B	

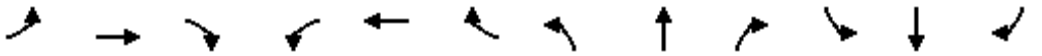
Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	3	14	78	2	79	10	700	103	99	769	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.63	1.00	0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.77	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1692	950	2515	1487		1676	3353	1445	1676	3311	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1692	950	1955	1487		1676	3353	1445	1676	3311	
Peak-hour factor, PHF	0.72	0.72	0.72	0.77	0.77	0.77	0.98	0.98	0.98	0.96	0.96	0.96
Adj. Flow (vph)	25	4	19	101	3	103	10	714	105	103	801	38
RTOR Reduction (vph)	0	0	18	0	82	0	0	0	60	0	3	0
Lane Group Flow (vph)	0	29	1	101	24	0	10	714	45	103	836	0
Confl. Peds. (#/hr)			95	95			67		7	7		67
Confl. Bikes (#/hr)						2			6			10
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.0	4.0	15.1	15.1		1.8	31.7	31.7	8.7	38.6	
Effective Green, g (s)		3.5	3.5	15.1	15.1		1.3	32.2	32.2	8.2	39.1	
Actuated g/C Ratio		0.05	0.05	0.20	0.20		0.02	0.43	0.43	0.11	0.52	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		78	44	393	299		29	1439	620	183	1726	
v/s Ratio Prot		c0.02			0.02		0.01	0.21		c0.06	c0.25	
v/s Ratio Perm			0.00	c0.05					0.03			
v/c Ratio		0.37	0.02	0.26	0.08		0.34	0.50	0.07	0.56	0.48	
Uniform Delay, d1		34.7	34.1	25.2	24.3		36.4	15.5	12.6	31.7	11.5	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.1	0.1	0.1	0.0		2.6	1.2	0.2	2.4	1.0	
Delay (s)		35.8	34.2	25.4	24.4		39.0	16.7	12.8	34.1	12.5	
Level of Service		D	C	C	C		D	B	B	C	B	
Approach Delay (s)		35.1			24.8			16.5			14.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	558	250	115	443	66	466	524	74	152	319	284
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.2		4.0	4.2	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.99		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3149		1676	3252		1676	1722		1668	1765	1455
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.43	1.00	1.00
Satd. Flow (perm)	1676	3149		1676	3252		1676	1722		757	1765	1455
Peak-hour factor, PHF	0.87	0.87	0.87	0.96	0.96	0.96	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	168	641	287	120	461	69	480	540	76	167	351	312
RTOR Reduction (vph)	0	46	0	0	10	0	0	4	0	0	0	61
Lane Group Flow (vph)	168	882	0	120	520	0	480	612	0	167	351	251
Confl. Peds. (#/hr)	16		3	3		16	17		14	14		17
Confl. Bikes (#/hr)			7			6			13			16
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	16.8	34.6		11.0	28.8		31.0	42.7		22.4	22.2	39.0
Effective Green, g (s)	16.3	35.1		10.5	29.3		30.5	42.2		21.9	21.7	38.0
Actuated g/C Ratio	0.14	0.31		0.09	0.26		0.27	0.37		0.19	0.19	0.33
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	239	969		154	835		448	637		225	335	485
v/s Ratio Prot	0.10	c0.28		c0.07	0.16		c0.29	0.36		0.07	c0.20	0.07
v/s Ratio Perm										0.08		0.10
v/c Ratio	0.70	0.91		0.78	0.62		1.07	0.96		0.74	1.05	0.52
Uniform Delay, d1	46.5	37.9		50.6	37.5		41.8	35.1		43.3	46.1	30.6
Progression Factor	0.56	0.68		1.00	1.00		1.01	1.07		1.00	1.00	1.00
Incremental Delay, d2	2.8	4.3		21.6	1.5		58.7	23.7		12.4	62.2	0.9
Delay (s)	28.8	29.9		72.2	38.9		100.9	61.2		55.7	108.4	31.6
Level of Service	C	C		E	D		F	E		E	F	C
Approach Delay (s)		29.8			45.1			78.6			68.9	
Approach LOS		C			D			E			E	

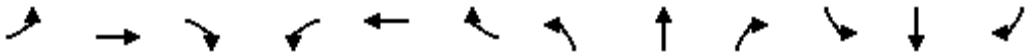
Intersection Summary			
HCM 2000 Control Delay	55.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	743	0	0	523	0	166
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	808	0	0	568	0	180
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	821					
pX, platoon unblocked						
vC, conflicting volume			808		1092	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			808		1092	404
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	70
cM capacity (veh/h)			813		209	596

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	404	404	284	284	180
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	180
cSH	1700	1700	1700	1700	596
Volume to Capacity	0.24	0.24	0.17	0.17	0.30
Queue Length 95th (ft)	0	0	0	0	32
Control Delay (s)	0.0	0.0	0.0	0.0	13.6
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.6
Approach LOS					B

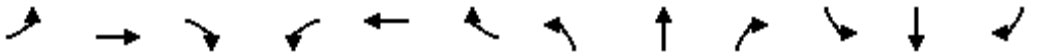
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	1	5	99	0	27	1	291	199	20	149	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
Hourly flow rate (vph)	1	1	5	108	0	29	1	316	216	22	162	1

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	8	108	29	1	533	185
Volume Left (vph)	1	108	0	1	0	22
Volume Right (vph)	5	0	29	0	216	1
Hadj (s)	-0.37	0.53	-0.67	0.53	-0.25	0.05
Departure Headway (s)	6.3	6.9	5.6	5.7	4.9	5.7
Degree Utilization, x	0.01	0.20	0.05	0.00	0.73	0.29
Capacity (veh/h)	505	480	573	611	710	608
Control Delay (s)	9.4	10.4	7.7	7.5	18.9	11.0
Approach Delay (s)	9.4	9.8		18.9		11.0
Approach LOS	A	A		C		B

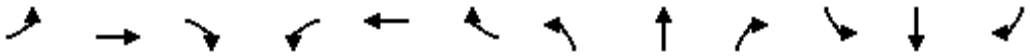
Intersection Summary				
Delay	15.7			
Level of Service	C			
Intersection Capacity Utilization	48.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	238	103	86	21	9	45	36	773	75	61	530	91
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.2			4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.97			1.00			1.00	0.97
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	1.00
Frt	1.00	0.93		1.00	0.88			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1660	1597		1642	1504			3250			1713	1457
Flt Permitted	0.71	1.00		0.54	1.00			0.92			0.83	1.00
Satd. Flow (perm)	1241	1597		939	1504			2982			1425	1457
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.85	0.85	0.85	0.96	0.96	0.96
Adj. Flow (vph)	301	130	109	28	12	60	42	909	88	64	552	95
RTOR Reduction (vph)	0	64	0	0	36	0	0	10	0	0	0	14
Lane Group Flow (vph)	301	175	0	28	36	0	0	1029	0	0	616	81
Confl. Peds. (#/hr)	16		22	22		16	11		16	16		11
Confl. Bikes (#/hr)			12			12			10			18
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	18.5	18.5		18.5	18.5			31.3			31.3	31.3
Effective Green, g (s)	18.0	18.0		18.0	18.0			30.8			30.8	30.8
Actuated g/C Ratio	0.32	0.32		0.32	0.32			0.54			0.54	0.54
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	391	504		296	474			1611			770	787
v/s Ratio Prot		0.11			0.02							
v/s Ratio Perm	c0.24			0.03				0.35			c0.43	0.06
v/c Ratio	0.77	0.35		0.09	0.08			0.64			0.80	0.10
Uniform Delay, d1	17.6	15.0		13.8	13.7			9.2			10.6	6.4
Progression Factor	1.00	1.00		1.00	1.00			0.79			0.80	0.66
Incremental Delay, d2	8.5	0.3		0.1	0.0			1.6			3.2	0.1
Delay (s)	26.1	15.3		13.9	13.7			8.9			11.6	4.3
Level of Service	C	B		B	B			A			B	A
Approach Delay (s)		21.3			13.8			8.9			10.6	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		

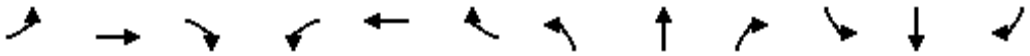
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	54	0	22	0	403	28	51	385	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
Hourly flow rate (vph)	0	0	0	59	0	24	0	438	30	55	418	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	83	468	474
Volume Left (vph)	0	59	0	55
Volume Right (vph)	0	24	30	0
Hadj (s)	0.00	0.00	0.00	0.06
Departure Headway (s)	6.3	6.0	4.7	4.8
Degree Utilization, x	0.00	0.14	0.61	0.63
Capacity (veh/h)	476	518	748	738
Control Delay (s)	9.3	10.0	14.9	15.5
Approach Delay (s)	0.0	10.0	14.9	15.5
Approach LOS	A	B	B	C

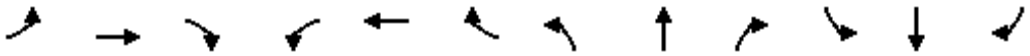
Intersection Summary				
Delay		14.8		
Level of Service		B		
Intersection Capacity Utilization		66.2%	ICU Level of Service	C
Analysis Period (min)		15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	55	43	36	30	83	14	650	25	63	542	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.93		1.00	0.89		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1658	1610		1646	1529		1665	1751		1665	1697	
Flt Permitted	0.65	1.00		0.65	1.00		0.33	1.00		0.27	1.00	
Satd. Flow (perm)	1137	1610		1129	1529		584	1751		468	1697	
Peak-hour factor, PHF	0.64	0.64	0.64	0.74	0.74	0.74	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	161	86	67	49	41	112	16	730	28	70	602	48
RTOR Reduction (vph)	0	53	0	0	88	0	0	2	0	0	4	0
Lane Group Flow (vph)	161	100	0	49	65	0	16	756	0	70	646	0
Confl. Peds. (#/hr)	9		15	15		9	15		17	17		15
Confl. Bikes (#/hr)			7			2			15			22
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	12.8	12.8		12.8	12.8		37.0	37.0		37.0	37.0	
Effective Green, g (s)	12.3	12.3		12.3	12.3		36.5	36.5		36.5	36.5	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.64	0.64		0.64	0.64	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	245	347		243	329		373	1121		299	1086	
v/s Ratio Prot		0.06			0.04			c0.43			0.38	
v/s Ratio Perm	c0.14			0.04			0.03			0.15		
v/c Ratio	0.66	0.29		0.20	0.20		0.04	0.67		0.23	0.59	
Uniform Delay, d1	20.4	18.7		18.3	18.3		3.8	6.5		4.3	6.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.48	0.75	
Incremental Delay, d2	4.8	0.2		0.1	0.1		0.2	3.3		1.4	1.8	
Delay (s)	25.2	18.9		18.5	18.4		4.0	9.7		3.4	6.2	
Level of Service	C	B		B	B		A	A		A	A	
Approach Delay (s)		22.1			18.4			9.6			6.0	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	0	33	0	0	3	36	341	0	1	401	65
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	72	0	36	0	0	3	39	371	0	1	436	71
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	926	922	471	958	958	371	507			371		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	926	922	471	958	958	371	507			371		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	70	100	94	100	100	100	96			100		
cM capacity (veh/h)	241	260	593	216	248	675	1058			1188		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	108	3	410	508
Volume Left	72	0	39	1
Volume Right	36	3	0	71
cSH	300	675	1058	1188
Volume to Capacity	0.36	0.00	0.04	0.00
Queue Length 95th (ft)	39	0	3	0
Control Delay (s)	23.5	10.4	1.2	0.0
Lane LOS	C	B	A	A
Approach Delay (s)	23.5	10.4	1.2	0.0
Approach LOS	C	B		

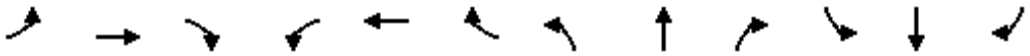
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	38	29	349	38	33	404
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	32	379	41	36	439

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	73	421	475
Volume Left (vph)	41	0	36
Volume Right (vph)	32	41	0
Hadj (s)	-0.11	-0.02	0.05
Departure Headway (s)	5.8	4.6	4.6
Degree Utilization, x	0.12	0.54	0.61
Capacity (veh/h)	543	758	757
Control Delay (s)	9.5	13.0	14.7
Approach Delay (s)	9.5	13.0	14.7
Approach LOS	A	B	B

Intersection Summary			
Delay	13.6		
Level of Service	B		
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	34	45	14	35	39	76	11	573	30	94	517	9
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
Hourly flow rate (vph)	37	49	15	38	42	83	12	623	33	102	562	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	101	163	667	674
Volume Left (vph)	37	38	12	102
Volume Right (vph)	15	83	33	10
Hadj (s)	0.02	-0.22	0.01	0.06
Departure Headway (s)	7.9	7.3	6.0	6.0
Degree Utilization, x	0.22	0.33	1.0	1.0
Capacity (veh/h)	441	475	606	601
Control Delay (s)	13.1	13.9	94.0	101.1
Approach Delay (s)	13.1	13.9	94.0	101.1
Approach LOS	B	B	F	F

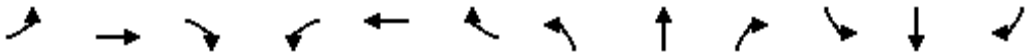
Intersection Summary				
Delay	83.7			
Level of Service	F			
Intersection Capacity Utilization	91.2%	ICU Level of Service	F	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	31	0	0	22	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	0	0	24	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	12	12			24	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	12	12			24	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	1008	1069			1591	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	24	0
Volume Left	34	0	0
Volume Right	0	24	0
cSH	1008	1700	1700
Volume to Capacity	0.03	0.01	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

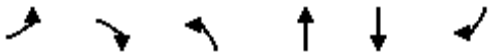
Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	25	2	7	24	8	7	33	8	9	26	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	3	27	2	8	26	9	8	36	9	10	28	3
Pedestrians		7			5			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			0			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	35			37			113	93	41	112	90	37
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	35			37			113	93	41	112	90	37
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	95	99	99	96	100
cM capacity (veh/h)	1577			1563			819	786	1019	816	790	1029

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	42	52	41
Volume Left	3	8	8	10
Volume Right	2	9	9	3
cSH	1577	1563	823	811
Volume to Capacity	0.00	0.00	0.06	0.05
Queue Length 95th (ft)	0	0	5	4
Control Delay (s)	0.7	1.3	9.7	9.7
Lane LOS	A	A	A	A
Approach Delay (s)	0.7	1.3	9.7	9.7
Approach LOS			A	A

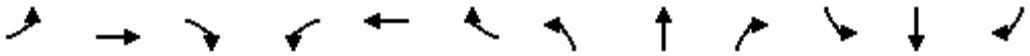
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	41	21	28	352	409	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	23	30	383	445	29
Pedestrians	4			2	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	917	465	478			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	917	465	478			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	85	96	97			
cM capacity (veh/h)	290	594	1081			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	67	413	474
Volume Left	45	30	0
Volume Right	23	0	29
cSH	351	1081	1700
Volume to Capacity	0.19	0.03	0.28
Queue Length 95th (ft)	17	2	0
Control Delay (s)	17.7	0.9	0.0
Lane LOS	C	A	
Approach Delay (s)	17.7	0.9	0.0
Approach LOS	C		

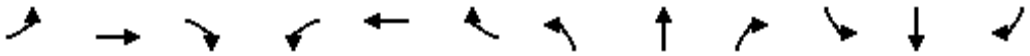
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	7	1	87	3	6	0	18	128	12	21	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	1	8	1	95	3	7	0	20	139	13	23	0
Pedestrians		4			2			2			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	20			11			223	221	12	367	219	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			11			223	221	12	367	219	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	97	87	97	96	100
cM capacity (veh/h)	1583			1606			671	631	1065	469	633	1045

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	104	159	36
Volume Left	1	95	0	13
Volume Right	1	7	139	0
cSH	1583	1606	982	562
Volume to Capacity	0.00	0.06	0.16	0.06
Queue Length 95th (ft)	0	5	14	5
Control Delay (s)	0.8	6.7	9.4	11.8
Lane LOS	A	A	A	B
Approach Delay (s)	0.8	6.7	9.4	11.8
Approach LOS			A	B

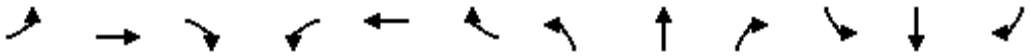
Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	135	19	12	91	31	5	12	23	20	12	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	8	147	21	13	99	34	5	13	25	22	13	5
Pedestrians		6			7			6			17	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	150			173			338	354	170	370	347	139
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	150			173			338	354	170	370	347	139
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	98	97	96	98	99
cM capacity (veh/h)	1411			1396			580	552	864	535	557	892

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	175	146	43	40
Volume Left	8	13	5	22
Volume Right	21	34	25	5
cSH	1411	1396	702	573
Volume to Capacity	0.01	0.01	0.06	0.07
Queue Length 95th (ft)	0	1	5	6
Control Delay (s)	0.4	0.8	10.5	11.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.4	0.8	10.5	11.8
Approach LOS			B	B

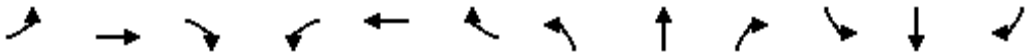
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	89	73	30	34	52	40	33	236	40	80	344	46
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
Hourly flow rate (vph)	97	79	33	37	57	43	36	257	43	87	374	50

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	209	137	336	511
Volume Left (vph)	97	37	36	87
Volume Right (vph)	33	43	43	50
Hadj (s)	0.03	-0.10	-0.02	0.01
Departure Headway (s)	6.8	6.9	6.1	5.8
Degree Utilization, x	0.39	0.26	0.57	0.82
Capacity (veh/h)	473	459	554	599
Control Delay (s)	14.1	12.3	16.7	29.9
Approach Delay (s)	14.1	12.3	16.7	29.9
Approach LOS	B	B	C	D

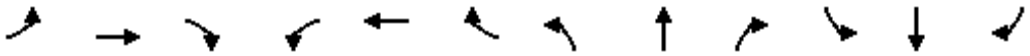
Intersection Summary			
Delay	21.4		
Level of Service	C		
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	131	54	29	65	127	24	444	22	60	481	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			1.00	0.94	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1658			1538	1253	1676	1747		1676	1744	
Flt Permitted		0.94			0.85	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1570			1324	1253	1676	1747		1676	1744	
Peak-hour factor, PHF	0.83	0.83	0.83	0.88	0.88	0.88	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	41	158	65	33	74	144	25	462	23	71	566	36
RTOR Reduction (vph)	0	23	0	0	0	113	0	3	0	0	3	0
Lane Group Flow (vph)	0	241	0	0	107	31	25	482	0	71	599	0
Confl. Peds. (#/hr)	21		19	19		21	8		19	19		8
Confl. Bikes (#/hr)			8			5			16			20
Parking (#/hr)			2		2	2						
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		13.1			13.1	13.1	1.6	28.3		5.1	31.8	
Effective Green, g (s)		12.6			12.6	12.6	1.1	28.8		4.6	32.3	
Actuated g/C Ratio		0.22			0.22	0.22	0.02	0.50		0.08	0.56	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		341			287	272	31	867		132	971	
v/s Ratio Prot							0.01	0.28		c0.04	c0.34	
v/s Ratio Perm		c0.15			0.08	0.02						
v/c Ratio		0.71			0.37	0.12	0.81	0.56		0.54	0.62	
Uniform Delay, d1		21.0			19.3	18.2	28.3	10.2		25.7	8.7	
Progression Factor		1.00			1.00	1.00	1.18	0.96		1.00	1.00	
Incremental Delay, d2		5.4			0.3	0.1	77.1	2.3		4.2	2.9	
Delay (s)		26.4			19.6	18.3	110.6	12.0		29.8	11.6	
Level of Service		C			B	B	F	B		C	B	
Approach Delay (s)		26.4			18.9			16.8			13.5	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

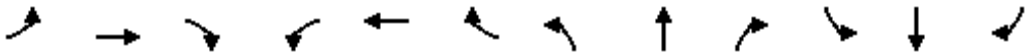
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	559	184	156	540	75	278	190	124	195	203	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.96		1.00	1.00	0.93	1.00	0.98			1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3054		1676	3353	1400	1676	1850			1521	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3054		1676	3353	1400	1676	1850			1521	
Peak-hour factor, PHF	0.91	0.91	0.91	0.95	0.95	0.95	0.83	0.83	0.83	0.97	0.97	0.97
Adj. Flow (vph)	46	614	202	164	568	79	335	229	149	201	209	18
RTOR Reduction (vph)	0	27	0	0	0	53	0	20	0	0	1	0
Lane Group Flow (vph)	46	789	0	164	568	26	335	358	0	0	427	0
Confl. Peds. (#/hr)	16		48	48		16	32		7	7		32
Confl. Bikes (#/hr)			15			7			22			29
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	6.6	30.3		14.2	37.9	37.9	25.4	25.4			29.6	
Effective Green, g (s)	7.1	31.3		14.7	38.9	38.9	24.9	24.9			29.1	
Actuated g/C Ratio	0.06	0.27		0.13	0.34	0.34	0.21	0.21			0.25	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	102	824		212	1124	469	359	397			381	
v/s Ratio Prot	0.03	c0.26		c0.10	0.17		c0.20	0.19			c0.28	
v/s Ratio Perm						0.02						
v/c Ratio	0.45	0.96		0.77	0.51	0.06	0.93	0.90			1.12	
Uniform Delay, d1	52.6	41.7		49.0	30.9	26.1	44.7	44.3			43.5	
Progression Factor	1.00	1.00		1.51	0.49	0.12	1.00	1.00			1.00	
Incremental Delay, d2	2.3	22.6		14.3	1.5	0.2	30.7	22.9			82.6	
Delay (s)	54.9	64.3		88.2	16.7	3.3	75.5	67.2			126.0	
Level of Service	D	E		F	B	A	E	E			F	
Approach Delay (s)		63.8			29.8			71.1			126.0	
Approach LOS		E			C			E			F	

Intersection Summary			
HCM 2000 Control Delay	65.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	761	89	108	637	164	79	281	83	178	348	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3221		1676	3353	1363	1676	1765	1439	1676	1740	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3221		1676	3353	1363	1676	1765	1439	1676	1740	
Peak-hour factor, PHF	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	46	810	95	110	650	167	82	293	86	187	366	29
RTOR Reduction (vph)	0	7	0	0	0	67	0	0	68	0	3	0
Lane Group Flow (vph)	46	898	0	110	650	100	82	293	18	187	392	0
Confl. Peds. (#/hr)	5		22	22		5	7		11	11		7
Confl. Bikes (#/hr)			14			10			15			22
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.6		12.3	50.5	50.5	8.3	24.4	24.4	16.0	32.1	
Effective Green, g (s)	7.9	46.6		11.8	50.5	50.5	7.8	23.9	23.9	15.5	31.6	
Actuated g/C Ratio	0.07	0.40		0.10	0.44	0.44	0.07	0.21	0.21	0.13	0.27	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	114	1293		170	1459	593	112	363	296	223	474	
v/s Ratio Prot	0.03	c0.28		c0.07	0.19		0.05	0.17		c0.11	c0.23	
v/s Ratio Perm						0.07			0.01			
v/c Ratio	0.40	0.69		0.65	0.45	0.17	0.73	0.81	0.06	0.84	0.83	
Uniform Delay, d1	51.8	28.8		50.1	22.9	20.0	53.1	43.9	37.0	49.0	39.6	
Progression Factor	0.71	0.60		1.00	1.00	1.00	1.00	1.00	1.00	1.01	0.95	
Incremental Delay, d2	0.5	0.8		7.3	1.0	0.6	20.6	12.0	0.1	19.8	9.5	
Delay (s)	37.0	18.1		57.4	23.9	20.6	73.6	55.9	37.1	69.5	47.1	
Level of Service	D	B		E	C	C	E	E	D	E	D	
Approach Delay (s)		19.0			27.3			55.5			54.3	
Approach LOS		B			C			E			D	

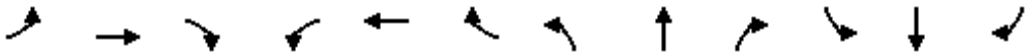
Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	937	79	67	830	50	175	112	269	75	117	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (prot)	1676	3141		1676	3180			1712	1446		1720	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	
Satd. Flow (perm)	1676	3141		1676	3180			1712	1446		1720	
Peak-hour factor, PHF	0.98	0.98	0.98	0.97	0.97	0.97	0.83	0.83	0.83	0.85	0.85	0.85
Adj. Flow (vph)	22	956	81	69	856	52	211	135	324	88	138	9
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	207	0	2	0
Lane Group Flow (vph)	22	1032	0	69	905	0	0	346	117	0	233	0
Confl. Peds. (#/hr)	12		41	41		12	23		13	13		23
Confl. Bikes (#/hr)			24			16			8			6
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	4.0	45.0		8.9	49.9			26.0	26.0		21.4	
Effective Green, g (s)	3.5	45.0		8.4	49.9			25.5	26.0		20.9	
Actuated g/C Ratio	0.03	0.39		0.07	0.43			0.22	0.22		0.18	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	50	1218		121	1367			376	324		309	
v/s Ratio Prot	0.01	c0.33		c0.04	0.28			c0.20			c0.14	
v/s Ratio Perm									0.08			
v/c Ratio	0.44	0.85		0.57	0.66			0.92	0.36		0.76	
Uniform Delay, d1	55.3	32.4		52.1	26.3			44.3	38.0		45.1	
Progression Factor	1.00	1.00		1.16	0.33			1.00	1.00		1.00	
Incremental Delay, d2	4.4	7.4		1.7	0.8			27.3	0.5		9.6	
Delay (s)	59.7	39.8		62.0	9.6			71.6	38.5		54.7	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		40.2			13.3			55.6			54.7	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



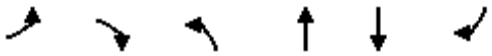
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	697	381	56	496	192	363	870	32	235	922	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2999		1676	3117		3252	3245		1676	3225	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2999		1676	3117		3252	3245		1676	3225	
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	220	726	397	67	590	229	382	916	34	253	991	97
RTOR Reduction (vph)	0	61	0	0	35	0	0	2	0	0	7	0
Lane Group Flow (vph)	220	1062	0	67	784	0	382	948	0	253	1081	0
Confl. Peds. (#/hr)	67		103	103		67	72		109	109		72
Confl. Bikes (#/hr)			29			12			24			24
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.6	39.6		8.8	27.8		16.0	35.1		19.3	37.4	
Effective Green, g (s)	20.6	39.6		8.8	27.8		17.0	36.1		19.3	38.4	
Actuated g/C Ratio	0.18	0.34		0.08	0.24		0.15	0.31		0.17	0.33	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	297	1023		127	747		476	1009		278	1067	
v/s Ratio Prot	0.13	c0.35		0.04	c0.25		0.12	c0.29		0.15	c0.34	
v/s Ratio Perm												
v/c Ratio	0.74	1.04		0.53	1.05		0.80	0.94		0.91	1.01	
Uniform Delay, d1	45.2	38.2		51.6	44.1		47.9	38.9		47.5	38.8	
Progression Factor	0.58	0.45		1.00	1.00		1.00	1.00		1.07	0.71	
Incremental Delay, d2	5.4	32.8		1.8	46.7		8.9	17.0		28.9	29.3	
Delay (s)	31.4	50.1		53.4	90.8		56.8	55.9		79.8	56.9	
Level of Service	C	D		D	F		E	E		E	E	
Approach Delay (s)		47.1			88.0			56.2			61.2	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	60.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	10	145	5	3	10	77	1156	11	2	1072	71
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.91		0.96		1.00	1.00			0.99	
Flpb, ped/bikes		0.95	1.00		0.99		0.97	1.00			1.00	
Frt		1.00	0.85		0.93		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)		1607	1360		1537		1635	3340			3276	
Flt Permitted		0.72	1.00		0.90		0.20	1.00			0.95	
Satd. Flow (perm)		1215	1360		1409		337	3340			3125	
Peak-hour factor, PHF	0.81	0.81	0.81	0.39	0.39	0.39	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	270	12	179	13	8	26	83	1243	12	2	1094	72
RTOR Reduction (vph)	0	0	67	0	19	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	282	112	0	28	0	83	1254	0	0	1164	0
Confl. Peds. (#/hr)	38		57	57		38	74		68	68		74
Confl. Bikes (#/hr)			5						22			21
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		29.5	29.5		29.0		79.5	79.5			79.5	
Effective Green, g (s)		29.5	29.5		29.5		80.5	80.5			80.5	
Actuated g/C Ratio		0.25	0.25		0.25		0.69	0.69			0.69	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		308	345		358		233	2317			2168	
v/s Ratio Prot								c0.38				
v/s Ratio Perm		c0.23	0.08		0.02		0.25				0.37	
v/c Ratio		0.92	0.32		0.08		0.36	0.54			0.54	
Uniform Delay, d1		42.0	35.2		32.9		7.2	8.7			8.7	
Progression Factor		1.00	1.00		1.00		0.50	0.50			2.01	
Incremental Delay, d2		29.8	0.2		0.0		1.6	0.4			0.9	
Delay (s)		71.8	35.4		32.9		5.2	4.7			18.3	
Level of Service		E	D		C		A	A			B	
Approach Delay (s)		57.7			32.9			4.7			18.3	
Approach LOS		E			C			A			B	

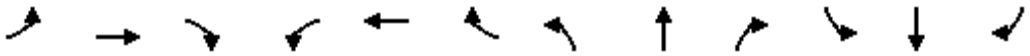
Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	56	128	146	1249	1076	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	0.99	
Flpb, ped/bikes	1.00		0.97	1.00	1.00	
Frt	0.91		1.00	1.00	1.00	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1554		1627	3279	3322	
Flt Permitted	0.98		0.22	1.00	1.00	
Satd. Flow (perm)	1554		380	3279	3322	
Peak-hour factor, PHF	0.88	0.88	0.94	0.94	0.98	0.98
Adj. Flow (vph)	64	145	155	1329	1098	28
RTOR Reduction (vph)	79	0	0	0	1	0
Lane Group Flow (vph)	130	0	155	1329	1125	0
Confl. Peds. (#/hr)	33		62			62
Confl. Bikes (#/hr)		6				21
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	21.4		87.6	87.6	87.6	
Effective Green, g (s)	21.9		88.1	88.1	88.1	
Actuated g/C Ratio	0.19		0.76	0.76	0.76	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	293		288	2490	2523	
v/s Ratio Prot	c0.08			0.41	0.34	
v/s Ratio Perm			c0.41			
v/c Ratio	0.44		0.54	0.53	0.45	
Uniform Delay, d1	41.7		5.7	5.6	5.1	
Progression Factor	1.00		0.77	0.58	1.00	
Incremental Delay, d2	0.4		5.8	0.7	0.6	
Delay (s)	42.1		10.2	4.0	5.6	
Level of Service	D		B	A	A	
Approach Delay (s)	42.1			4.6	5.6	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

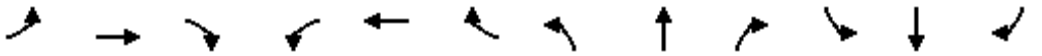
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	23	134	10	16	9	60	1263	22	19	1036	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.95		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1702	1424		1664		1676	3334		1676	3316	
Flt Permitted		0.79	1.00		0.92		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1389	1424		1551		1676	3334		1676	3316	
Peak-hour factor, PHF	0.82	0.82	0.82	0.64	0.64	0.64	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	76	28	163	16	25	14	66	1388	24	20	1079	52
RTOR Reduction (vph)	0	0	136	0	12	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	104	27	0	43	0	66	1411	0	20	1129	0
Confl. Peds. (#/hr)			17	17			26		42	42		26
Confl. Bikes (#/hr)			15			4			34			28
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.8	18.8		18.8		13.2	82.3		4.4	73.5	
Effective Green, g (s)		19.3	19.3		19.3		13.2	83.3		4.4	74.5	
Actuated g/C Ratio		0.17	0.17		0.17		0.11	0.72		0.04	0.64	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		231	236		258		190	2394		63	2129	
v/s Ratio Prot							0.04	c0.42		0.01	c0.34	
v/s Ratio Perm		c0.07	0.02		0.03							
v/c Ratio		0.45	0.11		0.17		0.35	0.59		0.32	0.53	
Uniform Delay, d1		43.6	41.1		41.5		47.4	8.0		54.3	11.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		0.1		0.4	1.1		1.1	0.9	
Delay (s)		44.1	41.2		41.6		47.8	9.1		55.4	12.2	
Level of Service		D	D		D		D	A		E	B	
Approach Delay (s)		42.3			41.6			10.8			13.0	
Approach LOS		D			D			B			B	

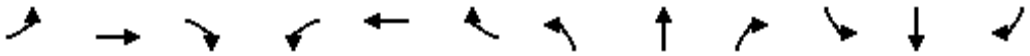
Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	275	153	0	377	1243	0	0	0	770	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.95			0.91	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3104			2830	1365				2515		1430
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3104			2830	1365				2515		1430
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	286	159	0	385	1268	0	0	0	837	0	175
RTOR Reduction (vph)	0	59	0	0	189	475	0	0	0	0	0	107
Lane Group Flow (vph)	106	386	0	0	703	286	0	0	0	837	0	68
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	61.4			41.4	41.4				44.1		44.1
Effective Green, g (s)	16.0	61.4			41.4	41.4				44.6		44.6
Actuated g/C Ratio	0.14	0.54			0.36	0.36				0.39		0.39
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1671			1027	495				983		559
v/s Ratio Prot	c0.06	0.12			c0.25	0.21				c0.33		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.23			0.68	0.58				0.85		0.12
Uniform Delay, d1	45.0	13.9			30.8	29.3				31.7		22.2
Progression Factor	1.00	1.00			0.82	4.03				1.00		1.00
Incremental Delay, d2	0.5	0.3			3.0	1.3				7.1		0.1
Delay (s)	45.5	14.2			28.2	119.2				38.8		22.3
Level of Service	D	B			C	F				D		C
Approach Delay (s)		20.2			70.1			0.0			35.9	
Approach LOS		C			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	50.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



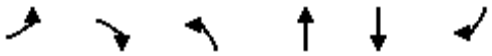
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	970	0	0	1179	484	452	58	998	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.93	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1402	1593	1404	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1402	1593	1404	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1054	0	0	1282	526	466	60	1029	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	269	0	85	35	0	0	0
Lane Group Flow (vph)	92	1054	0	0	1282	257	419	485	531	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	60.0			55.6	55.6	38.0	38.0	46.0			
Effective Green, g (s)	8.4	60.0			55.6	55.6	38.0	38.0	46.0			
Actuated g/C Ratio	0.07	0.53			0.49	0.49	0.33	0.33	0.40			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2535			2349	683	531	468	575			
v/s Ratio Prot	c0.05	0.22			c0.27		0.26	c0.35	c0.37			
v/s Ratio Perm						0.18						
v/c Ratio	0.75	0.42			0.55	0.38	0.79	1.04	0.92			
Uniform Delay, d1	51.8	16.4			20.4	18.3	34.4	38.0	32.3			
Progression Factor	1.38	0.29			0.86	0.83	1.00	1.00	1.00			
Incremental Delay, d2	15.9	0.4			0.7	1.1	7.7	51.5	20.6			
Delay (s)	87.5	5.2			18.2	16.3	42.0	89.5	52.9			
Level of Service	F	A			B	B	D	F	D			
Approach Delay (s)		11.8			17.7			63.4			0.0	
Approach LOS		B			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



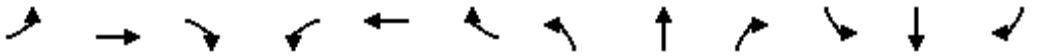
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	894	66	279	156	42	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	3217		3353	1427		3323
Flt Permitted	0.96		1.00	1.00		0.86
Satd. Flow (perm)	3217		3353	1427		2892
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	922	68	321	179	49	321
RTOR Reduction (vph)	6	0	0	81	0	0
Lane Group Flow (vph)	984	0	321	98	0	370
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	43.7		63.1	63.1		63.1
Effective Green, g (s)	43.2		62.6	62.6		62.6
Actuated g/C Ratio	0.38		0.55	0.55		0.55
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1219		1841	783		1588
v/s Ratio Prot	c0.31		0.10			
v/s Ratio Perm				0.07		c0.13
v/c Ratio	0.81		0.17	0.13		0.23
Uniform Delay, d1	31.7		12.8	12.4		13.3
Progression Factor	0.28		0.25	0.00		1.00
Incremental Delay, d2	3.3		0.2	0.3		0.3
Delay (s)	12.1		3.4	0.3		13.6
Level of Service	B		A	A		B
Approach Delay (s)	12.1		2.3			13.6
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



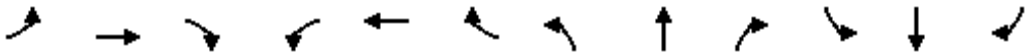
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	138	68	738	590	269	215
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	175	86	761	608	299	239
RTOR Reduction (vph)	0	36	0	0	0	204
Lane Group Flow (vph)	175	50	761	608	299	35
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	17.3	67.3	46.5	89.7	39.7	17.3
Effective Green, g (s)	16.8	66.8	46.0	89.2	39.2	16.8
Actuated g/C Ratio	0.15	0.59	0.40	0.78	0.34	0.15
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	878	1312	1381	606	221
v/s Ratio Prot	c0.10	0.03	c0.23	0.34	c0.17	0.02
v/s Ratio Perm						
v/c Ratio	0.71	0.06	0.58	0.44	0.49	0.16
Uniform Delay, d1	46.3	10.1	26.5	4.1	29.6	42.4
Progression Factor	1.41	6.00	0.51	0.13	1.00	1.00
Incremental Delay, d2	9.2	0.0	1.3	0.7	2.9	0.3
Delay (s)	74.3	60.7	14.7	1.2	32.4	42.8
Level of Service	E	E	B	A	C	D
Approach Delay (s)	69.8			8.7	37.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



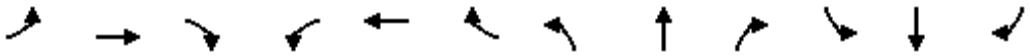
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	579	1057	294	614	138	205	24	104	169	208	772
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.94	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2882	1365	1676	3353	1470	1593	1613	1444		1726	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2882	1365	1676	3353	1470	1593	1613	1444		1726	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	330	585	1068	363	758	170	220	26	112	172	212	788
RTOR Reduction (vph)	0	78	61	0	0	54	0	0	99	0	0	51
Lane Group Flow (vph)	330	882	633	363	758	116	123	123	13	0	384	737
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	922	592	249	1014	444	181	183	164		454	1169
v/s Ratio Prot	0.10	0.31	c0.46	c0.22	0.23		0.08	0.08			c0.22	0.28
v/s Ratio Perm						0.08			0.01			
v/c Ratio	0.57	0.96	1.07	1.46	0.75	0.26	0.68	0.67	0.08		0.85	0.63
Uniform Delay, d1	42.7	38.0	32.2	48.5	35.8	30.1	48.5	48.5	45.1		39.8	24.5
Progression Factor	0.92	0.75	0.68	0.73	0.65	0.52	1.00	1.00	1.00		0.69	0.39
Incremental Delay, d2	2.8	16.5	51.7	223.3	4.1	1.2	8.9	8.5	0.1		15.7	2.3
Delay (s)	42.0	45.0	73.6	258.6	27.4	16.7	57.4	57.0	45.3		43.3	11.8
Level of Service	D	D	E	F	C	B	E	E	D		D	B
Approach Delay (s)		54.5			91.0			53.4			22.1	
Approach LOS		D			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	56.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



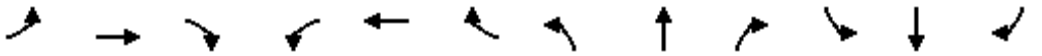
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	257	930	74	0	194	0	1056	71	0	344	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3307			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3307			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	268	969	77	0	202	0	1100	74	0	395	0
RTOR Reduction (vph)	0	0	625	0	0	183	0	4	0	0	0	0
Lane Group Flow (vph)	126	268	344	77	0	19	0	1170	0	0	395	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.6	15.6	40.6	11.2		11.2		52.4			27.6	
Effective Green, g (s)	14.6	14.6	39.6	10.7		10.7		51.9			27.1	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	195	411	781	157		138		1505			797	
v/s Ratio Prot	0.08	c0.08	0.15	c0.05				c0.35			0.12	
v/s Ratio Perm						0.01						
v/c Ratio	0.65	0.65	0.44	0.49		0.14		0.78			0.50	
Uniform Delay, d1	47.2	47.3	28.7	49.1		47.4		26.2			37.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.40			0.52	
Incremental Delay, d2	6.4	3.3	0.3	1.8		0.3		3.3			2.1	
Delay (s)	53.6	50.6	29.0	50.8		47.7		13.9			21.7	
Level of Service	D	D	C	D		D		B			C	
Approach Delay (s)		35.5			48.6			13.9			21.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	106	1	161	15	969	134	221	1107	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2355	1458		1676	3353	1375	1676	3314	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1832	1458		1676	3353	1375	1676	3314	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	125	1	189	16	1053	146	235	1178	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	42	0	1	0
Lane Group Flow (vph)	0	28	1	125	28	0	16	1053	104	235	1203	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.5	16.5		4.2	57.2	57.2	20.3	73.3	
Effective Green, g (s)		4.0	4.0	16.5	16.5		3.7	57.7	57.7	19.8	73.8	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	265	211		54	1697	695	291	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.31		c0.14	0.36	
v/s Ratio Perm			0.00	c0.07					0.08			
v/c Ratio		0.47	0.02	0.47	0.13		0.30	0.62	0.15	0.81	0.56	
Uniform Delay, d1		54.0	53.1	44.7	42.5		53.9	20.3	15.0	45.3	11.1	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.93	1.24	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.7	0.5	11.5	0.8	
Delay (s)		56.2	53.2	45.2	42.6		55.0	22.0	15.5	53.7	14.7	
Level of Service		E	D	D	D		D	C	B	D	B	
Approach Delay (s)		55.1			43.7			21.6			21.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	474	256	90	603	39	291	199	44	40	214	143
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3148		1676	3313		1676	1707		1667	1765	1479
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.60	1.00	1.00
Satd. Flow (perm)	1676	3148		1676	3313		1676	1707		1047	1765	1479
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	515	278	98	655	42	316	216	48	43	233	155
RTOR Reduction (vph)	0	66	0	0	4	0	0	7	0	0	0	88
Lane Group Flow (vph)	108	727	0	98	693	0	316	257	0	43	233	67
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	13.1	31.8		12.8	31.5		25.5	45.8		28.9	28.7	41.8
Effective Green, g (s)	13.1	31.8		12.8	31.5		25.5	45.8		28.9	28.7	41.8
Actuated g/C Ratio	0.11	0.28		0.11	0.28		0.22	0.40		0.25	0.25	0.37
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	878		188	915		374	685		311	444	542
v/s Ratio Prot	0.06	c0.23		0.06	c0.21		c0.19	0.15		0.01	c0.13	0.01
v/s Ratio Perm										0.02		0.03
v/c Ratio	0.56	0.83		0.52	0.76		0.84	0.38		0.14	0.52	0.12
Uniform Delay, d1	47.7	38.5		47.7	37.8		42.4	24.0		33.1	36.8	23.9
Progression Factor	0.72	1.02		1.00	1.00		1.03	1.09		1.00	1.00	1.00
Incremental Delay, d2	2.0	3.5		2.6	3.6		15.8	1.6		0.2	4.4	0.1
Delay (s)	36.5	42.7		50.3	41.4		59.4	27.8		33.3	41.2	24.1
Level of Service	D	D		D	D		E	C		C	D	C
Approach Delay (s)		42.0			42.5			45.0			34.2	
Approach LOS		D			D			D			C	

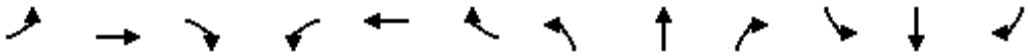
Intersection Summary			
HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	508	0	0	678	0	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	552	0	0	737	0	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			552		921	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			552		921	276
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	94
cM capacity (veh/h)			1014		270	721

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	276	276	368	368	46
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	46
cSH	1700	1700	1700	1700	721
Volume to Capacity	0.16	0.16	0.22	0.22	0.06
Queue Length 95th (ft)	0	0	0	0	5
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

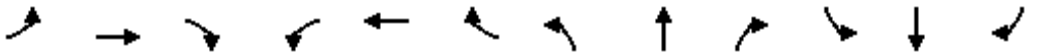
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	24.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	76	0	9	0	77	66	4	53	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
Hourly flow rate (vph)	1	0	0	83	0	10	0	84	72	4	58	0

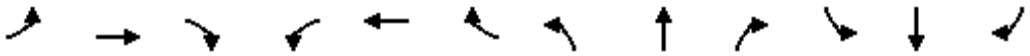
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	83	10	0	155	62
Volume Left (vph)	1	83	0	0	0	4
Volume Right (vph)	0	0	10	0	72	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.29	0.05
Departure Headway (s)	5.4	5.6	4.4	4.8	4.5	5.0
Degree Utilization, x	0.00	0.13	0.01	0.00	0.20	0.09
Capacity (veh/h)	623	615	780	745	772	694
Control Delay (s)	8.4	8.2	6.2	6.6	7.4	8.5
Approach Delay (s)	8.4	8.0		7.4		8.5
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.8			
Level of Service	A			
Intersection Capacity Utilization	19.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	16	10	11	6	43	12	419	21	53	436	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98			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	0.94		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1676	1626		1672	1500			3320			1755	1473
Flt Permitted	0.72	1.00		0.74	1.00			0.94			0.92	1.00
Satd. Flow (perm)	1274	1626		1301	1500			3135			1619	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	17	11	12	7	47	13	455	23	58	474	80
RTOR Reduction (vph)	0	9	0	0	40	0	0	3	0	0	0	8
Lane Group Flow (vph)	72	19	0	12	14	0	0	488	0	0	532	72
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	183	233		187	215			2288			1181	1075
v/s Ratio Prot		0.01			0.01							
v/s Ratio Perm	c0.06			0.01				0.16			c0.33	0.05
v/c Ratio	0.39	0.08		0.06	0.06			0.21			0.45	0.07
Uniform Delay, d1	22.1	21.1		21.1	21.1			2.5			3.1	2.2
Progression Factor	1.00	1.00		1.00	1.00			0.60			1.02	0.90
Incremental Delay, d2	1.0	0.1		0.1	0.1			0.2			1.0	0.1
Delay (s)	23.2	21.2		21.2	21.2			1.7			4.1	2.1
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		22.6			21.2			1.7			3.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	22	0	7	0	139	19	7	117	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
Hourly flow rate (vph)	0	0	0	24	0	8	0	151	21	8	127	0

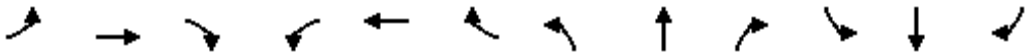
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	32	172	135
Volume Left (vph)	0	24	0	8
Volume Right (vph)	0	8	21	0
Hadj (s)	0.00	0.04	-0.04	0.05
Departure Headway (s)	4.6	4.6	4.1	4.2
Degree Utilization, x	0.00	0.04	0.19	0.16
Capacity (veh/h)	741	724	864	845
Control Delay (s)	7.6	7.8	8.1	8.0
Approach Delay (s)	0.0	7.8	8.1	8.0
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.0			
Level of Service	A			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	9	4	13	7	59	6	353	20	69	354	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1676		1669	1476		1670	1747		1669	1740	
Flt Permitted	0.71	1.00		0.75	1.00		0.51	1.00		0.52	1.00	
Satd. Flow (perm)	1251	1676		1315	1476		898	1747		911	1740	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	10	4	14	8	64	7	384	22	75	385	33
RTOR Reduction (vph)	0	4	0	0	56	0	0	2	0	0	3	0
Lane Group Flow (vph)	40	10	0	14	16	0	7	404	0	75	415	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Effective Green, g (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	153	205		161	181		674	1311		684	1306	
v/s Ratio Prot		0.01			0.01			0.23			c0.24	
v/s Ratio Perm	c0.03			0.01			0.01			0.08		
v/c Ratio	0.26	0.05		0.09	0.09		0.01	0.31		0.11	0.32	
Uniform Delay, d1	22.7	22.1		22.2	22.2		1.8	2.3		1.9	2.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.12	1.56	
Incremental Delay, d2	0.3	0.0		0.1	0.1		0.0	0.6		0.3	0.6	
Delay (s)	23.0	22.1		22.3	22.2		1.8	2.9		2.5	4.2	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		22.8			22.2			2.9			3.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	0	19	0	0	0	22	103	1	1	81	59
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	61	0	21	0	0	0	24	112	1	1	88	64
Pedestrians					4			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	283	287	121	308	319	116	152			117		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	283	287	121	308	319	116	152			117		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	100	98	100	100	100	98			100		
cM capacity (veh/h)	659	610	929	617	585	933	1429			1466		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	82	0	137	153
Volume Left	61	0	24	1
Volume Right	21	0	1	64
cSH	711	1700	1429	1466
Volume to Capacity	0.11	0.00	0.02	0.00
Queue Length 95th (ft)	10	0	1	0
Control Delay (s)	10.7	0.0	1.4	0.1
Lane LOS	B	A	A	A
Approach Delay (s)	10.7	0.0	1.4	0.1
Approach LOS	B	A		

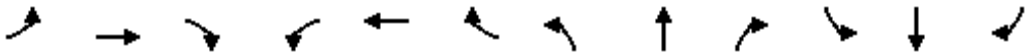
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	16	10	116	31	9	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	11	126	34	10	101

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	28	160	111
Volume Left (vph)	17	0	10
Volume Right (vph)	11	34	0
Hadj (s)	-0.07	-0.09	0.05
Departure Headway (s)	4.4	4.0	4.2
Degree Utilization, x	0.03	0.18	0.13
Capacity (veh/h)	768	884	849
Control Delay (s)	7.6	7.8	7.8
Approach Delay (s)	7.6	7.8	7.8
Approach LOS	A	A	A

Intersection Summary			
Delay	7.8		
Level of Service	A		
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	17	2	19	15	48	5	310	18	45	323	11
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
Hourly flow rate (vph)	25	18	2	21	16	52	5	337	20	49	351	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	46	89	362	412
Volume Left (vph)	25	21	5	49
Volume Right (vph)	2	52	20	12
Hadj (s)	0.11	-0.27	0.00	0.04
Departure Headway (s)	6.1	5.6	4.8	4.8
Degree Utilization, x	0.08	0.14	0.48	0.55
Capacity (veh/h)	498	560	723	728
Control Delay (s)	9.6	9.5	12.3	13.5
Approach Delay (s)	9.6	9.5	12.3	13.5
Approach LOS	A	A	B	B

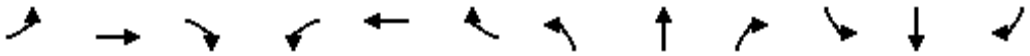
Intersection Summary				
Delay	12.4			
Level of Service	B			
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	6	14	16	8	13
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	7	15	17	9	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	55	24			33	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55	24			33	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	947	1053			1579	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	33	23
Volume Left	15	0	9
Volume Right	7	17	0
cSH	976	1700	1579
Volume to Capacity	0.02	0.02	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.8	0.0	2.8
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	2.8
Approach LOS	A		

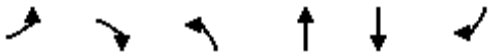
Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	23	2	11	14	5	6	20	5	6	20	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	25	2	12	15	5	7	22	5	7	22	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			36			93	80	45	94	78	23
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			36			93	80	45	94	78	23
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	97	99	99	97	100
cM capacity (veh/h)	1595			1563			852	798	1009	849	800	1050

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	27	33	34	28
Volume Left	0	12	7	7
Volume Right	2	5	5	0
cSH	1595	1563	837	811
Volume to Capacity	0.00	0.01	0.04	0.03
Queue Length 95th (ft)	0	1	3	3
Control Delay (s)	0.0	2.7	9.5	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.7	9.5	9.6
Approach LOS			A	A

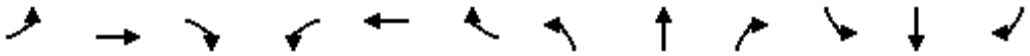
Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	24	23	118	86	21
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	26	25	128	93	23
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	294	118	124			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294	118	124			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	98			
cM capacity (veh/h)	679	924	1453			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	53	153	116
Volume Left	27	25	0
Volume Right	26	0	23
cSH	780	1453	1700
Volume to Capacity	0.07	0.02	0.07
Queue Length 95th (ft)	5	1	0
Control Delay (s)	10.0	1.3	0.0
Lane LOS	A	A	
Approach Delay (s)	10.0	1.3	0.0
Approach LOS	A		

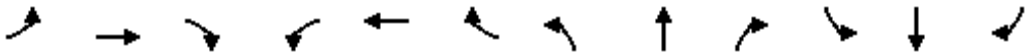
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	27	0	8	25	24	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	29	0	9	27	26	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	37			5			90	102	5	117	88	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	37			5			90	102	5	117	88	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	97	99	100
cM capacity (veh/h)	1568			1613			867	769	1077	811	782	1044

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	62	36	35
Volume Left	0	30	0	26
Volume Right	1	29	27	0
cSH	1568	1613	981	804
Volume to Capacity	0.00	0.02	0.04	0.04
Queue Length 95th (ft)	0	1	3	3
Control Delay (s)	0.0	3.6	8.8	9.7
Lane LOS		A	A	A
Approach Delay (s)	0.0	3.6	8.8	9.7
Approach LOS			A	A

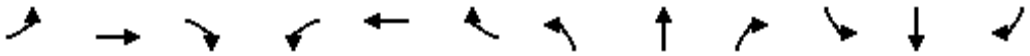
Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	45	14	8	53	20	6	7	10	15	16	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	49	15	9	58	22	7	8	11	16	17	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	89			68			159	167	67	173	164	81
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	89			68			159	167	67	173	164	81
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			99	99	99	98	98	100
cM capacity (veh/h)	1493			1528			776	713	989	754	716	968

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	64	88	25	35
Volume Left	0	9	7	16
Volume Right	15	22	11	1
cSH	1493	1528	831	740
Volume to Capacity	0.00	0.01	0.03	0.05
Queue Length 95th (ft)	0	0	2	4
Control Delay (s)	0.0	0.8	9.5	10.1
Lane LOS		A	A	B
Approach Delay (s)	0.0	0.8	9.5	10.1
Approach LOS			A	B

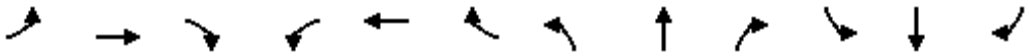
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	23.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	43	27	30	42	24	30	108	36	30	64	12
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
Hourly flow rate (vph)	8	47	29	33	46	26	33	117	39	33	70	13

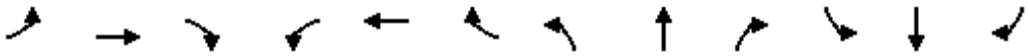
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	84	104	189	115
Volume Left (vph)	8	33	33	33
Volume Right (vph)	29	26	39	13
Hadj (s)	-0.16	-0.05	-0.06	0.02
Departure Headway (s)	4.6	4.7	4.4	4.6
Degree Utilization, x	0.11	0.14	0.23	0.15
Capacity (veh/h)	721	714	773	736
Control Delay (s)	8.1	8.4	8.8	8.4
Approach Delay (s)	8.1	8.4	8.8	8.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.5			
Level of Service	A			
Intersection Capacity Utilization	31.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	63	37	24	62	55	25	243	8	28	298	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1655			1735	1453	1676	1753		1676	1738	
Flt Permitted		0.91			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1524			1610	1453	1676	1753		1676	1738	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	68	40	26	67	60	27	264	9	30	324	27
RTOR Reduction (vph)	0	30	0	0	0	51	0	1	0	0	3	0
Lane Group Flow (vph)	0	111	0	0	93	9	27	272	0	30	348	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.9			8.9	8.9	1.6	34.4		3.2	36.0	
Effective Green, g (s)		8.9			8.9	8.9	1.6	34.4		3.2	36.0	
Actuated g/C Ratio		0.15			0.15	0.15	0.03	0.59		0.06	0.62	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		233			247	222	46	1039		92	1078	
v/s Ratio Prot							c0.02	0.16		0.02	c0.20	
v/s Ratio Perm		c0.07			0.06	0.01						
v/c Ratio		0.47			0.38	0.04	0.59	0.26		0.33	0.32	
Uniform Delay, d1		22.4			22.1	20.9	27.9	5.7		26.4	5.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6			0.4	0.0	17.7	0.6		2.1	0.8	
Delay (s)		23.0			22.4	20.9	45.5	6.3		28.4	6.0	
Level of Service		C			C	C	D	A		C	A	
Approach Delay (s)		23.0			21.8			9.8			7.8	
Approach LOS		C			C			A			A	

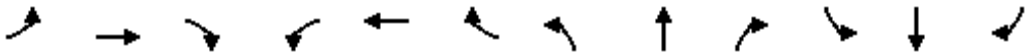
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	777	255	206	690	37	274	89	201	40	62	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.90			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3019		1676	3353	1334	1676	1708			1477	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3019		1676	3353	1334	1676	1708			1477	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	47	827	271	226	758	41	298	97	218	48	75	30
RTOR Reduction (vph)	0	24	0	0	0	24	0	70	0	0	8	0
Lane Group Flow (vph)	47	1074	0	226	758	17	298	245	0	0	145	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	7.4	38.4		18.7	49.7	49.7	24.9	24.9			21.5	
Effective Green, g (s)	7.9	39.4		19.2	50.7	50.7	24.4	24.4			21.0	
Actuated g/C Ratio	0.07	0.33		0.16	0.42	0.42	0.20	0.20			0.18	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	110	991		268	1416	563	340	347			258	
v/s Ratio Prot	0.03	c0.36		c0.13	0.23		c0.18	0.14			c0.10	
v/s Ratio Perm						0.01						
v/c Ratio	0.43	1.08		0.84	0.54	0.03	0.88	0.71			0.56	
Uniform Delay, d1	53.9	40.3		48.9	25.9	20.3	46.3	44.5			45.3	
Progression Factor	1.00	1.00		1.44	0.45	0.02	1.00	1.00			1.00	
Incremental Delay, d2	1.9	54.2		18.4	1.3	0.1	21.3	6.0			2.3	
Delay (s)	55.8	94.5		89.1	13.0	0.5	67.7	50.4			47.5	
Level of Service	E	F		F	B	A	E	D			D	
Approach Delay (s)		93.0			29.2			58.8			47.5	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	61.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	855	106	175	766	89	90	134	123	69	228	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.89	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3200		1676	3353	1271	1676	1765	1449	1676	1683	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3200		1676	3353	1271	1676	1765	1449	1676	1683	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	891	110	182	798	93	96	143	131	78	256	83
RTOR Reduction (vph)	0	7	0	0	0	46	0	0	98	0	10	0
Lane Group Flow (vph)	61	994	0	182	798	47	96	143	33	78	329	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.4		16.7	54.7	54.7	12.4	30.4	30.4	9.8	27.8	
Effective Green, g (s)	7.9	46.4		16.2	54.7	54.7	11.9	29.9	29.9	9.3	27.3	
Actuated g/C Ratio	0.07	0.39		0.13	0.46	0.46	0.10	0.25	0.25	0.08	0.23	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1237		226	1528	579	166	439	361	129	382	
v/s Ratio Prot	0.04	c0.31		c0.11	0.24		c0.06	c0.08		0.05	c0.20	
v/s Ratio Perm						0.04			0.02			
v/c Ratio	0.55	0.80		0.81	0.52	0.08	0.58	0.33	0.09	0.60	0.86	
Uniform Delay, d1	54.3	32.7		50.4	23.3	18.5	51.7	36.8	34.6	53.6	44.5	
Progression Factor	0.57	0.42		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	1.6		18.0	1.3	0.3	4.0	0.3	0.1	6.6	17.5	
Delay (s)	32.2	15.3		68.4	24.6	18.7	55.6	37.1	34.7	60.2	62.1	
Level of Service	C	B		E	C	B	E	D	C	E	E	
Approach Delay (s)		16.2			31.5			41.1			61.7	
Approach LOS		B			C			D			E	

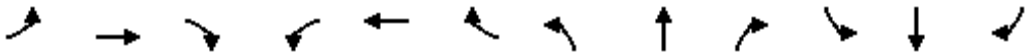
Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1007	80	117	1000	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3144		1676	3184			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3144		1676	3184			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	1095	87	121	1031	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1178	0	121	1078	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1362		173	1668			310	266		245	
v/s Ratio Prot	0.01	c0.37		c0.07	0.34			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.86		0.70	0.65			0.84	0.12		0.49	
Uniform Delay, d1	58.9	30.8		52.0	20.5			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.34			1.00	1.00		1.00	
Incremental Delay, d2	13.6	7.5		4.5	0.8			17.4	0.1		1.1	
Delay (s)	72.5	38.3		63.5	7.8			64.8	40.8		48.2	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		38.6			13.4			55.3			48.2	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

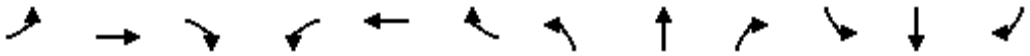
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	626	388	49	473	168	509	586	30	167	678	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	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	1.00	
Frt	1.00	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2954		1676	3163		3252	3236		1676	3116	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2954		1676	3163		3252	3236		1676	3116	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	688	426	59	570	202	572	658	34	180	729	197
RTOR Reduction (vph)	0	77	0	0	30	0	0	3	0	0	20	0
Lane Group Flow (vph)	160	1037	0	59	742	0	572	689	0	180	906	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.3	41.6		8.8	31.1		21.0	40.8		15.6	34.4	
Effective Green, g (s)	19.3	41.6		8.8	31.1		22.0	41.8		15.6	35.4	
Actuated g/C Ratio	0.16	0.35		0.07	0.26		0.18	0.35		0.13	0.29	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	269	1024		122	819		596	1127		217	919	
v/s Ratio Prot	0.10	c0.35		0.04	c0.23		c0.18	0.21		0.11	c0.29	
v/s Ratio Perm												
v/c Ratio	0.59	1.01		0.48	0.91		0.96	0.61		0.83	0.99	
Uniform Delay, d1	46.7	39.2		53.4	43.0		48.6	32.4		50.9	42.0	
Progression Factor	0.52	0.36		1.00	1.00		1.00	1.00		0.92	0.92	
Incremental Delay, d2	1.4	24.7		1.1	13.2		26.6	2.5		20.7	25.4	
Delay (s)	25.5	38.9		54.5	56.2		75.1	34.8		67.5	64.0	
Level of Service	C	D		D	E		E	C		E	E	
Approach Delay (s)		37.2			56.1			53.1			64.5	
Approach LOS		D			E			D			E	

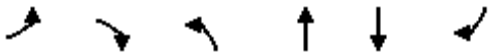
Intersection Summary			
HCM 2000 Control Delay	52.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	0	104	8	2	1	108	851	5	1	916	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.97	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1619	3346			3263	
Flt Permitted		0.80	1.00		0.82		0.25	1.00			0.95	
Satd. Flow (perm)		1387	1410		1383		427	3346			3116	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	106	0	109	17	4	2	117	925	5	1	974	80
RTOR Reduction (vph)	0	0	93	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	106	16	0	21	0	117	930	0	0	1052	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.4	17.4		16.9		95.6	95.6			95.6	
Effective Green, g (s)		17.4	17.4		17.4		96.6	96.6			96.6	
Actuated g/C Ratio		0.14	0.14		0.14		0.80	0.80			0.80	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		201	204		200		343	2693			2508	
v/s Ratio Prot								0.28				
v/s Ratio Perm		c0.08	0.01		0.02		0.27				c0.34	
v/c Ratio		0.53	0.08		0.11		0.34	0.35			0.42	
Uniform Delay, d1		47.5	44.4		44.5		3.1	3.2			3.4	
Progression Factor		1.00	1.00		1.00		0.54	0.54			1.00	
Incremental Delay, d2		1.2	0.1		0.1		2.1	0.3			0.5	
Delay (s)		48.6	44.4		44.6		3.8	2.0			4.0	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.5			44.6			2.2			4.0	
Approach LOS		D			D			A			A	

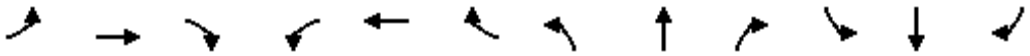
Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	56	94	872	954	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.98	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1553		1638	3279	3336	
Flt Permitted	0.99		0.25	1.00	1.00	
Satd. Flow (perm)	1553		437	3279	3336	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	26	74	101	938	994	17
RTOR Reduction (vph)	59	0	0	0	1	0
Lane Group Flow (vph)	41	0	101	938	1010	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	309		323	2429	2471	
v/s Ratio Prot	c0.03			0.29	c0.30	
v/s Ratio Perm			0.23			
v/c Ratio	0.13		0.31	0.39	0.41	
Uniform Delay, d1	32.9		4.4	4.7	4.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		2.5	0.5	0.5	
Delay (s)	33.0		6.9	5.2	5.3	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.3	5.3	
Approach LOS	C			A	A	

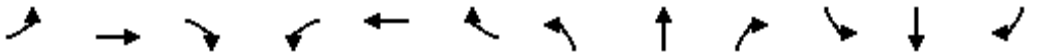
Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



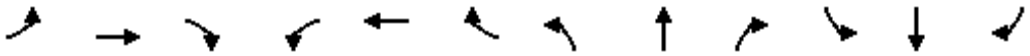
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	6	52	13	5	11	31	851	8	22	938	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1692	1461		1615		1676	3346		1676	3336	
Flt Permitted		0.80	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1415	1461		1456		1676	3346		1676	3336	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	49	8	67	17	6	14	33	896	8	24	1020	26
RTOR Reduction (vph)	0	0	59	0	12	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	57	8	0	25	0	33	904	0	24	1045	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		7.8	73.1		4.4	69.7	
Effective Green, g (s)		12.5	12.5		12.5		7.8	74.1		4.4	70.7	
Actuated g/C Ratio		0.12	0.12		0.12		0.08	0.74		0.04	0.71	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		176	182		182		130	2479		73	2358	
v/s Ratio Prot							0.02	c0.27		0.01	c0.31	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.32	0.05		0.14		0.25	0.36		0.33	0.44	
Uniform Delay, d1		39.9	38.5		38.9		43.4	4.6		46.4	6.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		0.1		0.4	0.4		1.0	0.6	
Delay (s)		40.3	38.5		39.1		43.7	5.0		47.3	6.9	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		39.3			39.1			6.4			7.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	275	153	0	377	1243	0	0	0	770	0	161
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.91	0.91				*0.75		1.00
Frpb, ped/bikes	1.00	0.98			0.96	1.00				1.00		0.95
Flpb, ped/bikes	1.00	1.00			1.00	1.00				1.00		1.00
Frt	1.00	0.95			0.91	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1676	3104			2830	1365				2515		1430
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1676	3104			2830	1365				2515		1430
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.25	0.25	0.25	0.92	0.92	0.92
Adj. Flow (vph)	106	286	159	0	385	1268	0	0	0	837	0	175
RTOR Reduction (vph)	0	59	0	0	189	475	0	0	0	0	0	107
Lane Group Flow (vph)	106	386	0	0	703	286	0	0	0	837	0	68
Confl. Peds. (#/hr)	29		40	40		29						20
Confl. Bikes (#/hr)			7			21						24
Turn Type	Prot	NA			NA	custom				Prot		Perm
Protected Phases	5	2			6	6 7				4		
Permitted Phases												4
Actuated Green, G (s)	16.5	61.4			41.4	41.4				44.1		44.1
Effective Green, g (s)	16.0	61.4			41.4	41.4				44.6		44.6
Actuated g/C Ratio	0.14	0.54			0.36	0.36				0.39		0.39
Clearance Time (s)	3.5	4.0			4.0					4.5		4.5
Vehicle Extension (s)	2.0	4.0			4.0					2.5		2.5
Lane Grp Cap (vph)	235	1671			1027	495				983		559
v/s Ratio Prot	c0.06	0.12			c0.25	0.21				c0.33		
v/s Ratio Perm												0.05
v/c Ratio	0.45	0.23			0.68	0.58				0.85		0.12
Uniform Delay, d1	45.0	13.9			30.8	29.3				31.7		22.2
Progression Factor	1.00	1.00			0.82	4.03				1.00		1.00
Incremental Delay, d2	0.5	0.3			3.0	1.3				7.1		0.1
Delay (s)	45.5	14.2			28.2	119.2				38.8		22.3
Level of Service	D	B			C	F				D		C
Approach Delay (s)		20.2			70.1			0.0			35.9	
Approach LOS		C			E			A			D	

Intersection Summary			
HCM 2000 Control Delay	50.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



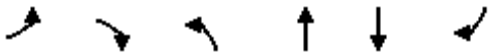
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	970	0	0	1179	484	452	58	998	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.91			0.91	1.00	0.95	0.91	0.95			
Frpb, ped/bikes	1.00	1.00			1.00	0.93	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	1676	4818			4818	1402	1593	1404	1425			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	1676	4818			4818	1402	1593	1404	1425			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	92	1054	0	0	1282	526	466	60	1029	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	269	0	85	35	0	0	0
Lane Group Flow (vph)	92	1054	0	0	1282	257	419	485	531	0	0	0
Confl. Peds. (#/hr)	14		48	48		14						
Confl. Bikes (#/hr)			35			22						
Turn Type	Prot	NA			NA	Perm	Split	NA	custom			
Protected Phases	5	2			6		4	4	4 1			
Permitted Phases						6						
Actuated Green, G (s)	8.9	60.0			55.6	55.6	38.0	38.0	46.0			
Effective Green, g (s)	8.4	60.0			55.6	55.6	38.0	38.0	46.0			
Actuated g/C Ratio	0.07	0.53			0.49	0.49	0.33	0.33	0.40			
Clearance Time (s)	3.5	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	2.0	4.0			4.0	4.0	3.0	3.0				
Lane Grp Cap (vph)	123	2535			2349	683	531	468	575			
v/s Ratio Prot	c0.05	0.22			c0.27		0.26	c0.35	c0.37			
v/s Ratio Perm						0.18						
v/c Ratio	0.75	0.42			0.55	0.38	0.79	1.04	0.92			
Uniform Delay, d1	51.8	16.4			20.4	18.3	34.4	38.0	32.3			
Progression Factor	1.38	0.29			0.86	0.83	1.00	1.00	1.00			
Incremental Delay, d2	15.9	0.4			0.7	1.1	7.7	51.5	20.6			
Delay (s)	87.5	5.2			18.2	16.3	42.0	89.5	52.9			
Level of Service	F	A			B	B	D	F	D			
Approach Delay (s)		11.8			17.7			63.4			0.0	
Approach LOS		B			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



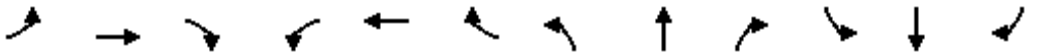
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	894	66	279	156	42	273
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0		4.2	4.2		4.2
Lane Util. Factor	0.97		0.95	1.00		0.95
Frpb, ped/bikes	0.99		1.00	0.95		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	3217		3353	1427		3323
Flt Permitted	0.96		1.00	1.00		0.86
Satd. Flow (perm)	3217		3353	1427		2892
Peak-hour factor, PHF	0.97	0.97	0.87	0.87	0.85	0.85
Adj. Flow (vph)	922	68	321	179	49	321
RTOR Reduction (vph)	6	0	0	81	0	0
Lane Group Flow (vph)	984	0	321	98	0	370
Confl. Peds. (#/hr)		30		13	13	
Confl. Bikes (#/hr)		8		3		
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	43.7		63.1	63.1		63.1
Effective Green, g (s)	43.2		62.6	62.6		62.6
Actuated g/C Ratio	0.38		0.55	0.55		0.55
Clearance Time (s)	3.5		3.7	3.7		3.7
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	1219		1841	783		1588
v/s Ratio Prot	c0.31		0.10			
v/s Ratio Perm				0.07		c0.13
v/c Ratio	0.81		0.17	0.13		0.23
Uniform Delay, d1	31.7		12.8	12.4		13.3
Progression Factor	0.28		0.25	0.00		1.00
Incremental Delay, d2	3.3		0.2	0.3		0.3
Delay (s)	12.1		3.4	0.3		13.6
Level of Service	B		A	A		B
Approach Delay (s)	12.1		2.3			13.6
Approach LOS	B		A			B

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	8.2
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



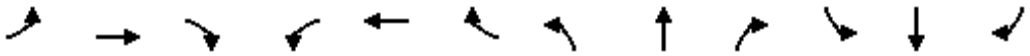
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	138	68	738	590	269	215
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1676	1500	3252	1765	1765	1500
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1676	1500	3252	1765	1765	1500
Peak-hour factor, PHF	0.79	0.79	0.97	0.97	0.90	0.90
Adj. Flow (vph)	175	86	761	608	299	239
RTOR Reduction (vph)	0	36	0	0	0	204
Lane Group Flow (vph)	175	50	761	608	299	35
Confl. Peds. (#/hr)		8	33			33
Confl. Bikes (#/hr)		2				20
Turn Type	Prot	pt+ov	Prot	NA	NA	Over
Protected Phases	4	4 5	5	2	6	4
Permitted Phases						
Actuated Green, G (s)	17.3	67.3	46.5	89.7	39.7	17.3
Effective Green, g (s)	16.8	66.8	46.0	89.2	39.2	16.8
Actuated g/C Ratio	0.15	0.59	0.40	0.78	0.34	0.15
Clearance Time (s)	3.5		3.5	3.5	3.5	3.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	878	1312	1381	606	221
v/s Ratio Prot	c0.10	0.03	c0.23	0.34	c0.17	0.02
v/s Ratio Perm						
v/c Ratio	0.71	0.06	0.58	0.44	0.49	0.16
Uniform Delay, d1	46.3	10.1	26.5	4.1	29.6	42.4
Progression Factor	1.41	6.00	0.51	0.13	1.00	1.00
Incremental Delay, d2	9.2	0.0	1.3	0.7	2.9	0.3
Delay (s)	74.3	60.7	14.7	1.2	32.4	42.8
Level of Service	E	E	B	A	C	D
Approach Delay (s)	69.8			8.7	37.0	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



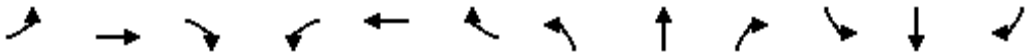
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	579	1057	294	614	138	205	24	104	169	208	772
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	5.0	3.5	3.5	4.0	4.0	4.0		4.0	4.5
Lane Util. Factor	0.97	0.91	0.91	1.00	0.95	1.00	0.95	0.95	1.00		1.00	0.88
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98	1.00	1.00	0.96		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.94	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	3252	2882	1365	1676	3353	1470	1593	1613	1444		1726	2640
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	3252	2882	1365	1676	3353	1470	1593	1613	1444		1726	2640
Peak-hour factor, PHF	0.99	0.99	0.99	0.81	0.81	0.81	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	330	585	1068	363	758	170	220	26	112	172	212	788
RTOR Reduction (vph)	0	78	61	0	0	54	0	0	99	0	0	51
Lane Group Flow (vph)	330	882	633	363	758	116	123	123	13	0	384	737
Confl. Peds. (#/hr)			83	83			97					97
Confl. Bikes (#/hr)			32			11			13			4
Turn Type	Prot	NA	pt+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA	pt+ov
Protected Phases	1	6	6 7	5	2		7	7		8	8	1 8
Permitted Phases						2			7			
Actuated Green, G (s)	21.0	37.0	54.0	17.5	34.0	34.0	13.5	13.5	13.5		30.5	51.5
Effective Green, g (s)	20.5	36.5	49.5	17.0	34.5	34.5	13.0	13.0	13.0		30.0	50.5
Actuated g/C Ratio	0.18	0.32	0.43	0.15	0.30	0.30	0.11	0.11	0.11		0.26	0.44
Clearance Time (s)	4.0	4.0		4.5	4.0	4.0	3.5	3.5	3.5		3.5	
Vehicle Extension (s)	2.0	4.0		2.0	4.0	4.0	2.5	2.5	2.5		4.0	
Lane Grp Cap (vph)	584	922	592	249	1014	444	181	183	164		454	1169
v/s Ratio Prot	0.10	0.31	c0.46	c0.22	0.23		0.08	0.08			c0.22	0.28
v/s Ratio Perm						0.08			0.01			
v/c Ratio	0.57	0.96	1.07	1.46	0.75	0.26	0.68	0.67	0.08		0.85	0.63
Uniform Delay, d1	42.7	38.0	32.2	48.5	35.8	30.1	48.5	48.5	45.1		39.8	24.5
Progression Factor	0.92	0.75	0.68	0.73	0.65	0.52	1.00	1.00	1.00		0.69	0.39
Incremental Delay, d2	2.8	16.5	51.7	223.3	4.1	1.2	8.9	8.5	0.1		15.7	2.3
Delay (s)	42.0	45.0	73.6	258.6	27.4	16.7	57.4	57.0	45.3		43.3	11.8
Level of Service	D	D	E	F	C	B	E	E	D		D	B
Approach Delay (s)		54.5			91.0			53.4			22.1	
Approach LOS		D			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	56.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



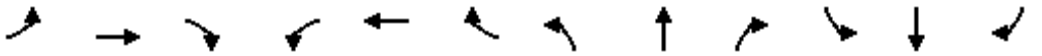
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	257	930	74	0	194	0	1056	71	0	344	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0		4.0		4.2			4.0	
Lane Util. Factor	0.91	0.91	*0.75	1.00		1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.98		1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00		0.85		0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (prot)	1526	3212	2250	1676		1471		3307			3353	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00			1.00	
Satd. Flow (perm)	1526	3212	2250	1676		1471		3307			3353	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.87	0.87	0.87
Adj. Flow (vph)	126	268	969	77	0	202	0	1100	74	0	395	0
RTOR Reduction (vph)	0	0	625	0	0	183	0	4	0	0	0	0
Lane Group Flow (vph)	126	268	344	77	0	19	0	1170	0	0	395	0
Confl. Peds. (#/hr)			255	255			59		77	77		59
Confl. Bikes (#/hr)			14			3			13			4
Turn Type	Split	NA	custom	Prot		Perm		NA			NA	
Protected Phases	4	4	4 5	3				2			6	
Permitted Phases						3						
Actuated Green, G (s)	15.6	15.6	40.6	11.2		11.2		52.4			27.6	
Effective Green, g (s)	14.6	14.6	39.6	10.7		10.7		51.9			27.1	
Actuated g/C Ratio	0.13	0.13	0.35	0.09		0.09		0.46			0.24	
Clearance Time (s)	3.0	3.0		3.5		3.5		3.7			3.5	
Vehicle Extension (s)	2.5	2.5		2.5		2.5		3.0			3.0	
Lane Grp Cap (vph)	195	411	781	157		138		1505			797	
v/s Ratio Prot	0.08	c0.08	0.15	c0.05				c0.35			0.12	
v/s Ratio Perm						0.01						
v/c Ratio	0.65	0.65	0.44	0.49		0.14		0.78			0.50	
Uniform Delay, d1	47.2	47.3	28.7	49.1		47.4		26.2			37.5	
Progression Factor	1.00	1.00	1.00	1.00		1.00		0.40			0.52	
Incremental Delay, d2	6.4	3.3	0.3	1.8		0.3		3.3			2.1	
Delay (s)	53.6	50.6	29.0	50.8		47.7		13.9			21.7	
Level of Service	D	D	C	D		D		B			C	
Approach Delay (s)		35.5			48.6			13.9			21.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	6	13	106	1	161	15	969	134	221	1107	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	0.54	1.00	0.97		1.00	1.00	0.92	1.00	0.99	
Flpb, ped/bikes		1.00	1.00	0.72	1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701	810	2355	1458		1676	3353	1375	1676	3314	
Flt Permitted		0.96	1.00	0.74	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1701	810	1832	1458		1676	3353	1375	1676	3314	
Peak-hour factor, PHF	0.82	0.82	0.82	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	21	7	16	125	1	189	16	1053	146	235	1178	26
RTOR Reduction (vph)	0	0	15	0	162	0	0	0	42	0	1	0
Lane Group Flow (vph)	0	28	1	125	28	0	16	1053	104	235	1203	0
Confl. Peds. (#/hr)			83	83			155		16	16		155
Confl. Bikes (#/hr)			32			11			32			46
Turn Type	Split	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8		5	2		1	6	
Permitted Phases			7	8					2			
Actuated Green, G (s)		4.5	4.5	16.5	16.5		4.2	57.2	57.2	20.3	73.3	
Effective Green, g (s)		4.0	4.0	16.5	16.5		3.7	57.7	57.7	19.8	73.8	
Actuated g/C Ratio		0.04	0.04	0.14	0.14		0.03	0.51	0.51	0.17	0.65	
Clearance Time (s)		3.5	3.5	4.0	4.0		3.5	4.5	4.5	3.5	4.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.5	2.5	2.0	2.5	
Lane Grp Cap (vph)		59	28	265	211		54	1697	695	291	2145	
v/s Ratio Prot		c0.02			0.02		0.01	c0.31		c0.14	0.36	
v/s Ratio Perm			0.00	c0.07					0.08			
v/c Ratio		0.47	0.02	0.47	0.13		0.30	0.62	0.15	0.81	0.56	
Uniform Delay, d1		54.0	53.1	44.7	42.5		53.9	20.3	15.0	45.3	11.1	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00	0.93	1.24	
Incremental Delay, d2		2.2	0.1	0.5	0.1		1.1	1.7	0.5	11.5	0.8	
Delay (s)		56.2	53.2	45.2	42.6		55.0	22.0	15.5	53.7	14.7	
Level of Service		E	D	D	D		D	C	B	D	B	
Approach Delay (s)		55.1			43.7			21.6			21.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	474	256	91	603	39	291	198	45	40	213	143
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.95		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1676	3148		1676	3313		1676	1706		1667	1765	1479
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.60	1.00	1.00
Satd. Flow (perm)	1676	3148		1676	3313		1676	1706		1047	1765	1479
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	515	278	99	655	42	316	215	49	43	232	155
RTOR Reduction (vph)	0	66	0	0	4	0	0	7	0	0	0	88
Lane Group Flow (vph)	108	727	0	99	693	0	316	257	0	43	232	67
Confl. Peds. (#/hr)	7		1	1		7	2		8	8		2
Confl. Bikes (#/hr)			2			6			10			8
Turn Type	Prot	NA		Prot	NA		Prot	NA		pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases										6		6
Actuated Green, G (s)	13.1	31.8		12.8	31.5		25.5	45.8		28.9	28.7	41.8
Effective Green, g (s)	13.1	31.8		12.8	31.5		25.5	45.8		28.9	28.7	41.8
Actuated g/C Ratio	0.11	0.28		0.11	0.28		0.22	0.40		0.25	0.25	0.37
Clearance Time (s)	3.5	4.5		3.5	4.5		3.5	3.7		3.5	3.7	3.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	878		188	915		374	685		311	444	542
v/s Ratio Prot	0.06	c0.23		0.06	c0.21		c0.19	0.15		0.01	c0.13	0.01
v/s Ratio Perm										0.02		0.03
v/c Ratio	0.56	0.83		0.53	0.76		0.84	0.38		0.14	0.52	0.12
Uniform Delay, d1	47.7	38.5		47.7	37.8		42.4	24.0		33.1	36.7	23.9
Progression Factor	0.72	1.02		1.00	1.00		1.03	1.09		1.00	1.00	1.00
Incremental Delay, d2	2.0	3.5		2.7	3.6		15.8	1.6		0.2	4.3	0.1
Delay (s)	36.5	42.7		50.4	41.4		59.5	27.8		33.3	41.1	24.1
Level of Service	D	D		D	D		E	C		C	D	C
Approach Delay (s)		42.0			42.5			45.1			34.2	
Approach LOS		D			D			D			C	

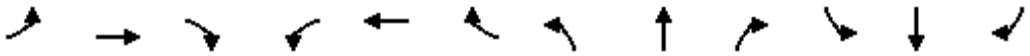
Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	509	0	0	678	0	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	553	0	0	737	0	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				339		
pX, platoon unblocked						
vC, conflicting volume			553		922	277
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			553		922	277
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	94
cM capacity (veh/h)			1013		269	721

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	277	277	368	368	46
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	46
cSH	1700	1700	1700	1700	721
Volume to Capacity	0.16	0.16	0.22	0.22	0.06
Queue Length 95th (ft)	0	0	0	0	5
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

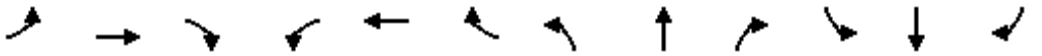
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	0	0	77	0	9	0	78	66	4	54	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
Hourly flow rate (vph)	1	0	0	84	0	10	0	85	72	4	59	0

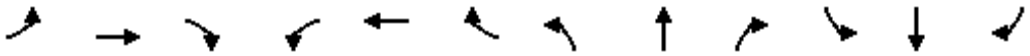
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	1	84	10	0	157	63
Volume Left (vph)	1	84	0	0	0	4
Volume Right (vph)	0	0	10	0	72	0
Hadj (s)	0.23	0.53	-0.67	0.00	-0.29	0.05
Departure Headway (s)	5.4	5.6	4.4	4.8	4.5	5.0
Degree Utilization, x	0.00	0.13	0.01	0.00	0.20	0.09
Capacity (veh/h)	622	614	778	744	771	694
Control Delay (s)	8.4	8.2	6.2	6.6	7.4	8.5
Approach Delay (s)	8.4	8.0		7.4		8.5
Approach LOS	A	A		A		A

Intersection Summary				
Delay	7.8			
Level of Service	A			
Intersection Capacity Utilization	19.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	16	10	11	6	44	12	419	21	54	435	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98			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	0.94		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	1.00
Satd. Flow (prot)	1676	1626		1672	1499			3320			1755	1473
Flt Permitted	0.72	1.00		0.74	1.00			0.94			0.92	1.00
Satd. Flow (perm)	1273	1626		1301	1499			3135			1616	1473
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	17	11	12	7	48	13	455	23	59	473	82
RTOR Reduction (vph)	0	9	0	0	41	0	0	3	0	0	0	8
Lane Group Flow (vph)	72	19	0	12	14	0	0	488	0	0	532	74
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)			12			9			22			19
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Effective Green, g (s)	8.2	8.2		8.2	8.2			41.6			41.6	41.6
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.73			0.73	0.73
Clearance Time (s)	3.5	3.5		3.5	3.5			3.7			3.7	3.7
Vehicle Extension (s)	2.5	2.5		2.5	2.5			2.5			2.5	2.5
Lane Grp Cap (vph)	183	233		187	215			2288			1179	1075
v/s Ratio Prot		0.01			0.01							
v/s Ratio Perm	c0.06			0.01				0.16			c0.33	0.05
v/c Ratio	0.39	0.08		0.06	0.06			0.21			0.45	0.07
Uniform Delay, d1	22.1	21.1		21.1	21.1			2.5			3.1	2.2
Progression Factor	1.00	1.00		1.00	1.00			0.63			1.03	0.90
Incremental Delay, d2	1.0	0.1		0.1	0.1			0.2			1.0	0.1
Delay (s)	23.2	21.2		21.2	21.2			1.8			4.2	2.1
Level of Service	C	C		C	C			A			A	A
Approach Delay (s)		22.6			21.2			1.8			3.9	
Approach LOS		C			C			A			A	

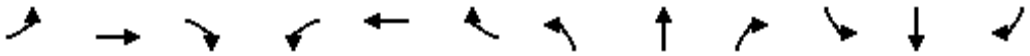
Intersection Summary			
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	0	0	27	0	7	0	140	24	7	119	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
Hourly flow rate (vph)	0	0	0	29	0	8	0	152	26	8	129	0

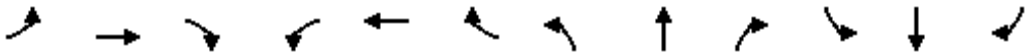
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	0	37	178	137
Volume Left (vph)	0	29	0	8
Volume Right (vph)	0	8	26	0
Hadj (s)	0.00	0.07	-0.05	0.05
Departure Headway (s)	4.6	4.6	4.1	4.2
Degree Utilization, x	0.00	0.05	0.20	0.16
Capacity (veh/h)	735	716	863	840
Control Delay (s)	7.6	7.9	8.1	8.0
Approach Delay (s)	0.0	7.9	8.1	8.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.0		
Level of Service	A		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	10	4	13	8	59	6	349	20	69	348	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	1682		1669	1480		1670	1747		1669	1736	
Flt Permitted	0.71	1.00		0.75	1.00		0.51	1.00		0.52	1.00	
Satd. Flow (perm)	1250	1682		1314	1480		900	1747		916	1736	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	11	4	14	9	64	7	379	22	75	378	38
RTOR Reduction (vph)	0	4	0	0	56	0	0	2	0	0	3	0
Lane Group Flow (vph)	45	11	0	14	17	0	7	399	0	75	413	0
Confl. Peds. (#/hr)	1		3	3		1	5		5	5		5
Confl. Bikes (#/hr)			1			6			8			7
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Effective Green, g (s)	7.0	7.0		7.0	7.0		42.8	42.8		42.8	42.8	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.75	0.75		0.75	0.75	
Clearance Time (s)	3.5	3.5		3.5	3.5		3.7	3.7		3.7	3.7	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	153	206		161	181		675	1311		687	1303	
v/s Ratio Prot		0.01			0.01			0.23			c0.24	
v/s Ratio Perm	c0.04			0.01			0.01			0.08		
v/c Ratio	0.29	0.06		0.09	0.09		0.01	0.30		0.11	0.32	
Uniform Delay, d1	22.8	22.1		22.2	22.2		1.8	2.3		1.9	2.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.12	1.56	
Incremental Delay, d2	0.4	0.0		0.1	0.1		0.0	0.6		0.3	0.6	
Delay (s)	23.1	22.1		22.3	22.3		1.8	2.9		2.5	4.2	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		22.9			22.3			2.9			3.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	7.2
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	0	23	0	0	0	27	101	1	1	81	68
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	70	0	25	0	0	0	29	110	1	1	88	74
Pedestrians					4			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	296	301	126	326	337	114	162			115		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	296	301	126	326	337	114	162			115		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	100	97	100	100	100	98			100		
cM capacity (veh/h)	644	597	924	596	569	935	1417			1469		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	95	0	140	163
Volume Left	70	0	29	1
Volume Right	25	0	1	74
cSH	700	1700	1417	1469
Volume to Capacity	0.14	0.00	0.02	0.00
Queue Length 95th (ft)	12	0	2	0
Control Delay (s)	10.9	0.0	1.7	0.1
Lane LOS	B	A	A	A
Approach Delay (s)	10.9	0.0	1.7	0.1
Approach LOS	B	A		

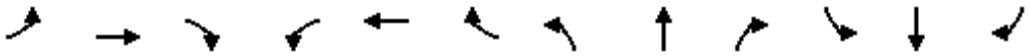
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	32.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	14	12	117	29	10	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	13	127	32	11	103

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total (vph)	28	159	114
Volume Left (vph)	15	0	11
Volume Right (vph)	13	32	0
Hadj (s)	-0.14	-0.09	0.05
Departure Headway (s)	4.3	4.0	4.2
Degree Utilization, x	0.03	0.18	0.13
Capacity (veh/h)	777	882	849
Control Delay (s)	7.5	7.8	7.8
Approach Delay (s)	7.5	7.8	7.8
Approach LOS	A	A	A

Intersection Summary			
Delay	7.8		
Level of Service	A		
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	17	2	19	16	48	5	307	18	45	319	9
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
Hourly flow rate (vph)	23	18	2	21	17	52	5	334	20	49	347	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	43	90	359	405
Volume Left (vph)	23	21	5	49
Volume Right (vph)	2	52	20	10
Hadj (s)	0.11	-0.27	0.00	0.04
Departure Headway (s)	6.0	5.5	4.8	4.8
Degree Utilization, x	0.07	0.14	0.48	0.54
Capacity (veh/h)	500	564	725	729
Control Delay (s)	9.5	9.4	12.1	13.3
Approach Delay (s)	9.5	9.4	12.1	13.3
Approach LOS	A	A	B	B

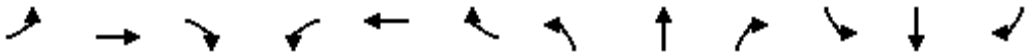
Intersection Summary				
Delay	12.2			
Level of Service	B			
Intersection Capacity Utilization	55.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	0	0	16	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	0	0	17	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9	9			17	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9	9			17	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	1012	1073			1600	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	17	0
Volume Left	15	0	0
Volume Right	0	17	0
cSH	1012	1700	1700
Volume to Capacity	0.02	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

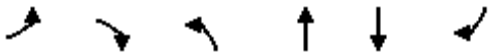
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	16	1	11	11	6	3	26	5	8	26	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	17	1	12	12	7	3	28	5	9	28	0
Pedestrians		5			10			9				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	18			27			85	69	37	87	67	20
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	18			27			85	69	37	87	67	20
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	97	99	99	97	100
cM capacity (veh/h)	1598			1574			857	809	1019	853	812	1053

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	18	30	37	37
Volume Left	0	12	3	9
Volume Right	1	7	5	0
cSH	1598	1574	838	821
Volume to Capacity	0.00	0.01	0.04	0.05
Queue Length 95th (ft)	0	1	3	4
Control Delay (s)	0.0	2.9	9.5	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	2.9	9.5	9.6
Approach LOS			A	A

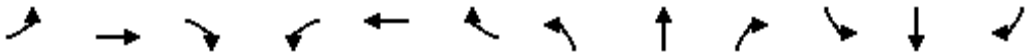
Intersection Summary				
Average Delay	6.5			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	22	22	121	89	19
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	24	24	132	97	21
Pedestrians	8			5	3	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	297	120	125			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	297	120	125			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	98			
cM capacity (veh/h)	676	921	1451			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	47	155	117
Volume Left	23	24	0
Volume Right	24	0	21
cSH	783	1451	1700
Volume to Capacity	0.06	0.02	0.07
Queue Length 95th (ft)	5	1	0
Control Delay (s)	9.9	1.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.9	1.3	0.0
Approach LOS	A		

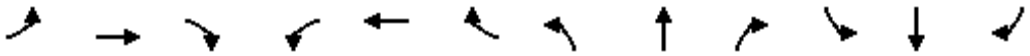
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	1	28	2	13	0	8	25	11	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	2	1	30	2	14	0	9	27	12	9	0
Pedestrians		3						2			5	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	21			5			82	87	5	109	80	17
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			5			82	87	5	109	80	17
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	97	99	99	100
cM capacity (veh/h)	1588			1613			877	783	1077	821	790	1054

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	3	47	36	21
Volume Left	0	30	0	12
Volume Right	1	14	27	0
cSH	1588	1613	987	808
Volume to Capacity	0.00	0.02	0.04	0.03
Queue Length 95th (ft)	0	1	3	2
Control Delay (s)	0.0	4.8	8.8	9.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.8	8.8	9.6
Approach LOS			A	A

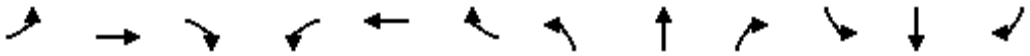
Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	35	11	8	43	22	2	10	10	17	20	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			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
Hourly flow rate (vph)	0	38	12	9	47	24	2	11	11	18	22	1
Pedestrians		3			6			4			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			1			0			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	81			54			139	146	54	152	140	72
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	81			54			139	146	54	152	140	72
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	99	99	98	97	100
cM capacity (veh/h)	1504			1546			796	732	1005	776	738	980

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	50	79	24	41
Volume Left	0	9	2	18
Volume Right	12	24	11	1
cSH	1504	1546	842	760
Volume to Capacity	0.00	0.01	0.03	0.05
Queue Length 95th (ft)	0	0	2	4
Control Delay (s)	0.0	0.8	9.4	10.0
Lane LOS		A	A	B
Approach Delay (s)	0.0	0.8	9.4	10.0
Approach LOS			A	B

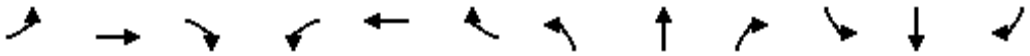
Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	25.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	38	24	30	34	26	29	109	36	33	62	12
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
Hourly flow rate (vph)	8	41	26	33	37	28	32	118	39	36	67	13

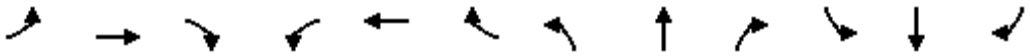
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	75	98	189	116
Volume Left (vph)	8	33	32	36
Volume Right (vph)	26	28	39	13
Hadj (s)	-0.15	-0.07	-0.06	0.03
Departure Headway (s)	4.6	4.6	4.4	4.6
Degree Utilization, x	0.10	0.13	0.23	0.15
Capacity (veh/h)	722	719	782	744
Control Delay (s)	8.1	8.3	8.7	8.3
Approach Delay (s)	8.1	8.3	8.7	8.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.4		
Level of Service	A		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	61	39	24	60	55	26	243	8	28	298	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1650			1734	1453	1676	1753		1676	1742	
Flt Permitted		0.92			0.92	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1535			1610	1453	1676	1753		1676	1742	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	66	42	26	65	60	28	264	9	30	324	23
RTOR Reduction (vph)	0	34	0	0	0	51	0	1	0	0	3	0
Lane Group Flow (vph)	0	103	0	0	91	9	28	272	0	30	344	0
Confl. Peds. (#/hr)	4		9	9		4	7		14	14		7
Confl. Bikes (#/hr)			3			2			5			29
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.8			8.8	8.8	3.2	34.5		3.2	34.5	
Effective Green, g (s)		8.8			8.8	8.8	3.2	34.5		3.2	34.5	
Actuated g/C Ratio		0.15			0.15	0.15	0.06	0.59		0.06	0.59	
Clearance Time (s)		3.5			3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)		2.0			2.0	2.0	3.0	2.0		3.0	2.0	
Lane Grp Cap (vph)		232			244	220	92	1042		92	1036	
v/s Ratio Prot							0.02	0.16		c0.02	c0.20	
v/s Ratio Perm		c0.07			0.06	0.01						
v/c Ratio		0.44			0.37	0.04	0.30	0.26		0.33	0.33	
Uniform Delay, d1		22.4			22.1	21.0	26.3	5.6		26.4	5.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			0.4	0.0	1.9	0.6		2.1	0.9	
Delay (s)		22.9			22.5	21.0	28.2	6.2		28.4	6.8	
Level of Service		C			C	C	C	A		C	A	
Approach Delay (s)		22.9			21.9			8.3			8.5	
Approach LOS		C			C			A			A	

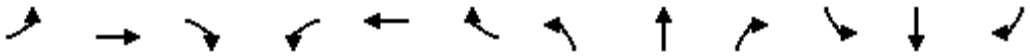
Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	777	255	206	689	37	274	88	201	37	61	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width	12	12	12	12	12	12	12	16	16	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.95		1.00	1.00	0.89	1.00	0.95			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.90			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (prot)	1676	3019		1676	3353	1334	1676	1707			1477	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00			0.98	
Satd. Flow (perm)	1676	3019		1676	3353	1334	1676	1707			1477	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	47	827	271	226	757	41	298	96	218	45	73	29
RTOR Reduction (vph)	0	23	0	0	0	24	0	71	0	0	8	0
Lane Group Flow (vph)	47	1075	0	226	757	17	298	243	0	0	139	0
Confl. Peds. (#/hr)	30		62	62		30	41		22	22		41
Confl. Bikes (#/hr)			24			17			27			27
Bus Blockages (#/hr)	0	8	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)											2	2
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases						2						
Actuated Green, G (s)	7.4	38.5		18.7	49.8	49.8	24.9	24.9			21.4	
Effective Green, g (s)	7.9	39.5		19.2	50.8	50.8	24.4	24.4			20.9	
Actuated g/C Ratio	0.07	0.33		0.16	0.42	0.42	0.20	0.20			0.17	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.5			3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0	3.0	2.5	2.5			2.5	
Lane Grp Cap (vph)	110	993		268	1419	564	340	347			257	
v/s Ratio Prot	0.03	c0.36		c0.13	0.23		c0.18	0.14			c0.09	
v/s Ratio Perm						0.01						
v/c Ratio	0.43	1.08		0.84	0.53	0.03	0.88	0.70			0.54	
Uniform Delay, d1	53.9	40.2		48.9	25.8	20.2	46.3	44.4			45.2	
Progression Factor	1.00	1.00		1.44	0.45	0.02	1.00	1.00			1.00	
Incremental Delay, d2	1.9	53.5		18.4	1.3	0.1	21.3	5.8			1.7	
Delay (s)	55.8	93.7		89.0	12.9	0.5	67.7	50.2			46.9	
Level of Service	E	F		F	B	A	E	D			D	
Approach Delay (s)		92.2			29.2			58.7			46.9	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		

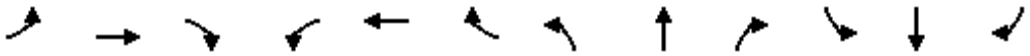
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	852	106	175	765	89	90	135	123	71	228	74
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	4.0	4.2	4.2	4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.89	1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1676	3200		1676	3353	1271	1676	1765	1449	1676	1683	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1676	3200		1676	3353	1271	1676	1765	1449	1676	1683	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	61	888	110	182	797	93	96	144	131	80	256	83
RTOR Reduction (vph)	0	7	0	0	0	46	0	0	98	0	10	0
Lane Group Flow (vph)	61	991	0	182	797	47	96	144	33	80	329	0
Confl. Peds. (#/hr)	26		40	40		26	17		15	15		17
Confl. Bikes (#/hr)			21			22			4			7
Bus Blockages (#/hr)	0	8	0	0	0	13	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2			8			
Actuated Green, G (s)	8.4	46.4		16.7	54.7	54.7	12.4	30.3	30.3	9.9	27.8	
Effective Green, g (s)	7.9	46.4		16.2	54.7	54.7	11.9	29.8	29.8	9.4	27.3	
Actuated g/C Ratio	0.07	0.39		0.13	0.46	0.46	0.10	0.25	0.25	0.08	0.23	
Clearance Time (s)	4.5	5.0		4.5	5.0	5.0	3.5	3.7	3.7	3.5	3.7	
Vehicle Extension (s)	2.5	4.0		2.5	4.0	4.0	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	110	1237		226	1528	579	166	438	359	131	382	
v/s Ratio Prot	0.04	c0.31		c0.11	0.24		c0.06	0.08		0.05	c0.20	
v/s Ratio Perm						0.04			0.02			
v/c Ratio	0.55	0.80		0.81	0.52	0.08	0.58	0.33	0.09	0.61	0.86	
Uniform Delay, d1	54.3	32.7		50.4	23.3	18.5	51.7	36.9	34.7	53.5	44.5	
Progression Factor	0.57	0.41		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	1.6		18.0	1.3	0.3	4.0	0.3	0.1	7.0	17.5	
Delay (s)	32.2	15.1		68.4	24.6	18.7	55.6	37.2	34.8	60.5	62.1	
Level of Service	C	B		E	C	B	E	D	C	E	E	
Approach Delay (s)		16.1			31.5			41.1			61.8	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.2
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

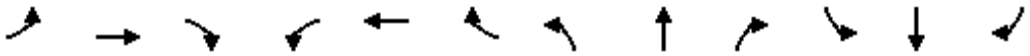
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1006	80	117	999	48	138	73	137	21	48	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.2		4.0	4.2			4.0	3.5		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00			1.00	0.96		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (prot)	1676	3144		1676	3184			1709	1433		1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.99	
Satd. Flow (perm)	1676	3144		1676	3184			1709	1433		1676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.68	0.68	0.68
Adj. Flow (vph)	10	1093	87	121	1030	49	170	90	169	31	71	28
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	138	0	9	0
Lane Group Flow (vph)	10	1176	0	121	1077	0	0	260	31	0	121	0
Confl. Peds. (#/hr)	20		42	42		20	24		19	19		24
Confl. Bikes (#/hr)			24			26			7			4
Bus Blockages (#/hr)	0	20	20	0	20	20	0	0	0	0	0	0
Turn Type	Prot	NA		Prot	NA		Split	NA	Perm	Split	NA	
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases									7			
Actuated Green, G (s)	2.0	52.0		12.9	62.9			22.3	22.3		18.1	
Effective Green, g (s)	1.5	52.0		12.4	62.9			21.8	22.3		17.6	
Actuated g/C Ratio	0.01	0.43		0.10	0.52			0.18	0.19		0.15	
Clearance Time (s)	3.5	4.2		3.5	4.2			3.5	3.5		3.5	
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		2.5	
Lane Grp Cap (vph)	20	1362		173	1668			310	266		245	
v/s Ratio Prot	0.01	c0.37		c0.07	0.34			c0.15			c0.07	
v/s Ratio Perm									0.02			
v/c Ratio	0.50	0.86		0.70	0.65			0.84	0.12		0.49	
Uniform Delay, d1	58.9	30.8		52.0	20.5			47.4	40.7		47.1	
Progression Factor	1.00	1.00		1.13	0.34			1.00	1.00		1.00	
Incremental Delay, d2	13.6	7.5		4.5	0.8			17.4	0.1		1.1	
Delay (s)	72.5	38.2		63.5	7.8			64.8	40.8		48.2	
Level of Service	E	D		E	A			E	D		D	
Approach Delay (s)		38.5			13.4			55.3			48.2	
Approach LOS		D			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.2
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

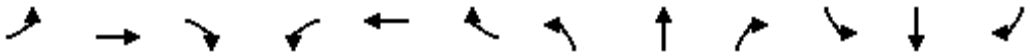
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	626	388	49	472	169	508	587	30	167	679	183
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.2		3.0	3.2		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.93		1.00	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	1.00	
Frt	1.00	0.94		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1676	2954		1676	3162		3252	3236		1676	3116	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1676	2954		1676	3162		3252	3236		1676	3116	
Peak-hour factor, PHF	0.91	0.91	0.91	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	160	688	426	59	569	204	571	660	34	180	730	197
RTOR Reduction (vph)	0	77	0	0	31	0	0	3	0	0	20	0
Lane Group Flow (vph)	160	1037	0	59	742	0	571	691	0	180	907	0
Confl. Peds. (#/hr)	29		112	112		29	84		89	89		84
Confl. Bikes (#/hr)			27			24			17			16
Bus Blockages (#/hr)	0	0	0	0	0	0	0	11	0	0	8	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.2	41.6		8.8	31.2		21.0	40.8		15.6	34.4	
Effective Green, g (s)	19.2	41.6		8.8	31.2		22.0	41.8		15.6	35.4	
Actuated g/C Ratio	0.16	0.35		0.07	0.26		0.18	0.35		0.13	0.29	
Clearance Time (s)	3.0	3.2		3.0	3.2		4.0	4.0		3.0	4.0	
Vehicle Extension (s)	2.0	2.5		2.0	2.0		2.0	4.0		2.5	4.0	
Lane Grp Cap (vph)	268	1024		122	822		596	1127		217	919	
v/s Ratio Prot	0.10	c0.35		0.04	c0.23		c0.18	0.21		0.11	c0.29	
v/s Ratio Perm												
v/c Ratio	0.60	1.01		0.48	0.90		0.96	0.61		0.83	0.99	
Uniform Delay, d1	46.8	39.2		53.4	42.9		48.5	32.4		50.9	42.1	
Progression Factor	0.52	0.36		1.00	1.00		1.00	1.00		0.92	0.92	
Incremental Delay, d2	1.4	24.8		1.1	12.9		26.3	2.5		20.7	25.7	
Delay (s)	25.6	39.0		54.5	55.8		74.8	34.9		67.5	64.2	
Level of Service	C	D		D	E		E	C		E	E	
Approach Delay (s)		37.3			55.7			52.9			64.7	
Approach LOS		D			E			D			E	

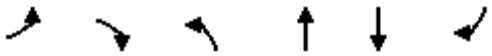
Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.2
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	0	104	8	2	1	108	852	5	1	916	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95			0.95	
Frpb, ped/bikes		1.00	0.94		1.00		1.00	1.00			0.98	
Flpb, ped/bikes		0.99	1.00		0.97		0.97	1.00			1.00	
Frt		1.00	0.85		0.99		1.00	1.00			0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00			1.00	
Satd. Flow (prot)		1653	1410		1632		1618	3346			3265	
Flt Permitted		0.80	1.00		0.82		0.25	1.00			0.95	
Satd. Flow (perm)		1387	1410		1384		428	3346			3118	
Peak-hour factor, PHF	0.95	0.95	0.95	0.47	0.47	0.47	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	104	0	109	17	4	2	117	926	5	1	974	78
RTOR Reduction (vph)	0	0	93	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	104	16	0	21	0	117	931	0	0	1050	0
Confl. Peds. (#/hr)	10		32	32		10	66		58	58		66
Confl. Bikes (#/hr)			2						14			18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		17.3	17.3		16.8		95.7	95.7			95.7	
Effective Green, g (s)		17.3	17.3		17.3		96.7	96.7			96.7	
Actuated g/C Ratio		0.14	0.14		0.14		0.81	0.81			0.81	
Clearance Time (s)		3.0	3.0		3.5		4.0	4.0			4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)		199	203		199		344	2696			2512	
v/s Ratio Prot								0.28				
v/s Ratio Perm		c0.07	0.01		0.02		0.27				c0.34	
v/c Ratio		0.52	0.08		0.11		0.34	0.35			0.42	
Uniform Delay, d1		47.5	44.4		44.6		3.1	3.1			3.4	
Progression Factor		1.00	1.00		1.00		0.54	0.55			1.00	
Incremental Delay, d2		1.1	0.1		0.1		2.1	0.3			0.5	
Delay (s)		48.7	44.5		44.7		3.7	2.0			3.9	
Level of Service		D	D		D		A	A			A	
Approach Delay (s)		46.5			44.7			2.2			3.9	
Approach LOS		D			D			A			A	

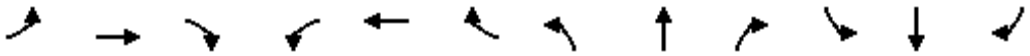
Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	56	95	870	952	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frpb, ped/bikes	0.99		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.98	1.00	1.00	
Frt	0.90		1.00	1.00	1.00	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1553		1638	3279	3336	
Flt Permitted	0.99		0.25	1.00	1.00	
Satd. Flow (perm)	1553		438	3279	3336	
Peak-hour factor, PHF	0.76	0.76	0.93	0.93	0.96	0.96
Adj. Flow (vph)	26	74	102	935	992	17
RTOR Reduction (vph)	59	0	0	0	1	0
Lane Group Flow (vph)	41	0	102	935	1008	0
Confl. Peds. (#/hr)	40		43			43
Confl. Bikes (#/hr)		1				16
Bus Blockages (#/hr)	0	0	0	11	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	19.4		73.6	73.6	73.6	
Effective Green, g (s)	19.9		74.1	74.1	74.1	
Actuated g/C Ratio	0.20		0.74	0.74	0.74	
Clearance Time (s)	3.5		3.5	3.5	3.5	
Vehicle Extension (s)	2.0		4.0	4.0	4.0	
Lane Grp Cap (vph)	309		324	2429	2471	
v/s Ratio Prot	c0.03			0.29	c0.30	
v/s Ratio Perm			0.23			
v/c Ratio	0.13		0.31	0.38	0.41	
Uniform Delay, d1	32.9		4.4	4.7	4.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		2.5	0.5	0.5	
Delay (s)	33.0		6.9	5.2	5.3	
Level of Service	C		A	A	A	
Approach Delay (s)	33.0			5.3	5.3	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



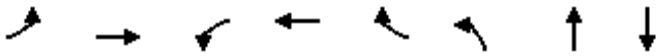
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	6	52	13	5	11	31	849	8	22	936	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1692	1461		1615		1676	3346		1676	3336	
Flt Permitted		0.80	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1415	1461		1456		1676	3346		1676	3336	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	49	8	67	17	6	14	33	894	8	24	1017	27
RTOR Reduction (vph)	0	0	59	0	12	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	57	8	0	25	0	33	902	0	24	1043	0
Confl. Peds. (#/hr)			11	11			11		24	24		11
Confl. Bikes (#/hr)			2			6			13			22
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.0	12.0		12.0		7.8	73.1		4.4	69.7	
Effective Green, g (s)		12.5	12.5		12.5		7.8	74.1		4.4	70.7	
Actuated g/C Ratio		0.12	0.12		0.12		0.08	0.74		0.04	0.71	
Clearance Time (s)		3.5	3.5		3.5		3.0	4.0		3.0	4.0	
Vehicle Extension (s)		2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		176	182		182		130	2479		73	2358	
v/s Ratio Prot							0.02	c0.27		0.01	c0.31	
v/s Ratio Perm		c0.04	0.01		0.02							
v/c Ratio		0.32	0.05		0.14		0.25	0.36		0.33	0.44	
Uniform Delay, d1		39.9	38.5		38.9		43.4	4.6		46.4	6.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.0		0.1		0.4	0.4		1.0	0.6	
Delay (s)		40.3	38.5		39.1		43.7	5.0		47.3	6.8	
Level of Service		D	D		D		D	A		D	A	
Approach Delay (s)		39.3			39.1			6.4			7.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX C VEHICLE QUEUE WORKSHEETS

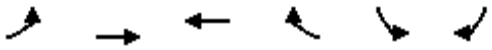
Intersection	Storage	Movement	Existing PM	Existing Sat	Existing + Project PM - A	Existing + Project PM - B	Existing + Project Sat - A	Existing + Project Sat - B	Near-Term PM	Near-Term Sat	Near-Term + Project PM - A	Near-Term + Project PM- B	Near-Term + Project Sat - A	Near-Term + Project Sat - B	Cumulative PM	Cumulative Sat	Cumulative + Project PM - A	Cumulative + Project PM - B	Cumulative + Project Sat - A	Cumulative + Project Sat - B
	340	EBL	119	137	116	116	130	130	116	130	116	116	130	130	116	130	116	116	130	130
	760	EBT	121	91	124	124	95	95	125	100	130	130	103	103	130	103	133	133	105	105
1	250	WBT	m101	m281	m101	m101	m289	m289	m97	m297	m97	m97	m316	m316	m98	m308	m97	m97	m326	m326
		WBR	m364	m398	m376	m376	m407	m407	m452	m451	m469	m469	m482	m482	m490	m464	m502	m502	m502	m502
		SBL	366	396	395	397	416	420	375	414	390	390	426	426	375	414	390	390	426	426
	380	SBR	58	39	58	58	38	38	58	38	58	58	38	38	58	38	58	58	38	38
	150	EBL	m136	m100	m129	m128	m97	m96	m133	m97	m132	m132	m95	m95	m134	m98	m131	m131	m96	m96
	250	EBT	136	50	143	143	57	57	141	62	147	147	66	66	143	65	149	149	67	67
	345	WBT	228	232	234	234	237	237	289	239	296	296	253	253	m300	249	m301	m301	264	264
2	350	WBR	16	53	5	15	49	49	m36	29	m35	m35	25	25	m31	26	m31	m31	26	26
		NBL	#537	#452	#537	#537	#452	#452	#537	#452	#537	#537	#452	#452	#537	#452	#537	#537	#452	#452
	645	NBT	#685	#468	#687	#685	#476	#475	#735	#602	#747	#747	#638	#638	#745	#629	#756	#756	#662	#662
		NBR	433	407	436	433	417	414	#574	#553	#646	#646	#592	#592	#640	#584	#675	#675	#620	#620
	330	WBL	101	72	102	102	72	72	108	77	109	109	76	76	108	77	109	109	76	76
3	230	NBT	14	13	14	14	13	13	m15	14	m15	m15	14	14	m16	14	m16	m16	14	14
	85	NBR	m0	m0	m0	m0	m0	m0	m0	0	m0	m0	0	0	m0	0	m0	m0	0	0
	497	SBT	134	73	134	134	74	74	162	108	162	162	111	111	162	108	162	162	111	111
	330	EBL	88	149	89	89	150	150	119	169	119	119	171	171	119	169	120	120	172	172
	220	EBR	37	29	41	41	31	31	54	46	54	54	48	48	54	46	54	54	48	48
4	200	NBL	21	156	21	21	164	164	23	174	23	23	182	182	23	174	23	23	182	182
	589	NBT	10	10	10	10	10	10	13	29	13	13	29	29	13	29	13	13	29	29
	612	SBT	144	204	144	144	204	204	200	284	200	200	284	284	200	284	200	200	284	284
		SBR	53	66	53	53	66	66	55	67	55	55	67	67	55	67	55	55	67	67
	290	EBL	m140	m118	m141	m142	m120	m120	m163	m134	m162	m162	m133	m133	m162	m134	m161	m161	m131	m131
	345	EBT	m#481	m280	m#511	m#509	m308	m309	m#522	m358	m#556	m#556	m#409	m#409	m#540	m#408	m#571	m#571	m#434	m#434
		EBR	m90	m#710	m97	m97	m#331	m#331	m105	m#685	m116	m116	m#694	m#694	m108	m#673	m120	m120	m#679	m#679
	135	WBL	m#302	#471	m#595	m#295	#471	#471	m#305	#482	m#295	m#295	#481	#481	m#285	#481	m#275	m#275	#481	#481
	1552	WBT	291	203	m294	m294	213	213	m361	260	m362	m362	275	275	m#405	272	m#395	m#396	286	286
5	55	WBR	m35	m46	m34	m34	m45	m45	m39	m55	m36	m36	m58	m58	m32	m57	m31	m31	m60	m60
		NBL	132	#180	132	132	#180	#180	132	#180	132	132	#180	#180	132	#180	132	132	#180	#180
	180	NBT	133	#178	133	133	#178	#178	133	#178	133	133	#178	#178	133	#178	133	133	#178	#178
		NBR	47	45	47	47	45	45	47	45	47	47	45	45	47	45	47	47	45	45
	230	SBT	#336	#311	#335	#335	#314	#314	#411	#419	#409	#409	#419	#419	#411	#419	#409	#409	#419	#419
		SBR	39	67	40	40	72	72	69	81	70	70	87	87	72	81	72	72	88	88
		EBL	95	163	94	94	163	163	101	165	100	100	165	165	101	165	100	100	165	165
	145	EBT	82	132	81	81	132	132	86	147	86	86	147	147	86	147	86	86	147	147
		EBR	44	52	43	43	52	52	42	52	43	43	57	57	42	52	43	43	57	57
6		WBL	66	87	66	66	87	87	79	102	79	79	102	102	79	102	79	79	102	102
		WBR	41	66	41	41	66	66	44	70	44	44	70	70	44	70	44	44	70	70
	790	NBT	273	#467	284	284	#503	#503	347	#568	356	356	#578	#578	347	#568	356	356	#578	#578
	102	SBT	94	150	93	93	147	147	126	#201	126	126	#202	#202	126	#201	126	126	#202	#202
	135	EBT	29	45	29	29	45	45	29	45	29	29	45	45	29	45	29	29	45	45
		EBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50	WBL	33	69	33	33	69	69	34	70	34	34	70	70	34	70	34	34	70	70
	221	WBT	27	54	27	27	54	54	27	54	27	27	54	54	27	54	27	27	54	54
7	65	NBL	18	34	18	18	34	34	18	34	18	18	34	34	18	34	18	18	34	34
	356	NBT	161	347	166	166	358	358	202	420	207	207	433	433	202	420	207	207	433	433
	140	NBR	10	61	10	10	62	62	11	71	11	11	72	72	11	71	11	11	72	72
	600	SBL	84	245	84	84	245	247	88	254	88	88	254	254	88	254	88	88	254	254
	790	SBT	186	318	194	194	328	328	221	387	229	229	398	398	221	387	229	229	398	398
	75	EBL	m82	m89	m79	m79	m84	m84	m90	m95	m86	m86	m91	m91	m87	m91	m82	m82	m88	m88
	1552	EBT	m346	294	m346	m346	301	301	m356	m322	m355	m355	m323	m323	m360	m323	m358	m358	m324	m324
	80	WBL	104	87	105	106	88	88	#135	106	#152	#156	117	117	#159	117	#179	#181	#129	#131
	700	WBT	218	277	218	218	277	277	253	325	253	253	325	325	253	325	253	253	325	325
8		NBL	#402	207	$425	#425	230	230	#437	267	#479	#478	300	300	#584	292	#623	#623	323	324
	344	NBT	461	128	464	464	139	140	#522	232	#542	#542	239	240	#676	246	#697	#697	251	251
	80	SBL	149	43	149	149	44	44	#201	59	#202	#202	59	59	#208	59	#208	#208	59	59
	580	SBT	#329	190	#343	#341	202	201	#427	229	#448	#447	240	238	#447	237	#467	#464	248	247
	130	SBR	82	37	87	87	38	38	150	41	165	157	41	41	188	42	188	188	50	50
	60	EBL	51	21	54	54	26	26	51	21	58	58	31	31	106	29	113	113	39	39
	484	EBT	28	9	29	29	11	11	29	9	31	31	13	13	50	14	55	55	17	17
	100	WBL	10	6	10	10	6	6	14	11	14	14	11	11	15	11	14	14	11	11
11	617	WBT	12	12	13	14	14	14	14	18	15	15	20	20	14	18	16	16	20	20
	690	NBT	80	14	86	86	18	20	94	24	98	100	27	28	147	30	160	161	33	35
	344	SBT	m190	146	m232	m230	164	164	m#339	194	m#348	m#354	256	258	m#262	223	m#324	m#331	286	291
	20	SBL	m13	m10	m14	m15	m12	m12	m9	m8	m12	m12	m15	m16	m15	m22	m18	m18	m27	m27
	100	EBL	20	11	23	24	19	20	20	11	22	23	17	19	54	22	57	58	27	30
	571	EBT	14	6	15	16	9	10	15	6	17	17	10	10	31	9	33	33	12	13
	95	WBL	21	11	21	21	11	11	26	13	26	26	13	13	26	13	26	26	13	13
13	289	WBT	23	11	25	25	13	13	25	21	27	27	23	24	27	22	29	30	24	25
	105	NBL	6	3	6	6	3	2	6	3	6	6	3	3	10	6	10	10	6	6
	1070	NBT	275	108	278	275	110	108	#381	123	#387	#383	125	124	#390	124	#393	#390	127	125
	100	SBL	12	23	12	11	21	21	m14	31	m12	m12	28	28	m11	30	m9	m9	27	27
	70	SBT	157	185	172	173	203	202	204	196	260	259	190	187	261	200	273	272	192	190
	236	EBT	91	51	106	106	63	60	95	52	109	109	63	60	100	52	114	114	64	61
	271	WBT	52	45	61	59	52	52	52	45	60	59	52	52	52	45	61	60	53	52
	50	WBR	32	12	32	32	12	12	32	12	32	32	12	12	32	12	31	31	12	12
23	105	NBL	m14	19	m27	m29	26	27	m16	20	m27	m29	27	28	m16	20	m27	m29	27	28
	410	NBT	203	114	207	206	115	115	233	125	233	#236	125	125	#257	127	#261	#261	127	127
	75	SBL	51	29	51	51	29	29	51	29	51	51	29	29	51	29	51	51	29	29
	592	SBT	#214	155	#223	#216	153	151	#279	160	#291	#287	163	161	#349	163	#361	#357	166	164
	50	EBL	54	58	72	72	74	74	41	44	72	72	74	74	41	44	72	72	74	74
	250	EBT	#348	#623	#348	#348	#623	#623	#450	#742	#450	#450	#742	#742	#450	#742	#450	#450	#742	#742
	190	WBL	#220	m#307	#221	#221	m#305	m#304	m#220	m#306	m#218	m#219	m#304	m#304	m#218	m#304	m#219	m#221	m#304	m#304
24	550	WBT	74	104	75	75	105	105	86	116	88	87	128	131	85	116	86	85	125	124

Intersection	Storage	Movement	Existing PM	Existing Sat	Existing + Project PM - A	Existing + Project PM - B	Existing + Project Sat - A	Existing + Project Sat - B	Near-Term PM	Near-Term Sat	Near-Term + Project PM - A	Near-Term + Project PM- B	Near-Term + Project Sat - A	Near-Term + Project Sat - B	Cumulative PM	Cumulative Sat	Cumulative + Project PM - A	Cumulative + Project PM - B	Cumulative + Project Sat - A	Cumulative + Project Sat - B
24	95	WBR	m1	m0	m2	m2	m0	m0	m1	m0	m2	m2	m0	m0	m3	m0	m3	m3	m0	m0
	65	NBL	#335	304	#335	#335	304	304	#357	#344	#357	#357	#344	#344	#357	#344	#357	#357	#344	#344
	353	NBT	#335	251	#372	#368	261	261	#335	251	#362	#357	261	261	#344	253	#368	#363	266	264
	167	SBT	244	105	#302	#286	128	124	269	108	#326	#320	131	125	#539	125	#592	#583	147	141
25	125	EBL	m42	m42	m39	m39	m42	m41	m35	m36	m34	m33	m36	m37	m30	m36	m29	m30	m37	m37
	550	EBT	m94	m106	m102	m101	m113	m112	104	m98	m108	m108	m104	m103	m200	m104	m208	m207	m110	m108
	105	WBL	134	#228	135	135	#228	#228	137	#228	137	137	#228	#228	137	#228	137	137	#228	#228
	555	WBT	194	262	204	203	269	268	241	308	250	249	316	316	251	315	260	259	323	322
	100	WBR	49	23	53	53	29	30	61	30	68	68	36	37	67	32	74	74	39	39
	150	NBL	100	114	103	103	116	116	#112	125	#120	#120	125	125	#112	125	#120	#120	125	125
	314	NBT	256	132	266	269	135	136	286	143	292	293	147	148	292	146	295	296	150	151
		NBR	0	45	0	0	45	46	0	45	0	0	46	46	0	45	0	0	46	46
	150	SBL	127	83	139	142	97	100	151	88	165	168	102	104	#220	92	#250	#253	107	108
	410	SBT	302	322	303	305	#325	#327	320	#377	325	326	#380	#383	335	#382	341	340	#383	#383
26	50	EBL	44	32	43	43	25	25	43	25	43	43	25	25	43	25	43	43	25	25
	570	EBT	332	#601	#305	#349	#624	#623	#446	#704	#472	#470	#726	#726	#595	#718	#618	#618	#743	#741
		WBL	m55	m104	m52	m51	m101	m101	m45	m89	m43	m44	m87	m87	m42	m87	m41	m40	m85	m84
	265	WBT	m304	#482	m312	m311	m#498	m#498	m351	m#521	m355	m357	m#531	m#531	m365	m#526	m376	m371	m#541	m#541
	254	NBT	#356	245	#356	#356	245	245	#356	245	#356	#356	245	245	#356	245	#356	#356	245	245
	150	NBR	95	40	95	95	40	40	95	40	95	95	40	40	95	40	95	95	40	40
	218	SBT	223	97	223	223	97	97	223	97	223	223	97	97	223	97	223	223	97	97
27		EBL	#269	m154	#267	#268	m155	m155	#267	m139	m#263	m#263	m135	m135	m184	m136	m178	m178	m132	m132
	265	EBT	185	#474	196	196	#497	#497	#438	#196	#461	#461	#602	#602	#574	#212	#597	#597	#615	#617
	95	WBL	83	81	83	83	81	81	88	81	88	88	81	81	88	81	88	88	81	81
	400	WBT	278	249	#295	293	259	259	#372	302	#397	#394	315	315	#385	308	#411	#410	322	322
	220	NBL	159	#279	163	163	#286	#286	185	#320	#192	#190	#327	#327	#206	#327	#213	#213	#334	#334
	740	NBT	387	256	#402	#403	265	265	#470	284	#486	#486	293	293	#479	286	#494	#495	294	295
	150	SBL	183	152	189	187	159	159	#284	#228	#292	#292	#232	#232	#318	#231	#327	#327	#239	#240
	410	SBT	241	#446	#207	#269	#458	#458	#495	#488	#509	#510	#504	#504	#547	#492	#560	#561	#506	#507
28	102	EBT	#280	124	#285	#280	126	124	#280	124	#285	#280	126	124	#280	124	#285	#280	126	124
		EBR	67	45	55	56	48	48	64	45	78	78	48	48	81	45	96	97	48	48
	246	WBT	9	18	9	9	18	18	9	18	9	9	18	18	9	18	9	9	18	18
	50	NBL	m13	m24	m16	m16	m27	m27	m12	m24	m15	m15	m28	m28	m11	m25	m152	m15	m28	m28
	410	NBT	128	71	m130	m131	71	72	m145	77	m145	m146	78	79	m143	78	m140	m141	80	80
	635	SBT	381	161	380	377	160	160	447	180	450	446	181	181	481	181	485	482	182	182
29	528	EBL	113	34	121	121	36	36	122	35	128	129	36	36	129	35	136	136	36	36
	95	NBL	m21	38	m24	m26	42	42	m115	56	m125	m129	62	62	m43	57	m52	m54	63	64
	635	NBT	166	163	165	167	164	163	263	181	262	267	181	181	277	182	281	283	183	182
	450	SBT	193	180	190	190	180	180	211	197	213	212	198	197	226	198	227	226	200	199
30	1265	EBT	67	30	70	71	32	33	97	45	100	101	49	49	97	45	100	101	49	49
	80	EBR	31	0	31	31	0	0	35	11	35	35	11	11	39	13	39	39	13	13
	526	WBT	34	28	34	34	28	28	36	28	37	37	29	29	36	28	37	37	29	29
	125	NBL	55	28	54	54	27	27	82	46	82	82	46	46	90	48	90	90	48	48
	490	NBT	441	234	442	441	235	234	487	257	488	488	258	257	488	258	490	488	259	258
	65	SBL	49	49	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
	575	SBT	320	293	323	323	295	294	363	318	368	367	322	321	372	319	375	374	322	322



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	24	253	113	209	72	93	208	79
v/c Ratio	0.16	0.17	0.58	0.11	0.08	0.40	0.75	0.36
Control Delay	42.5	15.2	52.1	14.7	3.1	41.7	52.1	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	15.2	52.1	14.7	3.1	41.7	52.1	37.6
Queue Length 50th (ft)	14	34	65	23	0	51	109	44
Queue Length 95th (ft)	39	83	122	80	20	89	163	70
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	158	1476	207	1909	861	282	332	457
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.17	0.55	0.11	0.08	0.33	0.63	0.17

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	98	840	981	784	633	273
v/c Ratio	0.37	0.41	0.68	0.78	0.86	0.44
Control Delay	47.6	6.1	11.0	13.7	50.1	5.7
Queue Delay	0.0	0.0	0.4	8.5	0.0	0.0
Total Delay	47.6	6.1	11.3	22.2	50.1	5.7
Queue Length 50th (ft)	65	72	81	282	287	0
Queue Length 95th (ft)	119	121	m101	m364	366	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2050	1436	1004	838	663
Starvation Cap Reductn	0	0	118	189	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.41	0.74	0.96	0.76	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	154	879	1255	351	486	554	547
v/c Ratio	0.58	0.45	0.69	0.48	0.85	0.99	0.71
Control Delay	41.0	12.5	22.5	3.3	49.3	70.2	24.9
Queue Delay	0.0	1.0	0.7	0.3	1.2	7.6	0.0
Total Delay	41.0	13.6	23.2	3.6	50.5	77.8	25.0
Queue Length 50th (ft)	74	114	178	9	343	425	284
Queue Length 95th (ft)	m136	136	228	16	#537	#685	433
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	562	770
Starvation Cap Reductn	0	752	255	78	0	0	0
Spillback Cap Reductn	0	222	67	0	17	17	1
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.74	0.80	0.54	0.88	1.02	0.71

Intersection Summary

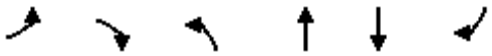
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	604	304	78	428
v/c Ratio	0.41	0.20	0.11	0.29
Control Delay	10.9	3.2	0.3	19.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.2	3.2	0.3	19.1
Queue Length 50th (ft)	66	8	0	98
Queue Length 95th (ft)	101	14	m0	134
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1471	1509	727	1476
Starvation Cap Reductn	339	0	0	0
Spillback Cap Reductn	94	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.53	0.20	0.11	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	70	47	422	414	139	149
v/c Ratio	0.41	0.04	0.20	0.28	0.54	0.52
Control Delay	74.8	4.8	1.9	0.8	51.5	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.8	4.8	1.9	0.8	51.5	13.7
Queue Length 50th (ft)	54	1	6	7	99	0
Queue Length 95th (ft)	88	37	21	10	144	53
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1395	2103	1460	572	492
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.03	0.20	0.28	0.24	0.30

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	328	977	430	236	778	102	98	99	114	340	644
v/c Ratio	0.65	0.96	0.57	0.95	0.71	0.19	0.55	0.55	0.42	0.75	0.54
Control Delay	49.2	44.9	7.1	80.7	27.3	5.9	60.5	59.9	11.8	44.3	5.2
Queue Delay	0.0	4.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.1
Total Delay	49.2	49.1	7.3	80.7	27.3	5.9	60.5	59.9	11.8	53.5	5.2
Queue Length 50th (ft)	102	398	59	181	235	14	72	73	0	230	21
Queue Length 95th (ft)	m140	m#481	m90	m#302	291	m35	132	133	47	#336	39
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1014	744	249	1102	538	181	185	278	453	1182
Starvation Cap Reductn	0	26	41	0	0	0	0	0	0	84	51
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.99	0.61	0.95	0.71	0.19	0.54	0.54	0.41	0.92	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	65	137	655	48	102	717	192
v/c Ratio	0.47	0.47	0.57	0.34	0.47	0.44	0.22
Control Delay	59.7	54.1	4.2	55.6	16.9	22.5	19.7
Queue Delay	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	59.7	54.1	5.4	55.6	16.9	22.5	19.7
Queue Length 50th (ft)	50	53	0	34	0	190	72
Queue Length 95th (ft)	95	82	44	66	41	273	94
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	447	1142	191	257	1636	861
Starvation Cap Reductn	0	0	271	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.31	0.75	0.25	0.40	0.44	0.22

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	97	106	10	580	103	96	709
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.36	0.13	0.43	0.36
Control Delay	36.2	0.6	25.2	8.0	30.5	17.9	1.2	36.1	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.2	8.0	30.5	17.9	1.2	36.1	11.9
Queue Length 50th (ft)	13	0	19	1	4	107	0	42	92
Queue Length 95th (ft)	29	0	33	27	18	161	10	84	186
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1613	780	290	1980
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.20	0.24	0.05	0.36	0.13	0.33	0.36

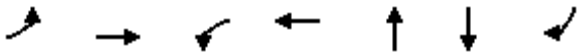
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	149	812	76	474	352	464	134	274	201
v/c Ratio	0.68	0.84	0.54	0.63	0.90	0.65	0.44	0.58	0.31
Control Delay	33.4	28.5	64.4	42.7	66.9	37.9	45.8	45.8	9.9
Queue Delay	0.0	0.0	0.0	0.0	1.4	3.9	0.0	0.0	0.0
Total Delay	33.4	28.5	64.4	42.7	68.3	41.9	45.8	45.8	9.9
Queue Length 50th (ft)	85	321	54	155	259	317	84	188	32
Queue Length 95th (ft)	m82	m346	104	218	#402	461	149	#329	82
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1035	161	789	427	714	302	469	753
Starvation Cap Reductn	0	0	0	0	15	170	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.78	0.47	0.60	0.85	0.85	0.44	0.58	0.27

Intersection Summary

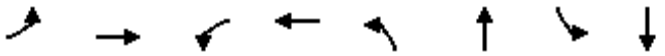
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	135	103	16	35	869	469	47
v/c Ratio	0.45	0.25	0.06	0.09	0.42	0.41	0.05
Control Delay	22.2	10.9	14.1	8.2	4.7	5.7	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	10.9	14.1	8.2	4.7	5.7	3.0
Queue Length 50th (ft)	43	16	5	3	28	98	4
Queue Length 95th (ft)	51	28	10	12	80	m190	m13
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	562	728	520	694	2085	1155	1002
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	4	0	0	5	77	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.14	0.03	0.05	0.43	0.41	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	42	33	38	118	8	687	61	495
v/c Ratio	0.21	0.12	0.18	0.35	0.01	0.53	0.14	0.39
Control Delay	21.1	15.5	20.2	9.5	4.7	7.7	3.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	15.5	20.2	9.5	4.7	7.7	3.6	5.7
Queue Length 50th (ft)	13	8	12	7	1	76	11	119
Queue Length 95th (ft)	20	14	21	23	6	275	12	157
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	396	565	423	565	594	1300	449	1272
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.06	0.09	0.21	0.01	0.53	0.14	0.39

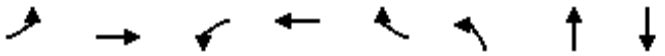
Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	204	88	144	10	440	71	468
v/c Ratio	0.63	0.34	0.40	0.05	0.47	0.31	0.43
Control Delay	27.6	22.1	7.2	29.1	12.8	26.5	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	22.1	7.2	29.1	12.8	26.5	10.3
Queue Length 50th (ft)	61	27	0	6	62	23	55
Queue Length 95th (ft)	91	52	32	m14	203	51	#214
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	501	414	489	231	944	236	1090
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.21	0.29	0.04	0.47	0.30	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	31	702	164	442	43	322	361	234
v/c Ratio	0.25	0.67	0.76	0.31	0.07	0.91	0.88	0.80
Control Delay	55.9	37.0	93.6	13.4	0.4	75.8	64.2	64.3
Queue Delay	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	38.8	93.6	13.4	0.4	75.8	64.2	64.3
Queue Length 50th (ft)	22	232	130	56	0	233	240	167
Queue Length 95th (ft)	54	#348	#220	74	m1	#335	#335	244
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	130	1042	235	1449	649	375	434	372
Starvation Cap Reductn	0	190	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.82	0.70	0.31	0.07	0.86	0.83	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

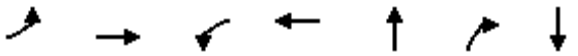
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	638	107	503	142	71	259	81	94	343
v/c Ratio	0.33	0.46	0.63	0.32	0.20	0.51	0.71	0.18	0.54	0.78
Control Delay	39.4	15.5	66.0	22.2	5.8	64.1	52.6	0.9	59.1	50.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	15.5	66.0	22.2	5.8	64.1	52.6	0.9	59.1	50.9
Queue Length 50th (ft)	35	76	78	127	5	52	177	0	71	233
Queue Length 95th (ft)	m42	m94	134	194	49	100	256	0	127	302
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1389	217	1578	709	144	441	491	245	538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	3
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.46	0.49	0.32	0.20	0.49	0.59	0.16	0.38	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

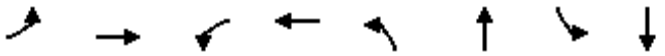


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	23	714	70	730	346	324	235
v/c Ratio	0.17	0.58	0.47	0.51	0.92	0.61	0.75
Control Delay	52.7	32.6	63.9	10.6	74.8	13.6	59.2
Queue Delay	0.0	0.3	0.0	0.9	0.0	0.1	0.0
Total Delay	52.7	33.0	63.9	11.6	74.8	13.7	59.2
Queue Length 50th (ft)	16	222	43	37	250	34	169
Queue Length 95th (ft)	44	332	m55	m304	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1230	174	1423	398	546	416
Starvation Cap Reductn	0	0	0	405	0	0	0
Spillback Cap Reductn	0	146	0	0	0	12	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.66	0.40	0.72	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

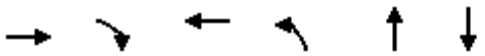
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	793	61	661	303	842	188	915
v/c Ratio	0.85	0.80	0.39	0.89	0.64	0.70	0.78	0.77
Control Delay	57.4	26.3	57.0	55.4	53.3	36.9	71.1	23.5
Queue Delay	0.0	2.2	0.0	3.5	0.0	0.0	0.0	0.2
Total Delay	57.4	28.5	57.0	58.8	53.3	36.9	71.1	23.7
Queue Length 50th (ft)	162	279	44	232	111	296	100	96
Queue Length 95th (ft)	#269	185	83	278	159	387	183	241
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1012	158	782	476	1195	288	1182
Starvation Cap Reductn	0	110	0	0	0	0	0	23
Spillback Cap Reductn	0	0	0	62	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.88	0.39	0.92	0.64	0.70	0.65	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	282	152	47	68	1128	967
v/c Ratio	0.91	0.36	0.12	0.23	0.49	0.45
Control Delay	75.2	14.9	18.1	5.2	5.0	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	75.2	14.9	18.1	5.2	5.1	18.0
Queue Length 50th (ft)	198	29	12	9	113	304
Queue Length 95th (ft)	#280	67	9	m13	128	381
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	459	419	301	2317	2154
Starvation Cap Reductn	0	0	0	0	306	0
Spillback Cap Reductn	0	0	0	0	0	26
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.33	0.11	0.23	0.56	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	164	91	1236	991
v/c Ratio	0.46	0.27	0.50	0.41
Control Delay	25.6	4.7	4.4	6.6
Queue Delay	0.0	0.0	0.0	0.3
Total Delay	25.6	4.7	4.4	6.9
Queue Length 50th (ft)	55	8	143	154
Queue Length 95th (ft)	113	m21	166	193
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	484	339	2490	2408
Starvation Cap Reductn	0	0	0	718
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.27	0.50	0.59

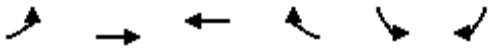
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	87	50	35	1329	28	1011
v/c Ratio	0.28	0.29	0.19	0.18	0.56	0.18	0.44
Control Delay	42.5	9.5	30.5	47.9	12.1	51.3	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay	42.5	9.5	30.5	47.9	12.7	51.3	11.7
Queue Length 50th (ft)	46	0	26	24	197	20	150
Queue Length 95th (ft)	67	31	34	55	441	49	320
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	413	470	456	216	2390	216	2318
Starvation Cap Reductn	0	0	0	0	636	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.19	0.11	0.16	0.76	0.13	0.44

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	113	423	809	672	788	175
v/c Ratio	0.48	0.24	0.65	0.72	0.84	0.27
Control Delay	52.8	9.4	20.5	13.9	40.6	4.0
Queue Delay	0.0	0.0	1.9	4.4	0.0	0.0
Total Delay	52.8	9.4	22.4	18.2	40.6	4.0
Queue Length 50th (ft)	77	50	159	174	343	0
Queue Length 95th (ft)	137	91	m281	m398	396	39
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1778	1249	934	1147	748
Starvation Cap Reductn	0	0	277	188	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.24	0.83	0.90	0.69	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	93	982	1099	435	419	473	466
v/c Ratio	0.63	0.37	0.45	0.47	0.87	0.90	0.80
Control Delay	86.1	4.4	17.7	4.1	56.0	47.9	37.2
Queue Delay	0.0	0.4	0.2	0.2	0.0	0.3	0.5
Total Delay	86.1	4.8	17.8	4.3	56.0	48.3	37.7
Queue Length 50th (ft)	66	32	189	22	292	261	262
Queue Length 95th (ft)	m100	50	232	53	#452	#468	407
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2647	2425	921	531	563	582
Starvation Cap Reductn	0	1058	491	97	0	0	0
Spillback Cap Reductn	0	23	98	0	0	6	13
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.62	0.57	0.53	0.79	0.85	0.82

Intersection Summary

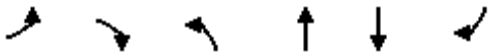
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	903	264	149	264
v/c Ratio	0.80	0.14	0.17	0.14
Control Delay	15.3	2.7	0.4	12.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.3	2.7	0.4	12.3
Queue Length 50th (ft)	67	7	0	44
Queue Length 95th (ft)	72	13	m0	73
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1733	1861	891	1829
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	30	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.53	0.14	0.17	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	143	44	699	520	227	212
v/c Ratio	0.67	0.05	0.53	0.37	0.35	0.56
Control Delay	81.3	11.5	15.5	1.0	29.7	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.3	11.5	15.5	1.0	29.7	11.9
Queue Length 50th (ft)	107	8	196	9	120	0
Queue Length 95th (ft)	149	29	156	10	204	66
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1001	1312	1415	641	494
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.04	0.53	0.37	0.35	0.43

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	278	784	660	357	544	142	123	123	112	349	707
v/c Ratio	0.48	0.76	0.94	1.43	0.54	0.29	0.68	0.67	0.41	0.77	0.57
Control Delay	42.6	22.1	37.5	243.7	21.4	7.9	68.1	67.3	11.4	34.1	4.4
Queue Delay	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.1
Total Delay	42.6	22.5	37.6	243.7	21.4	7.9	68.1	67.3	11.4	41.6	4.4
Queue Length 50th (ft)	87	141	280	~365	172	54	92	92	0	119	47
Queue Length 95th (ft)	m118	m280	m#710	#471	203	m46	#180	#178	45	#311	67
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1037	699	249	1014	498	181	183	274	455	1251
Starvation Cap Reductn	0	38	1	0	0	0	0	0	0	72	40
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.78	0.95	1.43	0.54	0.29	0.68	0.67	0.41	0.91	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	242	928	62	175	1031	289
v/c Ratio	0.66	0.60	0.67	0.41	0.60	0.67	0.37
Control Delay	63.2	52.9	4.3	57.4	16.3	14.6	22.7
Queue Delay	4.8	2.4	1.7	0.0	0.0	0.0	0.0
Total Delay	68.0	55.3	6.0	57.4	16.3	14.6	22.7
Queue Length 50th (ft)	97	92	0	44	0	333	100
Queue Length 95th (ft)	163	132	52	87	66	#467	150
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	224	471	1377	220	345	1548	778
Starvation Cap Reductn	51	126	274	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.70	0.84	0.28	0.51	0.67	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	121	190	16	904	141	227	1050
v/c Ratio	0.29	0.09	0.44	0.51	0.12	0.51	0.19	0.80	0.47
Control Delay	59.3	1.0	50.0	11.7	50.5	21.4	7.7	60.9	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Total Delay	59.3	1.0	50.0	11.7	50.5	22.1	7.7	60.9	13.4
Queue Length 50th (ft)	20	0	42	1	11	234	17	168	230
Queue Length 95th (ft)	45	0	69	54	34	347	61	245	318
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1757	760	396	2246
Starvation Cap Reductn	0	0	0	0	0	484	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.37	0.47	0.11	0.71	0.19	0.57	0.47

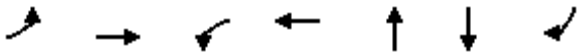
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	87	617	62	620	189	202	30	189	128
v/c Ratio	0.49	0.70	0.36	0.77	0.71	0.25	0.07	0.30	0.17
Control Delay	45.3	41.2	53.6	47.0	58.3	23.1	30.1	31.0	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.3	41.2	53.6	47.0	58.3	23.1	30.1	31.0	4.1
Queue Length 50th (ft)	63	234	43	221	135	86	14	98	0
Queue Length 95th (ft)	m89	294	87	277	207	128	43	190	37
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1026	181	813	433	817	453	638	898
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.60	0.34	0.76	0.44	0.25	0.07	0.30	0.14

Intersection Summary

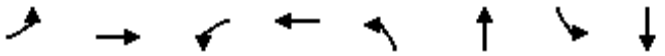
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	30	12	4	18	367	386	22
v/c Ratio	0.11	0.04	0.01	0.05	0.14	0.26	0.02
Control Delay	16.9	10.6	14.8	10.8	1.3	3.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	10.6	14.8	10.8	1.3	3.6	2.9
Queue Length 50th (ft)	9	1	1	2	0	0	0
Queue Length 95th (ft)	21	9	6	12	14	146	m10
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	588	699	590	715	2650	1468	1235
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.02	0.01	0.03	0.14	0.26	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



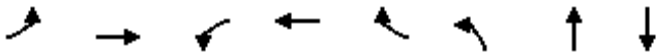
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	10	4	10	18	3	354	41	343
v/c Ratio	0.05	0.01	0.04	0.06	0.00	0.24	0.05	0.23
Control Delay	17.2	15.0	17.0	9.1	4.3	3.7	5.5	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	15.0	17.0	9.1	4.3	3.7	5.5	6.4
Queue Length 50th (ft)	3	1	3	0	0	0	0	1
Queue Length 95th (ft)	11	6	11	11	3	108	23	185
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	449	577	453	515	833	1495	825	1508
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.02	0.03	0.00	0.24	0.05	0.23

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	105	76	60	16	246	30	321
v/c Ratio	0.39	0.27	0.18	0.06	0.21	0.13	0.26
Control Delay	20.1	21.7	3.1	22.1	8.5	23.4	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	21.7	3.1	22.1	8.5	23.4	7.7
Queue Length 50th (ft)	26	24	0	5	20	9	27
Queue Length 95th (ft)	51	45	12	19	114	29	155
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	503	513	528	260	1160	245	1215
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.15	0.11	0.06	0.21	0.12	0.26

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	33	965	226	634	16	282	307	110
v/c Ratio	0.26	0.93	0.83	0.41	0.02	0.86	0.75	0.42
Control Delay	57.5	54.7	88.0	13.0	0.1	70.2	42.0	41.9
Queue Delay	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	58.9	88.0	13.0	0.1	70.2	42.0	41.9
Queue Length 50th (ft)	25	~487	136	84	0	211	155	62
Queue Length 95th (ft)	58	#623	m#307	104	m0	304	251	105
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	153	1036	282	1565	660	391	471	353
Starvation Cap Reductn	0	42	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.97	0.80	0.41	0.02	0.72	0.65	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

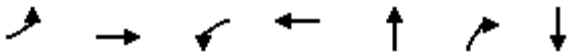


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	857	182	668	71	85	127	131	55	318
v/c Ratio	0.45	0.63	0.79	0.39	0.10	0.54	0.33	0.31	0.37	0.87
Control Delay	36.6	14.9	74.1	22.4	3.9	64.2	40.4	7.2	58.6	66.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	14.9	74.1	22.4	3.9	64.2	40.4	7.2	58.6	66.4
Queue Length 50th (ft)	34	91	137	180	0	64	83	0	41	227
Queue Length 95th (ft)	m42	m106	#228	262	23	114	132	45	83	322
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1370	268	1696	682	223	444	466	223	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.63	0.68	0.39	0.10	0.38	0.29	0.28	0.25	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

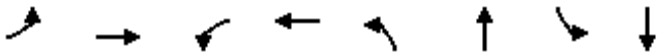


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	14	1020	122	929	260	169	130
v/c Ratio	0.11	0.75	0.70	0.56	0.84	0.42	0.51
Control Delay	53.4	35.6	71.9	13.3	69.7	9.0	48.2
Queue Delay	0.0	2.9	0.0	1.2	0.0	0.0	0.0
Total Delay	53.4	38.5	71.9	14.5	69.7	9.0	48.2
Queue Length 50th (ft)	10	323	99	54	195	0	90
Queue Length 95th (ft)	32	#601	m104	#482	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1358	189	1669	384	459	399
Starvation Cap Reductn	0	0	0	486	0	0	0
Spillback Cap Reductn	0	229	0	0	0	11	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.90	0.65	0.79	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

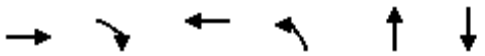


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	951	59	617	510	615	135	859
v/c Ratio	0.59	0.94	0.39	0.84	0.86	0.48	0.68	0.82
Control Delay	31.2	28.8	59.2	52.8	62.5	30.0	62.8	40.9
Queue Delay	0.0	21.5	0.0	0.8	2.1	0.0	0.0	0.0
Total Delay	31.2	50.3	59.2	53.6	64.6	30.0	62.8	40.9
Queue Length 50th (ft)	115	351	44	228	199	193	102	326
Queue Length 95th (ft)	m154	#474	81	249	#279	256	152	#446
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	284	1031	153	920	596	1281	237	1048
Starvation Cap Reductn	0	114	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	27	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	1.04	0.39	0.75	0.90	0.48	0.57	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	104	96	23	102	828	965
v/c Ratio	0.52	0.34	0.11	0.27	0.31	0.39
Control Delay	55.2	11.0	39.5	3.9	2.4	4.4
Queue Delay	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay	55.2	11.0	39.5	3.9	2.5	4.4
Queue Length 50th (ft)	78	0	15	9	40	70
Queue Length 95th (ft)	124	45	18	m24	71	161
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	501	427	382	2695	2490
Starvation Cap Reductn	0	0	0	0	730	0
Spillback Cap Reductn	0	3	0	15	0	103
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.19	0.05	0.28	0.42	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



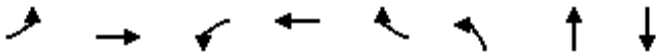
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	83	67	860	936
v/c Ratio	0.21	0.19	0.35	0.37
Control Delay	12.2	8.3	6.8	6.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.2	8.3	6.8	6.9
Queue Length 50th (ft)	11	16	125	140
Queue Length 95th (ft)	34	38	163	180
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	538	361	2472	2515
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.19	0.35	0.37

Intersection Summary



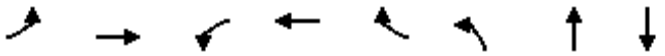
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	29	37	36	15	834	33	975
v/c Ratio	0.14	0.13	0.16	0.08	0.34	0.18	0.37
Control Delay	35.5	0.9	24.8	40.8	8.0	43.1	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	0.9	24.8	40.8	8.0	43.1	6.7
Queue Length 50th (ft)	17	0	13	9	99	19	53
Queue Length 95th (ft)	30	0	28	28	234	49	293
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	459	527	478	201	2489	201	2671
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.07	0.08	0.07	0.34	0.16	0.37

Intersection Summary



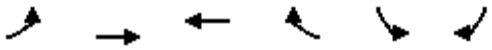
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	253	112	213	81	93	218	110
v/c Ratio	0.20	0.18	0.58	0.12	0.10	0.39	0.78	0.48
Control Delay	43.1	15.7	52.0	16.6	4.2	41.2	54.3	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	15.7	52.0	16.6	4.2	41.2	54.3	40.5
Queue Length 50th (ft)	17	35	64	36	0	51	116	61
Queue Length 95th (ft)	45	83	120	83	26	89	172	92
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	160	1445	207	1781	810	282	331	454
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.18	0.54	0.12	0.10	0.33	0.66	0.24

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	253	112	213	81	93	218	102
v/c Ratio	0.20	0.17	0.58	0.12	0.10	0.39	0.78	0.45
Control Delay	43.1	15.6	52.0	16.4	4.2	41.2	54.3	40.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	15.6	52.0	16.4	4.2	41.2	54.3	40.0
Queue Length 50th (ft)	17	35	64	36	0	51	116	57
Queue Length 95th (ft)	45	83	120	83	26	89	172	87
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	160	1451	207	1788	812	282	331	455
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.17	0.54	0.12	0.10	0.33	0.66	0.22

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	847	995	797	654	273
v/c Ratio	0.36	0.42	0.70	0.79	0.87	0.44
Control Delay	47.3	6.4	11.0	14.3	51.0	5.6
Queue Delay	0.0	0.0	0.4	12.2	0.0	0.0
Total Delay	47.3	6.4	11.4	26.5	51.0	5.6
Queue Length 50th (ft)	63	77	80	280	296	0
Queue Length 95th (ft)	116	124	m101	m390	381	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2034	1425	1009	838	663
Starvation Cap Reductn	0	0	120	200	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.76	0.99	0.78	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	907	1281	356	486	561	566
v/c Ratio	0.58	0.47	0.71	0.49	0.85	1.00	0.74
Control Delay	41.8	12.6	23.1	3.3	49.3	73.7	26.1
Queue Delay	0.0	1.1	0.8	0.3	1.5	10.6	0.0
Total Delay	41.8	13.7	23.9	3.6	50.7	84.4	26.1
Queue Length 50th (ft)	75	117	186	9	343	432	301
Queue Length 95th (ft)	m132	140	235	15	#537	#697	458
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	561	770
Starvation Cap Reductn	0	742	255	79	0	0	0
Spillback Cap Reductn	0	244	53	0	20	20	1
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.75	0.82	0.55	0.88	1.04	0.74

Intersection Summary

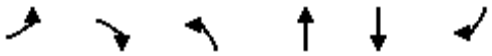
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	613	303	78	428
v/c Ratio	0.42	0.19	0.11	0.29
Control Delay	10.9	3.4	0.3	19.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.2	3.4	0.3	19.1
Queue Length 50th (ft)	67	10	0	98
Queue Length 95th (ft)	102	14	m0	134
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1470	1582	727	1476
Starvation Cap Reductn	333	0	0	0
Spillback Cap Reductn	94	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.19	0.11	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	69	47	430	420	139	149
v/c Ratio	0.40	0.04	0.20	0.29	0.54	0.52
Control Delay	75.4	4.8	1.8	0.8	51.5	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	4.8	1.8	0.8	51.5	13.8
Queue Length 50th (ft)	53	1	7	7	99	0
Queue Length 95th (ft)	88	39	21	10	144	53
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1395	2104	1460	572	492
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.03	0.20	0.29	0.24	0.30

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	328	1011	454	236	802	102	98	99	114	340	653
v/c Ratio	0.65	1.00	0.61	0.95	0.73	0.19	0.55	0.55	0.42	0.75	0.55
Control Delay	49.5	52.2	7.8	80.4	27.4	5.7	60.5	59.9	11.8	44.5	5.4
Queue Delay	0.0	5.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.1
Total Delay	49.5	57.8	8.0	80.4	27.4	5.7	60.5	59.9	11.8	53.6	5.5
Queue Length 50th (ft)	103	~417	71	170	224	13	72	73	0	227	22
Queue Length 95th (ft)	m141	m#508	m104	m#291	m292	m33	132	133	47	#337	42
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1014	744	249	1102	538	181	185	278	453	1179
Starvation Cap Reductn	0	21	30	0	0	0	0	0	0	84	49
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	1.02	0.64	0.95	0.73	0.19	0.54	0.54	0.41	0.92	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	65	137	681	48	102	731	187
v/c Ratio	0.46	0.46	0.58	0.34	0.47	0.45	0.21
Control Delay	58.5	53.4	4.2	55.6	16.9	22.9	19.2
Queue Delay	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	58.5	53.4	5.4	55.6	16.9	22.9	19.2
Queue Length 50th (ft)	50	53	0	34	0	195	70
Queue Length 95th (ft)	93	81	42	66	41	285	92
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	447	1171	191	257	1628	911
Starvation Cap Reductn	0	0	272	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.31	0.76	0.25	0.40	0.45	0.21

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	97	106	10	593	103	96	733
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.37	0.13	0.43	0.37
Control Delay	36.2	0.6	25.2	8.0	30.5	18.0	1.2	36.1	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.2	8.0	30.5	18.0	1.2	36.1	12.1
Queue Length 50th (ft)	13	0	19	1	4	110	0	42	96
Queue Length 95th (ft)	29	0	33	27	18	166	10	84	194
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1613	780	290	1981
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.20	0.24	0.05	0.37	0.13	0.33	0.37

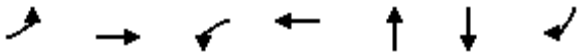
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	149	844	85	474	375	475	134	286	201
v/c Ratio	0.68	0.86	0.59	0.62	0.92	0.68	0.47	0.65	0.32
Control Delay	32.9	28.1	67.1	41.7	70.2	39.0	47.6	49.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	2.4	3.9	0.0	0.0	0.0
Total Delay	32.9	28.1	67.1	41.7	72.6	42.9	47.6	49.2	11.5
Queue Length 50th (ft)	85	331	61	151	276	337	87	205	40
Queue Length 95th (ft)	m78	m348	113	218	#441	465	149	#350	89
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1036	161	812	427	702	287	441	726
Starvation Cap Reductn	0	0	0	0	14	149	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.81	0.53	0.58	0.91	0.86	0.47	0.65	0.28

Intersection Summary

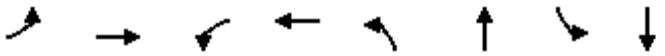
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	165	115	16	35	881	497	67
v/c Ratio	0.53	0.27	0.06	0.09	0.43	0.44	0.07
Control Delay	23.6	11.2	13.5	7.8	5.2	6.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	11.2	13.5	7.8	5.3	6.3	3.2
Queue Length 50th (ft)	52	19	4	3	32	122	7
Queue Length 95th (ft)	61	31	10	12	86	m229	m18
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	562	735	515	694	2050	1140	988
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	6	0	0	9	118	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.16	0.03	0.05	0.46	0.44	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	39	38	124	8	691	61	525
v/c Ratio	0.27	0.13	0.18	0.37	0.01	0.53	0.14	0.42
Control Delay	22.3	16.2	20.2	10.0	4.7	7.8	3.2	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	16.2	20.2	10.0	4.7	7.8	3.2	5.4
Queue Length 50th (ft)	17	10	12	9	1	76	8	133
Queue Length 95th (ft)	23	16	21	25	6	278	12	171
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	393	569	421	569	569	1298	444	1260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.07	0.09	0.22	0.01	0.53	0.14	0.42

Intersection Summary

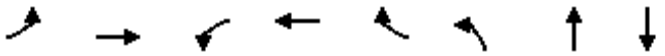


Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	241	108	144	21	442	71	474
v/c Ratio	0.69	0.39	0.38	0.10	0.48	0.31	0.44
Control Delay	29.0	22.5	6.8	29.2	13.2	26.5	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	22.5	6.8	29.2	13.2	26.5	10.9
Queue Length 50th (ft)	70	33	0	12	63	23	62
Queue Length 95th (ft)	106	61	32	m27	206	51	#223
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	505	416	489	231	923	236	1067
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.26	0.29	0.09	0.48	0.30	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	46	702	164	456	53	322	376	265
v/c Ratio	0.37	0.70	0.76	0.34	0.09	0.91	0.92	0.86
Control Delay	59.4	38.4	94.6	14.6	0.7	75.8	69.9	69.1
Queue Delay	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	40.1	94.6	14.6	0.7	75.8	69.9	69.1
Queue Length 50th (ft)	33	240	130	58	0	233	255	189
Queue Length 95th (ft)	72	#348	#220	75	m2	#335	#362	#280
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	131	1007	235	1331	603	375	435	371
Starvation Cap Reductn	0	157	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.83	0.70	0.34	0.09	0.86	0.86	0.71

Intersection Summary

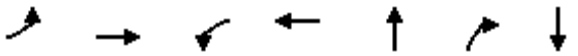
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	654	107	523	151	72	262	81	108	345
v/c Ratio	0.33	0.47	0.63	0.33	0.21	0.51	0.73	0.19	0.59	0.78
Control Delay	39.4	16.0	66.2	22.5	6.2	64.5	54.9	1.0	60.3	50.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	16.0	66.2	22.5	6.2	64.5	54.9	1.0	60.3	50.4
Queue Length 50th (ft)	34	83	78	133	7	53	182	0	81	215
Queue Length 95th (ft)	m39	m101	134	203	53	102	263	0	139	305
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1386	217	1575	710	144	438	489	245	538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	4
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.47	0.49	0.33	0.21	0.50	0.60	0.17	0.44	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

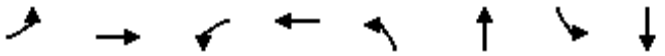


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	741	69	760	346	324	235
v/c Ratio	0.16	0.60	0.46	0.53	0.92	0.61	0.75
Control Delay	52.6	33.2	63.7	10.5	74.8	13.6	59.2
Queue Delay	0.0	0.4	0.0	1.1	0.0	0.1	0.0
Total Delay	52.6	33.6	63.7	11.6	74.8	13.7	59.2
Queue Length 50th (ft)	16	233	44	37	250	34	169
Queue Length 95th (ft)	43	#350	m52	m312	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1231	174	1425	398	546	416
Starvation Cap Reductn	0	0	0	404	0	0	0
Spillback Cap Reductn	0	155	0	0	0	12	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.69	0.40	0.74	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

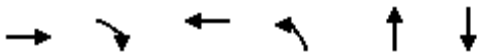
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	821	61	691	312	859	192	932
v/c Ratio	0.85	0.82	0.39	0.92	0.66	0.73	0.79	0.79
Control Delay	56.6	26.8	57.0	59.5	54.0	37.7	71.6	24.8
Queue Delay	0.0	2.6	0.0	7.9	0.0	0.0	0.0	0.2
Total Delay	56.6	29.5	57.0	67.3	54.0	37.7	71.6	25.0
Queue Length 50th (ft)	163	292	44	247	114	305	103	100
Queue Length 95th (ft)	#267	196	83	#295	163	#402	189	#270
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1019	158	781	476	1184	288	1175
Starvation Cap Reductn	0	106	0	0	0	0	0	23
Spillback Cap Reductn	0	0	0	69	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.90	0.39	0.97	0.66	0.73	0.67	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	285	169	47	81	1136	974
v/c Ratio	0.92	0.38	0.12	0.27	0.49	0.45
Control Delay	75.4	11.1	18.0	5.6	5.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	75.4	11.1	18.0	5.6	5.1	18.0
Queue Length 50th (ft)	200	18	11	12	120	307
Queue Length 95th (ft)	#285	55	9	m16	m130	380
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	484	419	297	2310	2154
Starvation Cap Reductn	0	0	0	0	313	0
Spillback Cap Reductn	0	1	0	0	0	33
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.35	0.11	0.27	0.57	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	173	97	1238	994
v/c Ratio	0.49	0.29	0.50	0.39
Control Delay	26.6	5.0	4.3	6.4
Queue Delay	0.0	0.0	0.0	0.3
Total Delay	26.6	5.0	4.3	6.7
Queue Length 50th (ft)	60	9	140	152
Queue Length 95th (ft)	121	m24	165	190
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	485	338	2490	2521
Starvation Cap Reductn	0	0	0	804
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.29	0.50	0.58

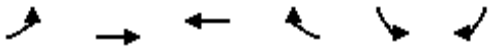
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	87	51	34	1331	20	1020
v/c Ratio	0.30	0.29	0.19	0.18	0.54	0.13	0.44
Control Delay	43.2	9.5	30.8	47.8	11.0	50.3	11.8
Queue Delay	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Total Delay	43.2	9.5	30.8	47.8	12.0	50.3	11.8
Queue Length 50th (ft)	51	0	26	23	85	14	152
Queue Length 95th (ft)	73	31	34	54	442	39	323
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	412	470	456	216	2470	216	2315
Starvation Cap Reductn	0	0	0	0	796	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.19	0.11	0.16	0.80	0.09	0.44

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	847	995	797	654	273
v/c Ratio	0.36	0.42	0.70	0.79	0.87	0.44
Control Delay	47.3	6.4	11.0	14.3	51.0	5.6
Queue Delay	0.0	0.0	0.4	12.2	0.0	0.0
Total Delay	47.3	6.4	11.4	26.5	51.0	5.6
Queue Length 50th (ft)	63	77	80	280	296	0
Queue Length 95th (ft)	116	124	m101	m390	381	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2034	1425	1009	838	663
Starvation Cap Reductn	0	0	120	200	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.76	0.99	0.78	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	907	1281	356	486	561	566
v/c Ratio	0.58	0.47	0.71	0.49	0.85	1.00	0.74
Control Delay	41.8	12.6	23.1	3.3	49.3	73.7	26.1
Queue Delay	0.0	1.1	0.8	0.3	1.5	10.6	0.0
Total Delay	41.8	13.7	23.9	3.6	50.7	84.4	26.1
Queue Length 50th (ft)	75	117	186	9	343	432	301
Queue Length 95th (ft)	m132	140	235	15	#537	#697	458
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	561	770
Starvation Cap Reductn	0	742	255	79	0	0	0
Spillback Cap Reductn	0	244	53	0	20	20	1
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.75	0.82	0.55	0.88	1.04	0.74

Intersection Summary

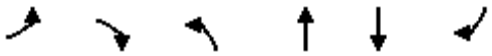
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	613	303	78	428
v/c Ratio	0.42	0.19	0.11	0.29
Control Delay	10.9	3.4	0.3	19.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.2	3.4	0.3	19.1
Queue Length 50th (ft)	67	10	0	98
Queue Length 95th (ft)	102	14	m0	134
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1470	1582	727	1476
Starvation Cap Reductn	333	0	0	0
Spillback Cap Reductn	94	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.19	0.11	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	69	47	430	420	139	149
v/c Ratio	0.40	0.04	0.20	0.29	0.54	0.52
Control Delay	75.4	4.8	1.8	0.8	51.5	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	4.8	1.8	0.8	51.5	13.8
Queue Length 50th (ft)	53	1	7	7	99	0
Queue Length 95th (ft)	88	39	21	10	144	53
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1395	2104	1460	572	492
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.03	0.20	0.29	0.24	0.30

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	328	1011	454	236	802	102	98	99	114	340	653
v/c Ratio	0.65	1.00	0.61	0.95	0.73	0.19	0.55	0.55	0.42	0.75	0.55
Control Delay	49.5	52.2	7.8	80.4	27.4	5.7	60.5	59.9	11.8	44.5	5.4
Queue Delay	0.0	5.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.1
Total Delay	49.5	57.8	8.0	80.4	27.4	5.7	60.5	59.9	11.8	53.6	5.5
Queue Length 50th (ft)	103	~417	71	170	224	13	72	73	0	227	22
Queue Length 95th (ft)	m141	m#508	m104	m#291	m292	m33	132	133	47	#337	42
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1014	744	249	1102	538	181	185	278	453	1179
Starvation Cap Reductn	0	21	30	0	0	0	0	0	0	84	49
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	1.02	0.64	0.95	0.73	0.19	0.54	0.54	0.41	0.92	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	65	137	681	48	102	731	187
v/c Ratio	0.46	0.46	0.58	0.34	0.47	0.45	0.21
Control Delay	58.5	53.4	4.2	55.6	16.9	22.9	19.2
Queue Delay	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	58.5	53.4	5.4	55.6	16.9	22.9	19.2
Queue Length 50th (ft)	50	53	0	34	0	195	70
Queue Length 95th (ft)	93	81	42	66	41	285	92
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	447	1171	191	257	1628	911
Starvation Cap Reductn	0	0	272	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.31	0.76	0.25	0.40	0.45	0.21

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	97	106	10	593	103	96	733
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.37	0.13	0.43	0.37
Control Delay	36.2	0.6	25.2	8.0	30.5	18.0	1.2	36.1	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.2	8.0	30.5	18.0	1.2	36.1	12.1
Queue Length 50th (ft)	13	0	19	1	4	110	0	42	96
Queue Length 95th (ft)	29	0	33	27	18	166	10	84	194
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1613	780	290	1981
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.20	0.24	0.05	0.37	0.13	0.33	0.37

Intersection Summary

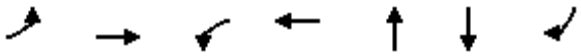


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	149	844	86	474	375	474	134	284	201
v/c Ratio	0.68	0.86	0.60	0.62	0.92	0.68	0.47	0.64	0.32
Control Delay	32.9	28.1	67.3	41.6	70.3	39.0	47.6	49.0	11.5
Queue Delay	0.0	0.0	0.0	0.0	2.4	3.8	0.0	0.0	0.0
Total Delay	32.9	28.1	67.3	41.6	72.7	42.8	47.6	49.0	11.5
Queue Length 50th (ft)	85	331	61	151	276	337	87	203	40
Queue Length 95th (ft)	m78	m348	115	218	#442	466	149	#347	89
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1036	161	813	427	701	287	441	726
Starvation Cap Reductn	0	0	0	0	14	148	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.81	0.53	0.58	0.91	0.86	0.47	0.64	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

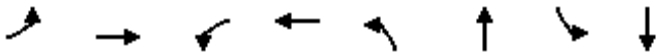
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	165	117	16	35	880	496	69
v/c Ratio	0.53	0.27	0.06	0.09	0.43	0.44	0.07
Control Delay	23.6	11.3	13.5	7.8	5.3	6.3	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	11.3	13.5	7.8	5.3	6.3	3.3
Queue Length 50th (ft)	52	20	4	3	32	122	8
Queue Length 95th (ft)	61	32	10	12	87	m226	m19
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	562	736	514	694	2050	1140	989
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	6	0	0	10	116	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.16	0.03	0.05	0.46	0.44	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	56	39	38	126	8	687	61	525
v/c Ratio	0.28	0.13	0.18	0.37	0.01	0.53	0.14	0.42
Control Delay	22.6	16.1	20.1	10.1	4.7	7.7	3.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	16.1	20.1	10.1	4.7	7.7	3.2	5.5
Queue Length 50th (ft)	18	10	12	9	1	76	8	133
Queue Length 95th (ft)	24	16	21	26	6	275	11	171
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	393	569	421	571	568	1296	447	1255
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.07	0.09	0.22	0.01	0.53	0.14	0.42

Intersection Summary

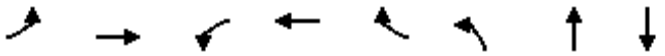


Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	241	105	144	22	443	71	470
v/c Ratio	0.69	0.38	0.38	0.10	0.48	0.31	0.44
Control Delay	28.9	22.4	6.8	29.0	13.1	26.5	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	22.4	6.8	29.0	13.1	26.5	10.8
Queue Length 50th (ft)	70	32	0	12	62	23	60
Queue Length 95th (ft)	105	59	32	m28	207	51	#216
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	506	414	489	231	924	236	1070
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.25	0.29	0.10	0.48	0.30	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	46	702	164	454	53	322	374	261
v/c Ratio	0.36	0.69	0.76	0.34	0.09	0.91	0.91	0.85
Control Delay	59.3	38.2	94.2	14.5	0.7	75.8	69.5	68.8
Queue Delay	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	39.9	94.2	14.5	0.7	75.8	69.5	68.8
Queue Length 50th (ft)	33	239	130	58	0	233	253	186
Queue Length 95th (ft)	72	#348	#218	75	m2	#335	#357	274
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	131	1013	235	1337	605	375	434	371
Starvation Cap Reductn	0	162	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.82	0.70	0.34	0.09	0.86	0.86	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

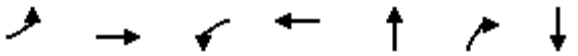
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	652	107	521	151	72	265	81	111	346
v/c Ratio	0.33	0.47	0.63	0.33	0.21	0.51	0.74	0.19	0.60	0.78
Control Delay	39.5	15.9	66.5	22.5	6.2	64.5	55.6	1.0	60.8	50.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	39.5	15.9	66.5	22.5	6.2	64.5	55.6	1.0	60.8	50.4
Queue Length 50th (ft)	34	82	78	133	7	53	184	0	83	220
Queue Length 95th (ft)	m39	m101	135	203	53	102	267	0	142	303
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1385	216	1573	709	144	438	489	245	538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	4
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.47	0.50	0.33	0.21	0.50	0.61	0.17	0.45	0.65

Intersection Summary

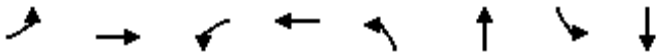
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	740	69	758	346	324	235
v/c Ratio	0.16	0.60	0.46	0.53	0.92	0.61	0.75
Control Delay	52.6	33.2	63.4	10.6	74.8	13.6	59.2
Queue Delay	0.0	0.4	0.0	1.1	0.0	0.1	0.0
Total Delay	52.6	33.6	63.4	11.6	74.8	13.7	59.2
Queue Length 50th (ft)	16	232	43	37	250	34	169
Queue Length 95th (ft)	43	#349	m51	m311	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1231	174	1425	398	546	416
Starvation Cap Reductn	0	0	0	405	0	0	0
Spillback Cap Reductn	0	156	0	0	0	12	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.69	0.40	0.74	0.87	0.61	0.56

Intersection Summary

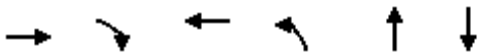
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	821	61	690	312	860	192	932
v/c Ratio	0.85	0.82	0.39	0.92	0.66	0.73	0.79	0.79
Control Delay	56.6	26.9	57.0	59.1	54.0	37.7	71.3	24.8
Queue Delay	0.0	2.7	0.0	7.5	0.0	0.0	0.0	0.2
Total Delay	56.6	29.5	57.0	66.7	54.0	37.7	71.3	25.1
Queue Length 50th (ft)	162	292	44	246	114	306	101	101
Queue Length 95th (ft)	#268	196	83	293	163	#403	187	#269
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1018	158	782	476	1185	288	1175
Starvation Cap Reductn	0	106	0	0	0	0	0	23
Spillback Cap Reductn	0	0	0	69	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.90	0.39	0.97	0.66	0.73	0.67	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	282	169	47	81	1138	971
v/c Ratio	0.91	0.38	0.12	0.27	0.49	0.45
Control Delay	75.2	11.2	18.1	5.5	4.9	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	75.2	11.2	18.1	5.5	5.1	17.8
Queue Length 50th (ft)	198	18	12	11	116	303
Queue Length 95th (ft)	#280	56	9	m16	m131	377
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	484	419	299	2317	2164
Starvation Cap Reductn	0	0	0	0	319	0
Spillback Cap Reductn	0	1	0	0	0	33
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.35	0.11	0.27	0.57	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	174	99	1236	992
v/c Ratio	0.49	0.29	0.50	0.39
Control Delay	26.5	5.0	4.3	6.4
Queue Delay	0.0	0.0	0.0	0.3
Total Delay	26.5	5.0	4.3	6.7
Queue Length 50th (ft)	60	8	126	151
Queue Length 95th (ft)	121	m26	167	190
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	486	337	2490	2521
Starvation Cap Reductn	0	0	0	803
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.29	0.50	0.58

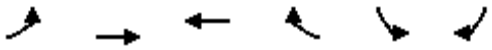
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	71	87	51	34	1330	20	1018
v/c Ratio	0.31	0.29	0.19	0.18	0.54	0.13	0.44
Control Delay	43.4	9.5	30.8	47.8	11.0	50.3	11.8
Queue Delay	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Total Delay	43.4	9.5	30.8	47.8	12.0	50.3	11.8
Queue Length 50th (ft)	52	0	26	23	84	14	152
Queue Length 95th (ft)	73	31	34	54	441	39	323
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	411	470	456	216	2470	216	2315
Starvation Cap Reductn	0	0	0	0	797	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.19	0.11	0.16	0.79	0.09	0.44

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	428	828	692	803	175
v/c Ratio	0.45	0.24	0.67	0.73	0.84	0.27
Control Delay	51.8	9.8	21.1	14.3	40.5	3.9
Queue Delay	0.0	0.0	2.3	5.4	0.0	0.0
Total Delay	51.8	9.8	23.3	19.7	40.5	3.9
Queue Length 50th (ft)	72	52	161	176	349	0
Queue Length 95th (ft)	130	94	m285	m413	404	39
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1762	1238	943	1147	748
Starvation Cap Reductn	0	0	270	191	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.24	0.86	0.92	0.70	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1002	1140	442	419	498	477
v/c Ratio	0.63	0.38	0.46	0.47	0.84	0.94	0.80
Control Delay	85.8	4.7	17.1	3.8	52.9	54.1	37.8
Queue Delay	0.0	0.5	0.2	0.2	0.0	0.8	0.6
Total Delay	85.8	5.2	17.3	4.0	52.9	54.9	38.4
Queue Length 50th (ft)	66	32	195	18	291	290	274
Queue Length 95th (ft)	m98	54	237	47	#452	#518	426
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2609	2485	936	531	559	590
Starvation Cap Reductn	0	1048	488	101	0	0	0
Spillback Cap Reductn	0	39	113	0	0	7	14
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.64	0.57	0.53	0.79	0.90	0.83

Intersection Summary

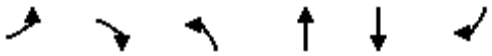
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	917	263	149	264
v/c Ratio	0.80	0.14	0.17	0.15
Control Delay	14.9	3.0	0.4	12.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.9	3.0	0.4	12.6
Queue Length 50th (ft)	65	8	0	44
Queue Length 95th (ft)	72	13	m0	74
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1733	1932	885	1813
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	31	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.14	0.17	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	143	44	713	527	227	212
v/c Ratio	0.67	0.05	0.54	0.37	0.35	0.56
Control Delay	81.1	11.5	15.5	1.0	29.7	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	11.5	15.5	1.0	29.7	11.9
Queue Length 50th (ft)	106	8	198	9	120	0
Queue Length 95th (ft)	150	30	160	10	204	66
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1001	1312	1415	641	494
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.04	0.54	0.37	0.35	0.43

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	278	825	674	357	583	142	123	123	112	349	721
v/c Ratio	0.48	0.80	0.96	1.43	0.57	0.29	0.68	0.67	0.41	0.77	0.58
Control Delay	42.4	24.7	41.2	243.4	22.1	8.2	68.1	67.3	11.4	34.6	4.9
Queue Delay	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.1
Total Delay	42.4	25.2	41.4	243.4	22.1	8.2	68.1	67.3	11.4	42.4	4.9
Queue Length 50th (ft)	88	160	295	~364	178	51	92	92	0	124	51
Queue Length 95th (ft)	m117	m313	m#326	#470	218	m45	#180	#178	45	#312	70
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1034	699	249	1014	498	181	183	274	455	1240
Starvation Cap Reductn	0	38	1	0	0	0	0	0	0	73	39
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.83	0.97	1.43	0.57	0.29	0.68	0.67	0.41	0.91	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	242	951	62	175	1053	283
v/c Ratio	0.66	0.60	0.68	0.41	0.60	0.68	0.34
Control Delay	63.2	52.9	4.4	57.4	16.3	14.8	21.6
Queue Delay	4.8	2.4	1.7	0.0	0.0	0.0	0.0
Total Delay	68.0	55.3	6.1	57.4	16.3	14.8	21.6
Queue Length 50th (ft)	97	92	0	44	0	343	96
Queue Length 95th (ft)	163	132	52	87	66	#503	145
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	224	471	1392	220	345	1548	835
Starvation Cap Reductn	51	126	269	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.70	0.85	0.28	0.51	0.68	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	121	190	16	927	141	227	1074
v/c Ratio	0.29	0.09	0.44	0.51	0.12	0.53	0.19	0.80	0.48
Control Delay	59.3	1.0	50.0	11.7	50.5	21.6	7.9	61.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	59.3	1.0	50.0	11.7	50.5	22.4	7.9	61.0	13.6
Queue Length 50th (ft)	20	0	42	1	11	242	18	167	235
Queue Length 95th (ft)	45	0	69	54	34	358	62	245	327
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1757	759	396	2246
Starvation Cap Reductn	0	0	0	0	0	479	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.37	0.47	0.11	0.73	0.19	0.57	0.48

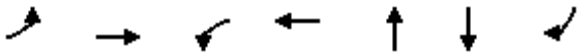
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	87	652	72	620	223	213	30	199	128
v/c Ratio	0.49	0.72	0.46	0.77	0.74	0.26	0.07	0.33	0.17
Control Delay	43.6	39.5	58.6	47.0	58.5	23.1	32.1	33.4	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	39.5	58.6	47.0	58.5	23.1	32.1	33.4	4.5
Queue Length 50th (ft)	63	244	51	221	162	100	15	107	0
Queue Length 95th (ft)	m82	304	98	277	238	144	44	207	39
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1029	172	813	433	817	428	603	871
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.63	0.42	0.76	0.52	0.26	0.07	0.33	0.15

Intersection Summary

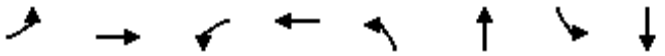
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	55	20	4	18	386	412	49
v/c Ratio	0.20	0.06	0.01	0.05	0.16	0.30	0.04
Control Delay	18.5	12.4	14.8	10.8	2.3	4.8	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	12.4	14.8	10.8	2.3	4.8	3.1
Queue Length 50th (ft)	16	3	1	2	22	119	6
Queue Length 95th (ft)	32	13	6	12	18	165	m19
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	588	736	585	715	2464	1366	1150
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.03	0.01	0.03	0.16	0.30	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



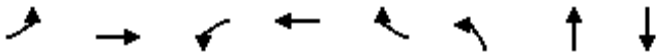
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	9	10	22	3	359	40	371
v/c Ratio	0.11	0.03	0.04	0.08	0.00	0.24	0.05	0.25
Control Delay	18.6	16.1	17.0	10.3	4.3	3.7	4.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	16.1	17.0	10.3	4.3	3.7	4.8	6.0
Queue Length 50th (ft)	8	3	3	2	0	0	0	0
Queue Length 95th (ft)	19	10	11	13	3	110	21	209
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	447	592	451	533	813	1495	821	1493
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.02	0.02	0.04	0.00	0.24	0.05	0.25

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	138	92	60	25	247	30	326
v/c Ratio	0.48	0.32	0.18	0.11	0.21	0.13	0.27
Control Delay	21.0	22.3	3.1	23.2	8.8	23.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	22.3	3.1	23.2	8.8	23.4	7.6
Queue Length 50th (ft)	34	30	0	8	20	9	28
Queue Length 95th (ft)	63	52	12	26	115	29	153
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	510	514	528	245	1153	245	1212
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.18	0.11	0.10	0.21	0.12	0.27

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	47	965	226	644	25	282	313	133
v/c Ratio	0.36	0.94	0.83	0.44	0.04	0.86	0.77	0.51
Control Delay	59.8	56.1	88.4	14.1	0.1	70.2	44.6	46.0
Queue Delay	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	61.2	88.4	14.1	0.1	70.2	44.6	46.0
Queue Length 50th (ft)	35	~487	139	85	0	211	165	80
Queue Length 95th (ft)	74	#623	m#305	105	m0	304	261	128
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	154	1027	282	1472	626	391	468	352
Starvation Cap Reductn	0	42	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.98	0.80	0.44	0.04	0.72	0.67	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

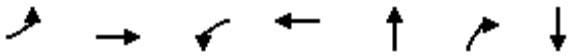


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	871	182	684	79	86	128	131	69	319
v/c Ratio	0.45	0.64	0.79	0.40	0.12	0.54	0.34	0.31	0.44	0.87
Control Delay	37.3	15.6	74.1	22.6	4.8	64.2	40.9	7.3	60.6	66.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	15.6	74.1	22.6	4.8	64.2	40.9	7.3	60.6	66.5
Queue Length 50th (ft)	34	98	137	186	0	65	84	0	52	228
Queue Length 95th (ft)	m42	m113	#228	269	29	116	135	45	97	#325
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1368	268	1693	681	223	439	462	223	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.64	0.68	0.40	0.12	0.39	0.29	0.28	0.31	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

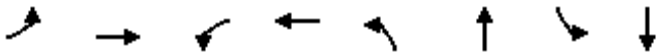


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1047	121	954	260	169	130
v/c Ratio	0.08	0.77	0.70	0.55	0.84	0.42	0.51
Control Delay	52.7	36.2	71.5	10.4	69.7	9.0	48.2
Queue Delay	0.0	4.2	0.0	0.9	0.0	0.1	0.0
Total Delay	52.7	40.4	71.5	11.2	69.7	9.0	48.2
Queue Length 50th (ft)	7	335	99	53	195	0	90
Queue Length 95th (ft)	25	#624	m101	m#498	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1361	188	1741	384	459	399
Starvation Cap Reductn	0	0	0	469	0	0	0
Spillback Cap Reductn	0	236	0	0	0	12	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.93	0.64	0.75	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

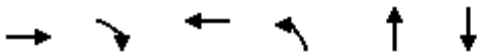


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	979	59	644	518	632	139	874
v/c Ratio	0.61	0.96	0.39	0.85	0.87	0.50	0.69	0.84
Control Delay	32.9	32.0	59.2	52.7	63.8	30.6	63.6	42.3
Queue Delay	0.0	30.0	0.0	1.0	2.7	0.0	0.0	0.0
Total Delay	32.9	62.0	59.2	53.7	66.5	30.6	63.6	42.3
Queue Length 50th (ft)	116	367	44	238	203	201	105	333
Queue Length 95th (ft)	m155	#497	81	259	#286	265	159	#458
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	275	1031	153	920	596	1268	237	1040
Starvation Cap Reductn	0	113	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	28	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	1.07	0.39	0.79	0.91	0.50	0.59	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	106	108	23	116	835	965
v/c Ratio	0.53	0.36	0.11	0.30	0.31	0.38
Control Delay	55.5	10.9	39.4	4.2	2.3	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.5	10.9	39.4	4.2	2.5	4.4
Queue Length 50th (ft)	79	0	15	11	39	71
Queue Length 95th (ft)	126	48	18	m27	71	160
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	510	427	382	2694	2507
Starvation Cap Reductn	0	0	0	0	744	0
Spillback Cap Reductn	0	4	0	0	0	120
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.21	0.05	0.30	0.43	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



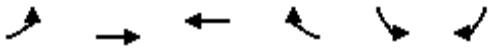
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	90	74	862	939
v/c Ratio	0.23	0.21	0.35	0.37
Control Delay	11.9	8.5	6.8	6.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.9	8.5	6.8	6.9
Queue Length 50th (ft)	12	18	126	140
Queue Length 95th (ft)	36	42	164	180
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	542	360	2472	2514
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.21	0.35	0.37

Intersection Summary



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	37	37	14	837	24	982
v/c Ratio	0.16	0.13	0.16	0.07	0.32	0.13	0.37
Control Delay	36.1	0.9	25.2	40.7	7.1	42.1	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	0.9	25.2	40.7	7.1	42.1	6.7
Queue Length 50th (ft)	20	0	14	8	43	14	53
Queue Length 95th (ft)	33	0	29	27	235	39	295
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	457	527	480	201	2583	201	2668
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.08	0.07	0.32	0.12	0.37

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	428	828	692	803	175
v/c Ratio	0.45	0.24	0.67	0.73	0.84	0.27
Control Delay	51.8	9.8	21.1	14.3	40.5	3.9
Queue Delay	0.0	0.0	2.3	5.4	0.0	0.0
Total Delay	51.8	9.8	23.3	19.7	40.5	3.9
Queue Length 50th (ft)	72	52	160	176	349	0
Queue Length 95th (ft)	130	94	m285	m413	404	39
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1762	1238	943	1147	748
Starvation Cap Reductn	0	0	270	191	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.24	0.86	0.92	0.70	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1002	1140	442	419	498	477
v/c Ratio	0.63	0.38	0.46	0.47	0.84	0.94	0.80
Control Delay	85.8	4.7	17.1	3.8	52.9	54.1	37.8
Queue Delay	0.0	0.5	0.2	0.2	0.0	0.8	0.6
Total Delay	85.8	5.2	17.3	4.0	52.9	54.9	38.4
Queue Length 50th (ft)	66	32	195	18	291	290	274
Queue Length 95th (ft)	m98	54	237	47	#452	#518	426
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2609	2485	936	531	559	590
Starvation Cap Reductn	0	1048	488	101	0	0	0
Spillback Cap Reductn	0	39	113	0	0	7	14
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.64	0.57	0.53	0.79	0.90	0.83

Intersection Summary

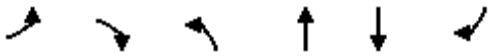
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	917	263	149	264
v/c Ratio	0.80	0.14	0.17	0.15
Control Delay	14.9	3.0	0.4	12.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.9	3.0	0.4	12.6
Queue Length 50th (ft)	65	8	0	44
Queue Length 95th (ft)	72	13	m0	74
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1733	1932	885	1813
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	31	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.14	0.17	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	143	44	713	527	227	212
v/c Ratio	0.67	0.05	0.54	0.37	0.35	0.56
Control Delay	81.1	11.5	15.5	1.0	29.7	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	11.5	15.5	1.0	29.7	11.9
Queue Length 50th (ft)	106	8	198	9	120	0
Queue Length 95th (ft)	150	30	160	10	204	66
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1001	1312	1415	641	494
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.04	0.54	0.37	0.35	0.43

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	278	825	674	357	583	142	123	123	112	349	721
v/c Ratio	0.48	0.80	0.96	1.43	0.57	0.29	0.68	0.67	0.41	0.77	0.58
Control Delay	42.4	24.7	41.2	243.4	22.1	8.2	68.1	67.3	11.4	34.6	4.9
Queue Delay	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.1
Total Delay	42.4	25.2	41.4	243.4	22.1	8.2	68.1	67.3	11.4	42.4	4.9
Queue Length 50th (ft)	88	160	295	~364	178	51	92	92	0	124	51
Queue Length 95th (ft)	m117	m313	m#326	#470	218	m45	#180	#178	45	#312	70
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1034	699	249	1014	498	181	183	274	455	1240
Starvation Cap Reductn	0	38	1	0	0	0	0	0	0	73	39
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.83	0.97	1.43	0.57	0.29	0.68	0.67	0.41	0.91	0.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	242	951	62	175	1053	283
v/c Ratio	0.66	0.60	0.68	0.41	0.60	0.68	0.34
Control Delay	63.2	52.9	4.4	57.4	16.3	14.8	21.6
Queue Delay	4.8	2.4	1.7	0.0	0.0	0.0	0.0
Total Delay	68.0	55.3	6.1	57.4	16.3	14.8	21.6
Queue Length 50th (ft)	97	92	0	44	0	343	96
Queue Length 95th (ft)	163	132	52	87	66	#503	145
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	224	471	1392	220	345	1548	835
Starvation Cap Reductn	51	126	269	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.70	0.85	0.28	0.51	0.68	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	121	190	16	927	141	227	1074
v/c Ratio	0.29	0.09	0.44	0.51	0.12	0.53	0.19	0.80	0.48
Control Delay	59.3	1.0	50.0	11.7	50.5	21.6	7.9	61.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	59.3	1.0	50.0	11.7	50.5	22.4	7.9	61.0	13.6
Queue Length 50th (ft)	20	0	42	1	11	242	18	167	235
Queue Length 95th (ft)	45	0	69	54	34	358	62	245	327
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1757	759	396	2246
Starvation Cap Reductn	0	0	0	0	0	479	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.37	0.47	0.11	0.73	0.19	0.57	0.48

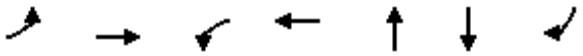
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	87	652	73	620	223	212	30	198	128
v/c Ratio	0.49	0.72	0.47	0.77	0.74	0.26	0.07	0.33	0.17
Control Delay	43.6	39.5	58.9	47.0	58.6	23.1	32.1	33.3	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	39.5	58.9	47.0	58.6	23.1	32.1	33.3	4.5
Queue Length 50th (ft)	63	244	52	221	162	99	15	107	0
Queue Length 95th (ft)	m82	304	100	277	238	143	44	206	39
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1029	172	813	433	817	428	603	871
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.63	0.42	0.76	0.52	0.26	0.07	0.33	0.15

Intersection Summary

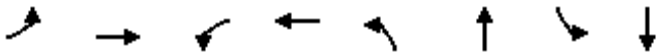
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	57	21	4	18	385	411	50
v/c Ratio	0.20	0.06	0.01	0.05	0.16	0.30	0.04
Control Delay	18.6	12.5	14.8	10.8	2.4	4.8	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	12.5	14.8	10.8	2.4	4.8	3.1
Queue Length 50th (ft)	17	4	1	2	23	119	6
Queue Length 95th (ft)	33	14	6	12	20	165	m20
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	588	739	585	715	2464	1366	1150
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.03	0.01	0.03	0.16	0.30	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



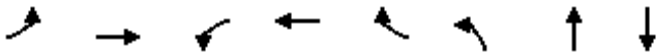
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	27	9	10	24	3	354	40	369
v/c Ratio	0.12	0.03	0.04	0.08	0.00	0.24	0.05	0.25
Control Delay	18.9	16.1	17.0	10.7	4.3	3.7	4.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	16.1	17.0	10.7	4.3	3.7	4.8	6.0
Queue Length 50th (ft)	8	3	3	2	0	0	0	0
Queue Length 95th (ft)	20	10	11	14	3	108	21	209
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	447	592	451	540	814	1495	825	1489
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.02	0.02	0.04	0.00	0.24	0.05	0.25

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	135	90	60	26	247	30	322
v/c Ratio	0.47	0.31	0.18	0.11	0.21	0.13	0.26
Control Delay	19.9	22.3	3.1	23.3	8.7	23.4	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	22.3	3.1	23.3	8.7	23.4	7.5
Queue Length 50th (ft)	31	29	0	8	20	9	27
Queue Length 95th (ft)	60	52	12	27	115	29	151
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	516	513	528	245	1156	245	1216
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.18	0.11	0.11	0.21	0.12	0.26

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	47	965	226	643	25	282	313	128
v/c Ratio	0.36	0.94	0.83	0.44	0.04	0.86	0.77	0.49
Control Delay	59.8	55.8	88.4	14.1	0.1	70.2	44.6	45.3
Queue Delay	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	60.6	88.4	14.1	0.1	70.2	44.6	45.3
Queue Length 50th (ft)	35	~487	139	85	0	211	165	76
Queue Length 95th (ft)	74	#623	m#304	105	m0	304	261	124
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	154	1029	282	1475	627	391	468	352
Starvation Cap Reductn	0	42	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.98	0.80	0.44	0.04	0.72	0.67	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

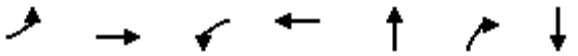


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	868	182	682	80	86	129	131	72	320
v/c Ratio	0.45	0.64	0.79	0.40	0.12	0.54	0.34	0.31	0.46	0.87
Control Delay	37.3	15.5	74.1	22.7	5.0	64.2	41.0	7.4	61.0	66.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	15.5	74.1	22.7	5.0	64.2	41.0	7.4	61.0	66.6
Queue Length 50th (ft)	34	97	137	186	0	65	84	0	54	228
Queue Length 95th (ft)	m41	m112	#228	268	30	116	136	46	100	#327
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1366	268	1691	680	223	437	461	223	419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.64	0.68	0.40	0.12	0.39	0.30	0.28	0.32	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

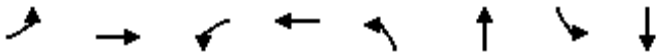
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1046	121	953	260	169	130
v/c Ratio	0.08	0.77	0.70	0.55	0.84	0.42	0.51
Control Delay	52.7	36.2	71.5	10.3	69.7	9.0	48.2
Queue Delay	0.0	4.1	0.0	0.9	0.0	0.1	0.0
Total Delay	52.7	40.3	71.5	11.2	69.7	9.0	48.2
Queue Length 50th (ft)	7	334	99	53	195	0	90
Queue Length 95th (ft)	25	#623	m101	m#498	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1361	188	1741	384	459	399
Starvation Cap Reductn	0	0	0	469	0	0	0
Spillback Cap Reductn	0	236	0	0	0	12	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.93	0.64	0.75	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

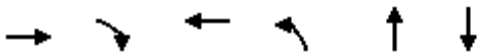


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	978	59	645	517	632	139	874
v/c Ratio	0.61	0.96	0.39	0.85	0.87	0.50	0.69	0.84
Control Delay	32.9	31.9	59.2	52.8	63.6	30.6	63.6	42.3
Queue Delay	0.0	29.7	0.0	1.0	2.6	0.0	0.0	0.0
Total Delay	32.9	61.6	59.2	53.8	66.2	30.6	63.6	42.3
Queue Length 50th (ft)	116	367	44	238	202	201	105	333
Queue Length 95th (ft)	m155	#497	81	259	#286	265	159	#458
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	275	1031	153	920	596	1268	237	1040
Starvation Cap Reductn	0	113	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	28	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	1.07	0.39	0.79	0.91	0.50	0.59	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	104	108	23	116	837	963
v/c Ratio	0.52	0.36	0.11	0.30	0.31	0.38
Control Delay	55.2	10.9	39.5	4.2	2.3	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.2	10.9	39.5	4.2	2.5	4.4
Queue Length 50th (ft)	78	0	15	10	38	70
Queue Length 95th (ft)	124	48	18	m27	72	160
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	510	427	382	2695	2510
Starvation Cap Reductn	0	0	0	0	745	0
Spillback Cap Reductn	0	4	0	0	0	120
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.21	0.05	0.30	0.43	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



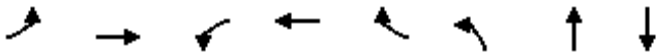
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	90	75	860	937
v/c Ratio	0.23	0.21	0.35	0.37
Control Delay	11.9	8.6	6.8	6.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.9	8.6	6.8	6.9
Queue Length 50th (ft)	12	18	125	140
Queue Length 95th (ft)	36	42	163	180
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	542	360	2472	2514
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.21	0.35	0.37

Intersection Summary



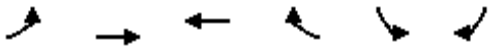
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	35	37	37	14	835	24	980
v/c Ratio	0.17	0.13	0.16	0.07	0.32	0.13	0.37
Control Delay	36.2	0.9	25.2	40.7	7.1	42.1	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.9	25.2	40.7	7.1	42.1	6.7
Queue Length 50th (ft)	21	0	14	8	42	14	53
Queue Length 95th (ft)	34	0	29	27	234	39	294
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	456	527	480	201	2583	201	2668
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.07	0.08	0.07	0.32	0.12	0.37

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	22	367	112	257	95	99	208	82
v/c Ratio	0.15	0.25	0.58	0.13	0.11	0.43	0.75	0.37
Control Delay	42.4	17.8	52.0	14.6	5.1	42.5	52.1	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	17.8	52.0	14.6	5.1	42.5	52.1	38.0
Queue Length 50th (ft)	12	60	64	30	0	55	109	45
Queue Length 95th (ft)	36	131	120	96	35	93	163	73
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	158	1483	207	1909	861	282	332	456
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.25	0.54	0.13	0.11	0.35	0.63	0.18

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	850	1040	844	646	273
v/c Ratio	0.36	0.42	0.73	0.81	0.87	0.44
Control Delay	47.3	6.4	10.4	16.2	50.5	5.7
Queue Delay	0.0	0.0	0.6	26.8	0.0	0.0
Total Delay	47.3	6.4	11.0	43.0	50.5	5.7
Queue Length 50th (ft)	63	77	78	316	292	0
Queue Length 95th (ft)	116	125	m97	m452	375	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2040	1432	1036	838	663
Starvation Cap Reductn	0	0	123	225	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.79	1.04	0.77	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	902	1373	397	486	582	631
v/c Ratio	0.58	0.46	0.76	0.54	0.85	1.04	0.82
Control Delay	41.6	12.8	24.0	4.7	49.3	83.0	31.5
Queue Delay	0.0	1.1	1.6	0.4	3.0	23.1	0.1
Total Delay	41.6	13.9	25.6	5.1	52.2	106.1	31.5
Queue Length 50th (ft)	75	117	197	11	343	~491	367
Queue Length 95th (ft)	m133	141	289	m36	#537	#735	#574
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	561	770
Starvation Cap Reductn	0	744	260	77	0	0	0
Spillback Cap Reductn	0	269	85	0	34	33	2
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.75	0.88	0.61	0.90	1.10	0.82

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

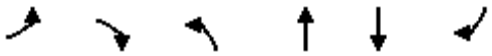
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	676	363	106	506
v/c Ratio	0.46	0.23	0.14	0.36
Control Delay	10.8	3.5	0.3	20.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.1	3.5	0.3	20.1
Queue Length 50th (ft)	72	14	0	121
Queue Length 95th (ft)	108	m15	m0	162
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1463	1582	742	1396
Starvation Cap Reductn	279	0	0	0
Spillback Cap Reductn	116	0	0	49
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.23	0.14	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	100	79	472	507	198	169
v/c Ratio	0.53	0.07	0.23	0.35	0.69	0.53
Control Delay	79.9	5.1	2.2	1.0	56.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	5.1	2.2	1.0	56.8	12.9
Queue Length 50th (ft)	77	5	9	10	140	0
Queue Length 95th (ft)	119	54	23	13	200	55
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1367	2015	1443	572	507
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.06	0.23	0.35	0.35	0.33

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	393	1031	454	241	889	127	98	99	114	371	702
v/c Ratio	0.77	1.02	0.61	0.97	0.81	0.24	0.55	0.55	0.42	0.82	0.60
Control Delay	53.0	56.8	7.9	85.5	32.2	7.8	60.5	59.9	11.8	50.6	7.8
Queue Delay	0.0	9.0	0.3	0.0	0.5	0.0	0.0	0.0	0.0	19.1	0.1
Total Delay	53.0	65.8	8.2	85.5	32.7	7.8	60.5	59.9	11.8	69.7	7.9
Queue Length 50th (ft)	126	~441	83	176	283	19	72	73	0	251	31
Queue Length 95th (ft)	m163	m#522	m105	m#305	m361	m39	132	133	47	#411	69
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1015	741	249	1102	538	181	185	278	452	1170
Starvation Cap Reductn	0	27	40	0	0	0	0	0	0	79	45
Spillback Cap Reductn	0	0	0	0	38	0	0	0	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.04	0.65	0.97	0.84	0.24	0.54	0.54	0.41	0.99	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	71	148	676	62	132	846	278
v/c Ratio	0.49	0.49	0.58	0.42	0.53	0.53	0.31
Control Delay	59.9	54.0	4.2	57.5	16.2	24.8	18.6
Queue Delay	0.3	0.0	1.3	0.0	0.0	0.0	0.0
Total Delay	60.2	54.0	5.5	57.5	16.2	24.8	18.6
Queue Length 50th (ft)	56	58	0	44	0	238	105
Queue Length 95th (ft)	101	86	42	79	44	347	126
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	448	1159	191	284	1609	895
Starvation Cap Reductn	16	0	276	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.77	0.32	0.46	0.53	0.31

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	101	106	10	701	105	103	814
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.44	0.14	0.45	0.41
Control Delay	36.2	0.6	25.3	8.0	30.5	19.1	1.3	36.4	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.3	8.0	30.5	19.1	1.3	36.4	12.5
Queue Length 50th (ft)	13	0	19	1	4	135	0	45	111
Queue Length 95th (ft)	29	0	34	27	18	202	11	88	221
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1605	777	290	1984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.21	0.24	0.05	0.44	0.14	0.36	0.41

Intersection Summary

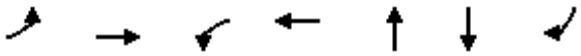


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	869	97	530	373	507	167	330	284
v/c Ratio	0.70	0.88	0.66	0.66	0.92	0.76	0.63	0.82	0.46
Control Delay	31.8	29.9	71.6	42.7	70.3	44.2	55.2	60.9	16.9
Queue Delay	0.0	0.0	0.0	0.0	1.7	13.2	0.0	0.0	0.0
Total Delay	31.8	29.9	71.6	42.7	72.0	57.4	55.2	60.9	16.9
Queue Length 50th (ft)	96	344	69	174	275	359	111	243	89
Queue Length 95th (ft)	m90	m356	#135	253	#437	#522	#201	#427	150
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1036	161	804	426	664	265	404	696
Starvation Cap Reductn	0	0	0	0	11	142	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.84	0.60	0.66	0.90	0.97	0.63	0.82	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

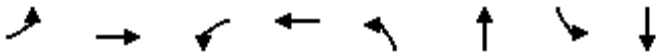


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	134	105	28	60	940	567	47
v/c Ratio	0.46	0.26	0.10	0.15	0.45	0.56	0.05
Control Delay	22.4	11.0	15.0	6.8	4.9	8.7	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	22.4	11.0	15.0	6.8	5.0	8.7	2.9
Queue Length 50th (ft)	42	17	8	3	30	123	4
Queue Length 95th (ft)	51	29	14	14	94	m#339	m9
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	550	729	519	692	2074	1019	1000
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	8	0	0	13	185	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.14	0.05	0.09	0.50	0.56	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	42	36	49	138	8	747	70	554
v/c Ratio	0.22	0.12	0.23	0.40	0.01	0.58	0.17	0.44
Control Delay	21.3	15.9	21.3	9.7	4.7	9.0	3.4	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	15.9	21.3	9.7	4.7	9.0	3.4	5.0
Queue Length 50th (ft)	13	9	15	8	1	87	9	127
Queue Length 95th (ft)	20	15	26	25	6	#381	m14	204
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	386	568	422	576	548	1298	406	1273
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.06	0.12	0.24	0.01	0.58	0.17	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

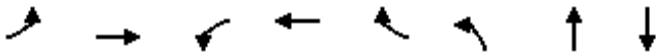


Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	217	88	144	12	471	71	517
v/c Ratio	0.65	0.33	0.39	0.06	0.50	0.31	0.48
Control Delay	27.7	21.9	7.1	27.6	13.0	26.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	21.9	7.1	27.6	13.0	26.5	11.7
Queue Length 50th (ft)	63	27	0	7	60	23	65
Queue Length 95th (ft)	95	52	32	m16	233	51	#279
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	501	410	489	231	938	236	1085
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.21	0.29	0.05	0.50	0.30	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	21	816	164	557	48	335	361	256
v/c Ratio	0.17	0.81	0.76	0.38	0.07	0.93	0.86	0.85
Control Delay	53.7	43.7	93.5	13.0	0.4	77.9	61.3	68.1
Queue Delay	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	52.6	93.5	13.0	0.4	77.9	61.3	68.1
Queue Length 50th (ft)	15	295	130	63	0	244	240	183
Queue Length 95th (ft)	41	#450	m#220	86	m1	#357	#335	269
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	130	1008	235	1480	662	375	434	372
Starvation Cap Reductn	0	166	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.97	0.70	0.38	0.07	0.89	0.83	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

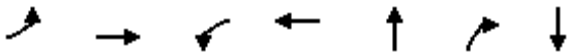


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	762	110	609	150	80	284	86	120	370
v/c Ratio	0.33	0.57	0.65	0.40	0.22	0.57	0.77	0.20	0.64	0.81
Control Delay	35.7	14.8	67.1	24.1	7.7	67.2	56.6	1.0	62.4	51.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	35.7	14.8	67.1	24.1	7.7	67.2	56.6	1.0	62.4	51.3
Queue Length 50th (ft)	31	84	80	165	13	58	197	0	90	261
Queue Length 95th (ft)	m35	104	137	241	61	#112	286	0	151	320
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1348	216	1541	689	144	438	489	245	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	5
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.57	0.51	0.40	0.22	0.56	0.65	0.18	0.49	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

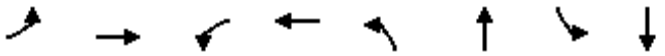


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	837	69	850	346	324	235
v/c Ratio	0.16	0.68	0.46	0.60	0.92	0.61	0.75
Control Delay	52.6	35.3	62.3	11.1	74.8	13.6	59.2
Queue Delay	0.0	1.0	0.0	2.0	0.0	0.1	0.0
Total Delay	52.6	36.3	62.3	13.0	74.8	13.8	59.2
Queue Length 50th (ft)	16	275	44	37	250	34	169
Queue Length 95th (ft)	43	#446	m45	m351	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1234	174	1426	398	546	416
Starvation Cap Reductn	0	0	0	403	0	0	0
Spillback Cap Reductn	0	180	0	0	0	15	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.79	0.40	0.83	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

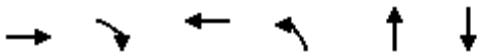
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	919	67	772	355	920	231	1011
v/c Ratio	0.83	0.88	0.42	0.99	0.75	0.84	0.87	0.89
Control Delay	51.2	28.3	58.4	70.9	58.0	44.7	78.0	33.8
Queue Delay	0.0	6.0	0.0	37.5	0.0	0.0	0.0	0.7
Total Delay	51.2	34.3	58.4	108.4	58.0	44.7	78.0	34.5
Queue Length 50th (ft)	162	337	48	287	132	346	126	104
Queue Length 95th (ft)	#267	#438	88	#372	185	#470	#284	#495
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1043	158	782	476	1093	288	1133
Starvation Cap Reductn	0	90	0	0	0	0	0	20
Spillback Cap Reductn	0	0	0	88	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.96	0.42	1.11	0.75	0.84	0.80	0.91

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	282	152	47	65	1234	1094
v/c Ratio	0.91	0.36	0.12	0.25	0.53	0.50
Control Delay	75.2	14.0	18.1	5.4	5.0	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	75.2	14.0	18.1	5.4	5.2	19.1
Queue Length 50th (ft)	198	26	12	9	138	363
Queue Length 95th (ft)	#280	64	9	m12	m145	447
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	462	419	258	2319	2169
Starvation Cap Reductn	0	0	0	0	341	0
Spillback Cap Reductn	0	2	0	0	0	69
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.33	0.11	0.25	0.62	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	181	143	1320	1075
v/c Ratio	0.50	0.47	0.53	0.43
Control Delay	25.6	9.6	4.7	6.7
Queue Delay	0.0	0.0	0.2	0.3
Total Delay	25.6	9.6	4.8	7.0
Queue Length 50th (ft)	59	14	99	171
Queue Length 95th (ft)	122	m115	263	211
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	490	307	2490	2523
Starvation Cap Reductn	0	0	347	775
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.47	0.62	0.61

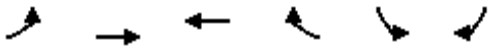
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	124	53	59	1409	20	1107
v/c Ratio	0.43	0.37	0.20	0.29	0.57	0.13	0.51
Control Delay	46.6	9.1	30.7	49.8	11.8	50.3	13.7
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Total Delay	46.6	9.1	30.7	49.8	12.9	50.3	13.7
Queue Length 50th (ft)	72	0	27	40	117	14	188
Queue Length 95th (ft)	97	35	36	82	487	39	363
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	400	497	449	216	2451	216	2191
Starvation Cap Reductn	0	0	0	0	733	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.25	0.12	0.27	0.82	0.09	0.51

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	436	863	730	822	175
v/c Ratio	0.45	0.25	0.71	0.76	0.84	0.26
Control Delay	51.8	10.5	20.8	15.4	40.2	3.8
Queue Delay	0.0	0.0	3.6	8.4	0.0	0.0
Total Delay	51.8	10.5	24.5	23.8	40.2	3.8
Queue Length 50th (ft)	72	56	173	284	357	0
Queue Length 95th (ft)	130	100	m297	m451	414	38
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1739	1224	963	1147	748
Starvation Cap Reductn	0	0	267	199	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.25	0.90	0.96	0.72	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1029	1216	513	419	541	530
v/c Ratio	0.63	0.41	0.51	0.54	0.79	0.98	0.87
Control Delay	85.2	5.1	18.1	3.3	47.1	62.4	43.6
Queue Delay	0.0	0.6	0.3	0.3	0.0	3.2	1.4
Total Delay	85.2	5.8	18.3	3.6	47.1	65.6	45.0
Queue Length 50th (ft)	66	34	214	12	291	346	332
Queue Length 95th (ft)	m97	62	239	29	#452	#602	#553
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2535	2389	953	531	556	605
Starvation Cap Reductn	0	1034	506	101	0	0	0
Spillback Cap Reductn	0	88	146	0	0	9	16
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.69	0.65	0.60	0.79	0.99	0.90

Intersection Summary

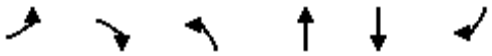
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	974	321	179	370
v/c Ratio	0.81	0.17	0.21	0.23
Control Delay	13.9	3.6	0.5	14.5
Queue Delay	0.0	0.0	0.3	0.0
Total Delay	13.9	3.6	0.7	14.5
Queue Length 50th (ft)	64	13	0	69
Queue Length 95th (ft)	77	14	0	108
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1727	1861	871	1606
Starvation Cap Reductn	0	0	292	0
Spillback Cap Reductn	57	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.17	0.31	0.23

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	86	746	601	299	239
v/c Ratio	0.71	0.09	0.57	0.44	0.49	0.56
Control Delay	79.0	10.3	14.9	1.3	34.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.0	10.3	14.9	1.3	34.3	10.5
Queue Length 50th (ft)	122	21	186	12	172	0
Queue Length 95th (ft)	169	46	174	29	284	67
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1016	1312	1381	607	515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.08	0.57	0.44	0.49	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	330	886	679	363	686	170	123	123	112	384	772
v/c Ratio	0.57	0.88	0.97	1.46	0.68	0.34	0.68	0.67	0.41	0.85	0.63
Control Delay	43.0	31.2	42.7	252.8	24.0	8.9	68.1	67.3	11.4	44.1	6.6
Queue Delay	0.0	1.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	21.2	0.1
Total Delay	43.0	32.6	43.2	252.8	24.0	8.9	68.1	67.3	11.4	65.3	6.7
Queue Length 50th (ft)	106	252	316	~360	210	55	92	92	0	155	79
Queue Length 95th (ft)	m134	m358	m#685	#482	260	m55	#180	#178	45	#419	81
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1012	697	249	1014	498	181	183	274	454	1219
Starvation Cap Reductn	0	37	2	0	0	0	0	0	0	73	39
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.91	0.98	1.46	0.68	0.34	0.68	0.67	0.41	1.01	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	268	946	77	202	1152	395
v/c Ratio	0.65	0.65	0.68	0.49	0.63	0.76	0.49
Control Delay	62.1	54.6	4.4	59.4	15.8	16.5	24.7
Queue Delay	4.4	3.1	1.6	0.0	0.0	0.0	0.0
Total Delay	66.5	57.7	6.0	59.4	15.8	16.5	24.7
Queue Length 50th (ft)	97	103	0	55	0	393	141
Queue Length 95th (ft)	165	147	52	102	70	#568	#201
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	223	469	1391	220	369	1522	812
Starvation Cap Reductn	48	116	266	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.76	0.84	0.35	0.55	0.76	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	125	190	16	1030	146	235	1180
v/c Ratio	0.29	0.09	0.46	0.51	0.12	0.59	0.19	0.81	0.53
Control Delay	59.3	1.0	50.1	11.6	50.5	23.4	9.2	58.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Total Delay	59.3	1.0	50.1	11.6	50.5	24.6	9.2	58.8	15.2
Queue Length 50th (ft)	20	0	43	1	11	284	22	174	286
Queue Length 95th (ft)	45	0	70	54	34	420	71	254	387
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1738	749	396	2247
Starvation Cap Reductn	0	0	0	0	0	444	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.38	0.47	0.11	0.80	0.19	0.59	0.53

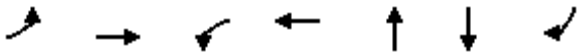
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	723	78	697	260	236	43	215	149
v/c Ratio	0.56	0.72	0.44	0.76	0.78	0.34	0.12	0.44	0.22
Control Delay	43.2	37.7	55.7	43.9	59.0	28.8	36.6	40.0	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	37.7	55.7	43.9	59.0	28.8	36.6	40.0	4.6
Queue Length 50th (ft)	81	274	53	239	185	135	24	133	0
Queue Length 95th (ft)	m95	m322	106	325	267	232	59	229	41
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1078	188	918	433	702	353	488	795
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.67	0.41	0.76	0.60	0.34	0.12	0.44	0.19

Intersection Summary

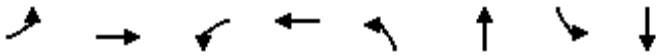
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	30	12	12	46	453	484	22
v/c Ratio	0.11	0.04	0.04	0.13	0.18	0.38	0.02
Control Delay	17.0	10.6	15.6	7.6	2.0	5.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.0	10.6	15.6	7.6	2.0	5.2	3.1
Queue Length 50th (ft)	9	1	3	2	10	146	2
Queue Length 95th (ft)	21	9	11	18	24	194	m8
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	573	699	590	701	2458	1280	1147
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.02	0.02	0.07	0.18	0.38	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



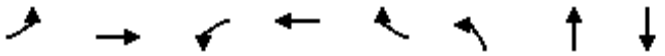
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	10	4	14	65	3	396	75	374
v/c Ratio	0.05	0.01	0.06	0.21	0.00	0.28	0.10	0.26
Control Delay	17.1	14.8	17.5	7.0	4.7	4.4	4.8	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	14.8	17.5	7.0	4.7	4.4	4.8	6.2
Queue Length 50th (ft)	3	1	4	0	0	32	21	111
Queue Length 95th (ft)	11	6	13	21	3	123	31	196
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	431	577	453	542	759	1401	739	1414
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.03	0.12	0.00	0.28	0.10	0.26

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	107	76	60	17	267	30	341
v/c Ratio	0.39	0.27	0.18	0.07	0.23	0.13	0.28
Control Delay	19.9	21.7	3.1	22.8	8.7	23.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	21.7	3.1	22.8	8.7	23.4	7.6
Queue Length 50th (ft)	26	24	0	5	22	9	29
Queue Length 95th (ft)	52	45	12	20	125	29	160
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	504	513	528	245	1160	245	1223
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.15	0.11	0.07	0.23	0.12	0.28

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	23	1098	226	748	19	298	307	112
v/c Ratio	0.19	1.07	0.84	0.48	0.03	0.88	0.73	0.43
Control Delay	56.2	86.8	92.8	13.0	0.1	71.7	40.4	42.2
Queue Delay	0.0	12.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	99.4	92.8	13.0	0.1	71.7	40.4	42.2
Queue Length 50th (ft)	17	~604	153	96	0	222	153	64
Queue Length 95th (ft)	44	#742	m#306	116	m0	#344	251	108
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	153	1027	278	1551	655	391	471	353
Starvation Cap Reductn	0	41	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	1.11	0.81	0.48	0.03	0.76	0.65	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

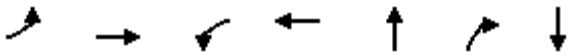


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	975	182	769	80	95	139	131	60	336
v/c Ratio	0.45	0.77	0.81	0.49	0.12	0.58	0.31	0.28	0.39	0.88
Control Delay	32.3	16.2	75.7	25.3	5.1	65.3	38.4	6.7	59.4	67.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	16.2	75.7	25.3	5.1	65.3	38.4	6.7	59.4	67.3
Queue Length 50th (ft)	33	95	137	223	0	72	89	0	45	240
Queue Length 95th (ft)	m36	m98	#228	308	30	125	143	45	88	#377
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1266	265	1578	640	223	461	479	223	422
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.77	0.69	0.49	0.13	0.43	0.30	0.27	0.27	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

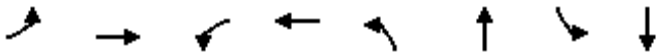


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1138	121	1039	260	169	130
v/c Ratio	0.08	0.83	0.70	0.60	0.84	0.42	0.51
Control Delay	52.7	39.0	69.1	10.2	69.7	9.0	48.2
Queue Delay	0.0	19.2	0.0	1.1	0.0	0.1	0.0
Total Delay	52.7	58.2	69.1	11.4	69.7	9.0	48.2
Queue Length 50th (ft)	7	381	98	52	195	0	90
Queue Length 95th (ft)	25	#704	m89	m#521	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1363	188	1743	384	459	399
Starvation Cap Reductn	0	0	0	440	0	0	0
Spillback Cap Reductn	0	251	0	0	0	13	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	1.02	0.64	0.80	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



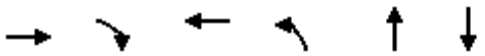
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	1071	59	733	556	672	174	907
v/c Ratio	0.59	0.98	0.39	0.89	0.93	0.58	0.81	0.94
Control Delay	31.9	34.2	59.2	54.7	72.2	33.8	72.5	53.2
Queue Delay	0.0	35.3	0.0	2.8	9.6	0.0	0.0	0.1
Total Delay	31.9	69.5	59.2	57.5	81.8	33.8	72.5	53.3
Queue Length 50th (ft)	121	~445	44	272	221	224	131	353
Queue Length 95th (ft)	m139	#196	81	302	#320	284	#228	#488
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	269	1088	153	920	596	1163	237	967
Starvation Cap Reductn	0	107	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	36	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	1.09	0.39	0.89	0.99	0.58	0.73	0.94

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	104	96	23	102	917	1043
v/c Ratio	0.52	0.34	0.11	0.29	0.34	0.41
Control Delay	55.2	11.0	39.5	4.0	2.4	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.2	11.0	39.5	4.0	2.5	4.6
Queue Length 50th (ft)	78	0	15	9	42	79
Queue Length 95th (ft)	124	45	18	m24	77	180
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	501	427	351	2696	2515
Starvation Cap Reductn	0	0	0	0	755	0
Spillback Cap Reductn	0	4	0	0	0	153
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.19	0.05	0.29	0.47	0.44

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



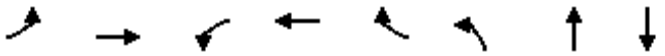
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	91	92	931	1005
v/c Ratio	0.23	0.28	0.38	0.40
Control Delay	11.6	9.8	7.0	7.2
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	11.6	9.8	7.0	7.3
Queue Length 50th (ft)	11	24	140	154
Queue Length 95th (ft)	35	56	181	197
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	542	332	2472	2517
Starvation Cap Reductn	0	0	0	578
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.28	0.38	0.52

Intersection Summary



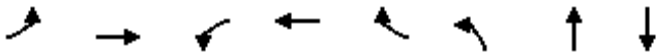
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	64	36	31	899	24	1038
v/c Ratio	0.26	0.22	0.16	0.16	0.35	0.13	0.42
Control Delay	38.7	5.1	24.9	41.8	7.4	42.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	5.1	24.9	41.8	7.4	42.1	9.3
Queue Length 50th (ft)	31	0	13	18	47	14	140
Queue Length 95th (ft)	45	11	28	46	257	39	318
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	427	527	475	201	2584	201	2465
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.12	0.08	0.15	0.35	0.12	0.42

Intersection Summary



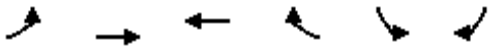
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	367	112	260	104	99	218	113
v/c Ratio	0.20	0.27	0.58	0.15	0.13	0.42	0.78	0.49
Control Delay	43.1	19.0	52.0	17.0	5.4	41.9	54.3	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	19.0	52.0	17.0	5.4	41.9	54.3	40.9
Queue Length 50th (ft)	17	63	64	45	0	54	116	63
Queue Length 95th (ft)	45	131	120	98	38	93	172	95
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	160	1360	207	1683	773	282	331	453
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.27	0.54	0.15	0.13	0.35	0.66	0.25

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	367	112	260	104	99	218	105
v/c Ratio	0.20	0.25	0.58	0.15	0.13	0.42	0.78	0.46
Control Delay	43.1	18.3	52.0	16.5	5.4	41.9	54.3	40.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	18.3	52.0	16.5	5.4	41.9	54.3	40.4
Queue Length 50th (ft)	17	63	64	44	0	54	116	59
Queue Length 95th (ft)	45	131	120	98	38	93	172	90
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	160	1455	207	1786	814	282	331	454
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.25	0.54	0.15	0.13	0.35	0.66	0.23

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	858	1052	857	667	273
v/c Ratio	0.36	0.42	0.74	0.82	0.88	0.44
Control Delay	47.3	6.7	10.5	16.7	51.3	5.6
Queue Delay	0.0	0.0	0.7	36.3	0.0	0.0
Total Delay	47.3	6.7	11.1	53.0	51.3	5.6
Queue Length 50th (ft)	63	84	78	336	302	0
Queue Length 95th (ft)	116	130	m97	m469	390	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2024	1418	1041	838	663
Starvation Cap Reductn	0	0	124	238	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.81	1.07	0.80	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	930	1399	403	486	589	650
v/c Ratio	0.58	0.48	0.77	0.55	0.85	1.05	0.84
Control Delay	42.2	12.8	24.3	4.8	49.3	86.4	33.5
Queue Delay	0.0	1.2	1.9	0.4	3.6	19.1	0.1
Total Delay	42.2	14.0	26.2	5.2	52.9	105.5	33.6
Queue Length 50th (ft)	76	121	201	11	343	~502	388
Queue Length 95th (ft)	m132	147	296	m35	#537	#747	#646
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	561	770
Starvation Cap Reductn	0	732	260	77	0	0	0
Spillback Cap Reductn	0	293	82	0	39	38	2
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.77	0.90	0.62	0.91	1.13	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

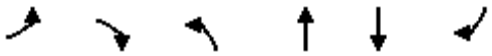
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	685	363	106	506
v/c Ratio	0.47	0.23	0.14	0.36
Control Delay	10.8	3.6	0.3	20.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.1	3.6	0.3	20.1
Queue Length 50th (ft)	73	14	0	121
Queue Length 95th (ft)	109	m15	m0	162
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1464	1582	742	1396
Starvation Cap Reductn	274	0	0	0
Spillback Cap Reductn	114	0	0	51
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.23	0.14	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	100	79	479	513	198	169
v/c Ratio	0.53	0.07	0.24	0.36	0.69	0.53
Control Delay	79.7	5.1	2.1	1.0	56.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.7	5.1	2.1	1.0	56.8	12.9
Queue Length 50th (ft)	77	5	9	10	140	0
Queue Length 95th (ft)	119	54	23	13	200	55
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1367	2015	1443	572	507
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.06	0.24	0.36	0.35	0.33

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	393	1072	472	241	912	127	98	99	114	371	710
v/c Ratio	0.77	1.06	0.63	0.97	0.83	0.24	0.55	0.55	0.42	0.82	0.61
Control Delay	53.3	68.6	8.4	84.5	32.7	7.6	60.5	59.9	11.8	50.6	8.0
Queue Delay	0.0	9.1	0.2	0.0	0.8	0.0	0.0	0.0	0.0	18.5	0.1
Total Delay	53.3	77.7	8.6	84.5	33.4	7.6	60.5	59.9	11.8	69.1	8.1
Queue Length 50th (ft)	127	~476	92	172	287	18	72	73	0	249	31
Queue Length 95th (ft)	m162	m#556	m116	m#295	m362	m36	132	133	47	#409	70
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1015	741	249	1102	538	181	185	278	452	1168
Starvation Cap Reductn	0	22	32	0	0	0	0	0	0	78	44
Spillback Cap Reductn	0	0	0	0	46	0	0	0	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.08	0.67	0.97	0.86	0.24	0.54	0.54	0.41	0.99	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	71	148	702	62	132	860	278
v/c Ratio	0.49	0.49	0.59	0.42	0.53	0.54	0.31
Control Delay	59.5	53.7	4.2	57.5	16.2	25.0	18.8
Queue Delay	0.3	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	59.8	53.7	5.5	57.5	16.2	25.0	18.8
Queue Length 50th (ft)	56	58	0	44	0	243	105
Queue Length 95th (ft)	100	86	43	79	44	356	126
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	449	1188	191	284	1607	893
Starvation Cap Reductn	17	0	272	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.77	0.32	0.46	0.54	0.31

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	101	106	10	714	105	103	839
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.44	0.14	0.45	0.42
Control Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Length 50th (ft)	13	0	19	1	4	139	0	45	116
Queue Length 95th (ft)	29	0	34	27	18	207	11	88	229
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1605	777	290	1984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.21	0.24	0.05	0.44	0.14	0.36	0.42

Intersection Summary



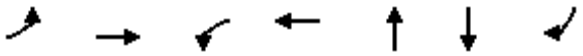
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	901	105	530	397	520	167	342	284
v/c Ratio	0.70	0.90	0.71	0.65	0.94	0.79	0.67	0.91	0.49
Control Delay	31.1	29.6	75.5	42.0	72.0	45.9	58.5	74.5	18.8
Queue Delay	0.0	0.0	0.0	0.0	2.9	20.0	0.0	0.0	0.0
Total Delay	31.1	29.6	75.5	42.0	74.8	65.9	58.5	74.5	18.8
Queue Length 50th (ft)	95	355	75	174	298	373	111	~258	97
Queue Length 95th (ft)	m86	m355	#152	253	#479	#542	#202	#448	157
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1037	161	820	432	655	251	375	668
Starvation Cap Reductn	0	0	0	0	11	138	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.87	0.65	0.65	0.94	1.01	0.67	0.91	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

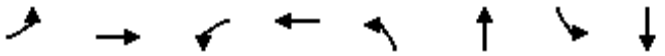


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	156	115	28	72	950	604	59
v/c Ratio	0.52	0.27	0.10	0.18	0.46	0.61	0.06
Control Delay	23.6	11.2	14.5	6.2	5.4	10.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	23.6	11.2	14.5	6.2	5.5	10.0	3.1
Queue Length 50th (ft)	49	19	8	3	33	160	6
Queue Length 95th (ft)	58	31	14	15	98	m#348	m12
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	544	735	515	694	2044	989	988
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	8	0	0	15	231	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.16	0.05	0.11	0.52	0.61	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	50	42	49	143	8	753	70	585
v/c Ratio	0.26	0.14	0.23	0.41	0.02	0.58	0.17	0.46
Control Delay	22.3	16.5	21.2	10.1	4.7	9.1	3.2	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	16.5	21.2	10.1	4.7	9.1	3.2	4.9
Queue Length 50th (ft)	16	11	15	10	1	89	7	142
Queue Length 95th (ft)	22	17	26	27	6	#387	m12	260
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	377	571	420	579	522	1296	401	1264
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.07	0.12	0.25	0.02	0.58	0.17	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

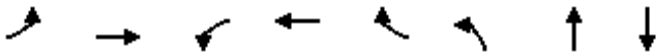


Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	254	108	144	23	472	71	525
v/c Ratio	0.71	0.38	0.38	0.11	0.51	0.32	0.50
Control Delay	29.1	22.0	6.6	28.1	13.6	26.8	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	22.0	6.6	28.1	13.6	26.8	12.5
Queue Length 50th (ft)	73	33	0	14	60	23	73
Queue Length 95th (ft)	109	60	32	m27	233	51	#291
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	506	414	489	231	917	234	1059
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.26	0.29	0.10	0.51	0.30	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	46	816	164	571	57	335	376	285
v/c Ratio	0.37	0.84	0.77	0.45	0.10	0.93	0.90	0.88
Control Delay	59.6	46.7	95.2	15.2	0.7	77.9	66.3	70.9
Queue Delay	0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	55.9	95.2	15.2	0.7	77.9	66.3	70.9
Queue Length 50th (ft)	33	306	131	71	0	244	255	202
Queue Length 95th (ft)	72	#450	m#218	88	m2	#357	#362	#326
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	130	967	234	1283	584	375	435	371
Starvation Cap Reductn	0	130	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.97	0.70	0.45	0.10	0.89	0.86	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

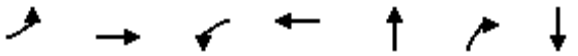
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	778	110	630	159	82	288	86	135	372
v/c Ratio	0.33	0.58	0.65	0.41	0.23	0.58	0.79	0.20	0.69	0.81
Control Delay	35.3	15.2	67.1	24.4	8.4	68.1	59.2	1.0	64.3	50.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	35.3	15.2	67.1	24.4	8.4	68.1	59.2	1.0	64.3	50.9
Queue Length 50th (ft)	29	90	80	173	18	60	202	0	102	245
Queue Length 95th (ft)	m34	m108	137	250	68	#120	292	0	165	325
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1345	216	1537	688	144	438	489	245	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	5
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.58	0.51	0.41	0.23	0.57	0.66	0.18	0.55	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

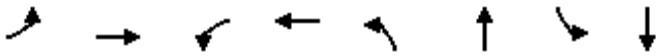


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	865	69	879	346	324	235
v/c Ratio	0.16	0.70	0.46	0.62	0.92	0.61	0.75
Control Delay	52.6	36.0	62.4	11.3	74.8	13.6	59.2
Queue Delay	0.0	1.3	0.0	2.4	0.0	0.1	0.0
Total Delay	52.6	37.3	62.4	13.7	74.8	13.8	59.2
Queue Length 50th (ft)	16	288	45	37	250	34	169
Queue Length 95th (ft)	43	#472	m43	m355	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1236	174	1426	398	546	416
Starvation Cap Reductn	0	0	0	400	0	0	0
Spillback Cap Reductn	0	185	0	0	0	15	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.82	0.40	0.86	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



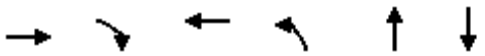
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	946	67	803	363	939	235	1027
v/c Ratio	0.82	0.91	0.42	1.03	0.76	0.87	0.87	0.91
Control Delay	49.5	30.0	58.4	80.8	59.0	46.7	78.5	36.1
Queue Delay	0.0	9.3	0.0	27.1	0.0	0.0	0.0	1.0
Total Delay	49.5	39.3	58.4	107.9	59.0	46.7	78.5	37.1
Queue Length 50th (ft)	162	351	48	~323	136	356	131	112
Queue Length 95th (ft)	m#263	#461	88	#397	#192	#486	#292	#509
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1043	158	781	476	1085	288	1128
Starvation Cap Reductn	0	88	0	0	0	0	0	21
Spillback Cap Reductn	0	0	0	93	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.99	0.42	1.17	0.76	0.87	0.82	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	285	169	47	81	1241	1106
v/c Ratio	0.92	0.40	0.12	0.32	0.54	0.51
Control Delay	75.4	16.6	18.0	6.1	5.1	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	75.4	16.6	18.0	6.1	5.3	19.2
Queue Length 50th (ft)	200	37	11	13	142	368
Queue Length 95th (ft)	#285	78	9	m15	m145	450
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	461	419	252	2313	2162
Starvation Cap Reductn	0	0	0	0	342	0
Spillback Cap Reductn	0	2	0	0	0	78
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.37	0.11	0.32	0.63	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	190	150	1321	1079
v/c Ratio	0.52	0.49	0.53	0.43
Control Delay	26.6	10.6	4.7	6.7
Queue Delay	0.0	0.0	0.2	0.3
Total Delay	26.6	10.6	4.9	7.0
Queue Length 50th (ft)	64	18	109	172
Queue Length 95th (ft)	128	m125	262	213
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	491	306	2490	2523
Starvation Cap Reductn	0	0	353	774
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.49	0.62	0.62

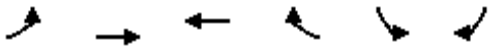
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	102	124	55	59	1411	20	1117
v/c Ratio	0.44	0.36	0.21	0.29	0.58	0.13	0.51
Control Delay	47.1	9.0	31.0	49.8	11.8	50.3	13.9
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Total Delay	47.1	9.0	31.0	49.8	12.9	50.3	13.9
Queue Length 50th (ft)	74	0	28	40	120	14	193
Queue Length 95th (ft)	100	35	37	82	488	39	368
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	397	497	451	216	2449	216	2186
Starvation Cap Reductn	0	0	0	0	729	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.25	0.12	0.27	0.82	0.09	0.51

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	858	1052	857	667	273
v/c Ratio	0.36	0.42	0.74	0.82	0.88	0.44
Control Delay	47.3	6.7	10.5	16.7	51.3	5.6
Queue Delay	0.0	0.0	0.7	36.3	0.0	0.0
Total Delay	47.3	6.7	11.1	53.0	51.3	5.6
Queue Length 50th (ft)	63	84	78	336	302	0
Queue Length 95th (ft)	116	130	m97	m469	390	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2024	1418	1041	838	663
Starvation Cap Reductn	0	0	124	238	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.81	1.07	0.80	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	930	1399	403	486	589	650
v/c Ratio	0.58	0.48	0.77	0.55	0.85	1.05	0.84
Control Delay	42.2	12.8	24.3	4.8	49.3	86.4	33.5
Queue Delay	0.0	1.2	1.9	0.4	3.6	19.1	0.1
Total Delay	42.2	14.0	26.2	5.2	52.9	105.5	33.6
Queue Length 50th (ft)	76	121	201	11	343	~502	388
Queue Length 95th (ft)	m132	147	296	m35	#537	#747	#646
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	561	770
Starvation Cap Reductn	0	732	260	77	0	0	0
Spillback Cap Reductn	0	293	82	0	39	38	2
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.77	0.90	0.62	0.91	1.13	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

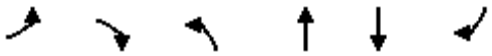
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	685	363	106	506
v/c Ratio	0.47	0.23	0.14	0.36
Control Delay	10.8	3.6	0.3	20.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.1	3.6	0.3	20.1
Queue Length 50th (ft)	73	14	0	121
Queue Length 95th (ft)	109	m15	m0	162
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1464	1582	742	1396
Starvation Cap Reductn	274	0	0	0
Spillback Cap Reductn	114	0	0	51
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.23	0.14	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	100	79	479	513	198	169
v/c Ratio	0.53	0.07	0.24	0.36	0.69	0.53
Control Delay	79.7	5.1	2.1	1.0	56.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.7	5.1	2.1	1.0	56.8	12.9
Queue Length 50th (ft)	77	5	9	10	140	0
Queue Length 95th (ft)	119	54	23	13	200	55
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1367	2015	1443	572	507
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.06	0.24	0.36	0.35	0.33

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	393	1072	472	241	912	127	98	99	114	371	710
v/c Ratio	0.77	1.06	0.63	0.97	0.83	0.24	0.55	0.55	0.42	0.82	0.61
Control Delay	53.3	68.6	8.4	84.5	32.7	7.6	60.5	59.9	11.8	50.6	8.0
Queue Delay	0.0	9.1	0.2	0.0	0.8	0.0	0.0	0.0	0.0	18.5	0.1
Total Delay	53.3	77.7	8.6	84.5	33.5	7.6	60.5	59.9	11.8	69.1	8.1
Queue Length 50th (ft)	127	~476	92	172	287	18	72	73	0	249	31
Queue Length 95th (ft)	m162	m#556	m116	m#295	m362	m36	132	133	47	#409	70
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1015	741	249	1102	538	181	185	278	452	1168
Starvation Cap Reductn	0	22	32	0	0	0	0	0	0	78	44
Spillback Cap Reductn	0	0	0	0	46	0	0	0	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.08	0.67	0.97	0.86	0.24	0.54	0.54	0.41	0.99	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	71	148	702	62	132	860	278
v/c Ratio	0.49	0.49	0.59	0.42	0.53	0.54	0.31
Control Delay	59.5	53.7	4.2	57.5	16.2	25.0	18.8
Queue Delay	0.3	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	59.8	53.7	5.5	57.5	16.2	25.0	18.8
Queue Length 50th (ft)	56	58	0	44	0	243	105
Queue Length 95th (ft)	100	86	43	79	44	356	126
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	449	1188	191	284	1607	893
Starvation Cap Reductn	17	0	272	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.77	0.32	0.46	0.54	0.31

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	101	106	10	714	105	103	839
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.44	0.14	0.45	0.42
Control Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Length 50th (ft)	13	0	19	1	4	139	0	45	116
Queue Length 95th (ft)	29	0	34	27	18	207	11	88	229
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1605	777	290	1984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.21	0.24	0.05	0.44	0.14	0.36	0.42

Intersection Summary



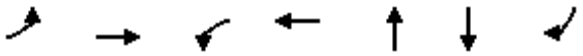
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	901	107	530	397	520	167	341	284
v/c Ratio	0.70	0.90	0.72	0.65	0.94	0.79	0.67	0.91	0.49
Control Delay	31.1	29.6	76.6	41.9	72.1	45.9	58.5	74.1	18.8
Queue Delay	0.0	0.0	0.0	0.0	2.9	20.0	0.0	0.0	0.0
Total Delay	31.1	29.6	76.6	41.9	75.0	65.9	58.5	74.1	18.8
Queue Length 50th (ft)	95	355	77	174	298	373	111	~256	97
Queue Length 95th (ft)	m86	m355	#156	253	#478	#542	#202	#447	157
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1037	161	821	432	655	251	375	668
Starvation Cap Reductn	0	0	0	0	11	138	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.87	0.66	0.65	0.94	1.01	0.67	0.91	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

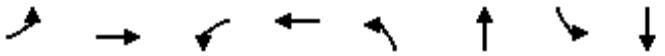


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	156	115	28	72	950	604	60
v/c Ratio	0.52	0.27	0.10	0.18	0.46	0.61	0.06
Control Delay	23.6	11.2	14.5	6.2	5.4	10.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Delay	23.6	11.2	14.5	6.2	5.5	10.2	3.1
Queue Length 50th (ft)	49	19	8	3	34	161	6
Queue Length 95th (ft)	58	31	14	15	100	m#354	m12
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	544	735	515	694	2044	983	988
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	8	0	0	15	231	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.16	0.05	0.11	0.52	0.61	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	42	49	144	8	749	70	582
v/c Ratio	0.28	0.14	0.23	0.41	0.02	0.58	0.17	0.46
Control Delay	22.7	16.5	21.2	10.1	4.9	9.1	3.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	16.5	21.2	10.1	4.9	9.1	3.1	4.9
Queue Length 50th (ft)	17	11	15	10	1	88	7	138
Queue Length 95th (ft)	23	17	26	27	6	#383	m12	259
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	375	571	420	579	524	1295	403	1260
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.07	0.12	0.25	0.02	0.58	0.17	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

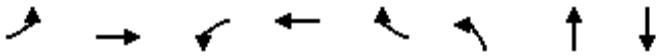


Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	254	105	144	25	473	71	520
v/c Ratio	0.71	0.37	0.38	0.12	0.52	0.32	0.49
Control Delay	29.1	21.9	6.6	28.5	13.5	26.8	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	21.9	6.6	28.5	13.5	26.8	12.4
Queue Length 50th (ft)	72	32	0	15	59	23	72
Queue Length 95th (ft)	109	59	32	m29	#236	51	#287
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	506	411	489	231	918	234	1062
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.26	0.29	0.11	0.52	0.30	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	46	816	164	568	57	335	374	281
v/c Ratio	0.37	0.84	0.77	0.44	0.10	0.93	0.90	0.88
Control Delay	59.6	46.2	95.0	15.1	0.7	77.9	65.9	70.5
Queue Delay	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	55.3	95.0	15.1	0.7	77.9	65.9	70.5
Queue Length 50th (ft)	33	305	130	70	0	244	253	199
Queue Length 95th (ft)	72	#450	m#219	87	m2	#357	#357	#320
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	130	973	234	1290	587	375	434	371
Starvation Cap Reductn	0	135	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.97	0.70	0.44	0.10	0.89	0.86	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

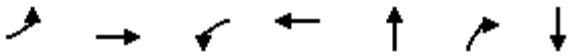


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	775	110	628	159	82	290	86	137	373
v/c Ratio	0.33	0.58	0.65	0.41	0.23	0.58	0.80	0.20	0.69	0.81
Control Delay	35.5	15.1	67.1	24.4	8.4	68.1	59.9	1.0	64.7	51.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	35.5	15.1	67.1	24.4	8.4	68.1	59.9	1.0	64.7	51.1
Queue Length 50th (ft)	29	90	80	173	18	60	204	0	103	247
Queue Length 95th (ft)	m33	m108	137	249	68	#120	293	0	168	326
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1343	216	1536	687	144	438	489	245	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	5
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.58	0.51	0.41	0.23	0.57	0.66	0.18	0.56	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

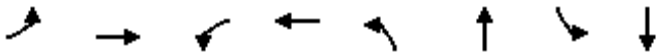
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	864	69	878	346	324	235
v/c Ratio	0.16	0.70	0.46	0.62	0.92	0.61	0.75
Control Delay	52.6	35.9	62.3	11.3	74.8	13.6	59.2
Queue Delay	0.0	1.3	0.0	2.4	0.0	0.1	0.0
Total Delay	52.6	37.2	62.3	13.7	74.8	13.8	59.2
Queue Length 50th (ft)	16	287	45	38	250	34	169
Queue Length 95th (ft)	43	#470	m44	m357	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1236	174	1426	398	546	416
Starvation Cap Reductn	0	0	0	401	0	0	0
Spillback Cap Reductn	0	185	0	0	0	15	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.82	0.40	0.86	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



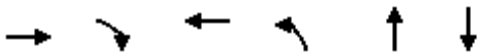
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	946	67	801	362	939	235	1028
v/c Ratio	0.82	0.91	0.42	1.02	0.76	0.87	0.87	0.91
Control Delay	49.5	30.0	58.4	79.7	58.9	46.7	78.4	36.2
Queue Delay	0.0	9.1	0.0	28.3	0.0	0.0	0.0	0.9
Total Delay	49.5	39.1	58.4	108.0	58.9	46.7	78.4	37.1
Queue Length 50th (ft)	162	351	48	~320	135	356	131	118
Queue Length 95th (ft)	m#263	#461	88	#394	#190	#486	#292	#510
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1043	158	782	476	1085	288	1128
Starvation Cap Reductn	0	87	0	0	0	0	0	20
Spillback Cap Reductn	0	0	0	92	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.99	0.42	1.16	0.76	0.87	0.82	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	282	169	47	81	1243	1102
v/c Ratio	0.91	0.40	0.12	0.32	0.54	0.51
Control Delay	75.2	16.6	18.1	6.0	5.0	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	75.2	16.6	18.1	6.0	5.2	19.0
Queue Length 50th (ft)	198	37	12	13	140	364
Queue Length 95th (ft)	#280	78	9	m15	m146	446
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	461	419	254	2319	2169
Starvation Cap Reductn	0	0	0	0	349	0
Spillback Cap Reductn	0	2	0	0	0	78
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.37	0.11	0.32	0.63	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	191	152	1320	1077
v/c Ratio	0.53	0.50	0.53	0.43
Control Delay	26.5	10.9	4.7	6.7
Queue Delay	0.0	0.0	0.2	0.3
Total Delay	26.5	10.9	4.8	7.0
Queue Length 50th (ft)	64	17	97	171
Queue Length 95th (ft)	129	m129	267	212
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	492	307	2490	2522
Starvation Cap Reductn	0	0	349	775
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.50	0.62	0.62

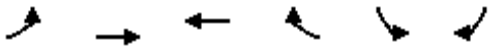
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	104	124	55	59	1410	20	1114
v/c Ratio	0.45	0.36	0.20	0.29	0.58	0.13	0.51
Control Delay	47.4	9.0	30.9	49.8	11.8	50.3	13.9
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Total Delay	47.4	9.0	30.9	49.8	13.0	50.3	13.9
Queue Length 50th (ft)	75	0	28	40	122	14	193
Queue Length 95th (ft)	101	35	37	82	488	39	367
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	395	497	451	216	2446	216	2183
Starvation Cap Reductn	0	0	0	0	727	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.25	0.12	0.27	0.82	0.09	0.51

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	442	882	750	837	175
v/c Ratio	0.45	0.26	0.73	0.77	0.85	0.26
Control Delay	51.8	11.0	21.2	16.2	40.3	3.8
Queue Delay	0.0	0.0	5.2	11.4	0.0	0.0
Total Delay	51.8	11.0	26.4	27.7	40.3	3.8
Queue Length 50th (ft)	72	60	179	316	364	0
Queue Length 95th (ft)	130	103	m316	m482	426	38
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1725	1214	970	1147	748
Starvation Cap Reductn	0	0	266	203	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.26	0.93	0.98	0.73	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1051	1258	521	419	557	550
v/c Ratio	0.63	0.41	0.53	0.55	0.79	1.01	0.90
Control Delay	84.8	5.2	18.4	3.1	46.7	70.2	48.4
Queue Delay	0.0	0.7	0.3	0.3	0.0	5.8	2.1
Total Delay	84.8	5.9	18.8	3.4	46.7	76.1	50.5
Queue Length 50th (ft)	66	35	220	11	291	~376	357
Queue Length 95th (ft)	m95	66	253	25	#452	#638	#592
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2535	2380	955	531	553	610
Starvation Cap Reductn	0	1025	505	105	0	0	0
Spillback Cap Reductn	0	104	165	0	0	11	17
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.70	0.67	0.61	0.79	1.03	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

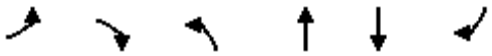
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	990	321	179	370
v/c Ratio	0.81	0.17	0.21	0.23
Control Delay	13.5	3.7	0.5	15.0
Queue Delay	0.1	0.0	0.3	0.0
Total Delay	13.5	3.7	0.7	15.0
Queue Length 50th (ft)	63	14	0	70
Queue Length 95th (ft)	76	14	0	111
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1727	1840	863	1588
Starvation Cap Reductn	0	0	288	0
Spillback Cap Reductn	60	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.17	0.31	0.23

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	86	761	608	299	239
v/c Ratio	0.71	0.09	0.58	0.44	0.49	0.56
Control Delay	79.7	10.6	14.9	1.3	34.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.7	10.6	14.9	1.3	34.3	10.5
Queue Length 50th (ft)	123	21	188	12	172	0
Queue Length 95th (ft)	171	48	182	29	284	67
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1016	1312	1381	607	515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.08	0.58	0.44	0.49	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	330	927	694	363	726	170	123	123	112	384	788
v/c Ratio	0.57	0.92	1.00	1.46	0.72	0.34	0.68	0.67	0.41	0.85	0.65
Control Delay	42.7	36.3	47.6	252.9	25.9	9.6	68.1	67.3	11.4	44.6	7.1
Queue Delay	0.0	2.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	22.6	0.1
Total Delay	42.7	39.2	48.3	252.9	25.9	9.6	68.1	67.3	11.4	67.2	7.2
Queue Length 50th (ft)	107	297	440	~361	226	52	92	92	0	157	86
Queue Length 95th (ft)	m133	m#409	m#694	#481	275	m58	#180	#178	45	#419	87
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1006	697	249	1014	498	181	183	274	454	1212
Starvation Cap Reductn	0	35	2	0	0	0	0	0	0	75	37
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.95	1.00	1.46	0.72	0.34	0.68	0.67	0.41	1.01	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	268	969	77	202	1174	395
v/c Ratio	0.65	0.65	0.69	0.49	0.63	0.77	0.49
Control Delay	62.1	54.6	4.7	59.4	15.8	16.8	24.7
Queue Delay	4.4	3.1	1.8	0.0	0.0	0.0	0.0
Total Delay	66.5	57.7	6.5	59.4	15.8	16.8	24.7
Queue Length 50th (ft)	97	103	4	55	0	405	140
Queue Length 95th (ft)	165	147	57	102	70	#578	#202
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	223	469	1398	220	369	1524	812
Starvation Cap Reductn	48	116	261	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.76	0.85	0.35	0.55	0.77	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	125	190	16	1053	146	235	1204
v/c Ratio	0.29	0.09	0.46	0.51	0.12	0.61	0.20	0.81	0.54
Control Delay	59.3	1.0	50.1	11.6	50.5	23.8	9.3	58.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0
Total Delay	59.3	1.0	50.1	11.6	50.5	25.0	9.3	58.7	15.5
Queue Length 50th (ft)	20	0	43	1	11	294	23	174	291
Queue Length 95th (ft)	45	0	70	54	34	433	72	254	398
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1738	748	396	2248
Starvation Cap Reductn	0	0	0	0	0	439	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.38	0.47	0.11	0.81	0.20	0.59	0.54

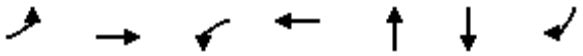
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	758	88	697	293	249	43	225	149
v/c Ratio	0.56	0.74	0.51	0.76	0.82	0.36	0.13	0.49	0.23
Control Delay	41.6	36.5	59.6	43.9	61.0	28.6	37.7	42.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	36.5	59.6	43.9	61.0	28.6	37.7	42.2	4.7
Queue Length 50th (ft)	79	285	61	239	213	141	25	144	0
Queue Length 95th (ft)	m91	m323	117	325	300	239	59	240	41
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1083	181	918	433	701	335	462	776
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.70	0.49	0.76	0.68	0.36	0.13	0.49	0.19

Intersection Summary

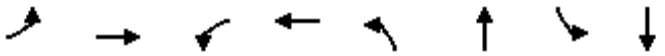
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	53	18	12	54	469	519	41
v/c Ratio	0.19	0.05	0.04	0.15	0.19	0.41	0.04
Control Delay	18.5	12.2	15.6	7.3	2.2	5.6	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	12.2	15.6	7.3	2.2	5.6	3.0
Queue Length 50th (ft)	16	3	3	2	12	163	5
Queue Length 95th (ft)	31	13	11	20	27	256	m15
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	569	730	587	702	2458	1265	1148
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.02	0.02	0.08	0.19	0.41	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



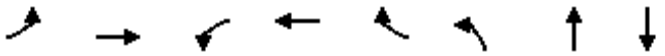
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	9	14	69	3	402	75	402
v/c Ratio	0.09	0.03	0.06	0.22	0.00	0.29	0.10	0.29
Control Delay	18.1	16.0	17.5	7.6	4.7	4.4	4.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	16.0	17.5	7.6	4.7	4.4	4.5	6.0
Queue Length 50th (ft)	6	2	4	2	0	33	19	131
Queue Length 95th (ft)	17	10	13	23	3	125	28	190
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	429	592	451	548	734	1401	734	1404
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.02	0.03	0.13	0.00	0.29	0.10	0.29

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	140	92	60	27	268	30	345
v/c Ratio	0.49	0.32	0.18	0.12	0.23	0.13	0.28
Control Delay	21.0	22.2	3.1	23.3	8.9	23.4	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	22.2	3.1	23.3	8.9	23.4	7.7
Queue Length 50th (ft)	34	30	0	8	22	9	30
Queue Length 95th (ft)	63	52	12	27	125	29	163
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	510	513	528	245	1151	245	1211
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.18	0.11	0.11	0.23	0.12	0.28

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	47	1098	226	758	27	298	313	136
v/c Ratio	0.36	1.08	0.84	0.52	0.04	0.88	0.75	0.52
Control Delay	59.8	90.1	93.1	14.5	0.1	71.7	42.8	46.5
Queue Delay	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	99.0	93.1	14.5	0.1	71.7	42.8	46.5
Queue Length 50th (ft)	35	~604	156	97	0	222	162	82
Queue Length 95th (ft)	74	#742	m#304	128	m0	#344	261	131
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	154	1018	278	1449	617	391	468	352
Starvation Cap Reductn	0	41	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.12	0.81	0.52	0.04	0.76	0.67	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

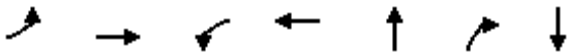


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	987	182	785	89	96	140	131	74	337
v/c Ratio	0.45	0.78	0.81	0.50	0.14	0.58	0.32	0.28	0.47	0.88
Control Delay	32.8	16.8	75.7	25.6	6.1	65.3	39.0	6.9	61.2	67.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	16.8	75.7	25.6	6.1	65.3	39.0	6.9	61.2	67.8
Queue Length 50th (ft)	34	102	137	231	2	73	90	0	56	241
Queue Length 95th (ft)	m36	m104	#228	316	36	125	147	46	102	#380
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1265	265	1576	640	223	455	474	223	421
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.78	0.69	0.50	0.14	0.43	0.31	0.28	0.33	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

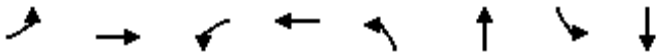


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1164	121	1063	260	169	130
v/c Ratio	0.08	0.85	0.70	0.61	0.84	0.42	0.51
Control Delay	52.7	40.1	68.4	10.2	69.7	9.0	48.2
Queue Delay	0.0	28.5	0.0	1.2	0.0	0.1	0.0
Total Delay	52.7	68.5	68.4	11.4	69.7	9.0	48.2
Queue Length 50th (ft)	7	395	98	51	195	0	90
Queue Length 95th (ft)	25	#726	m87	m#531	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1364	188	1743	384	459	399
Starvation Cap Reductn	0	0	0	425	0	0	0
Spillback Cap Reductn	0	257	0	0	0	13	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	1.05	0.64	0.81	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



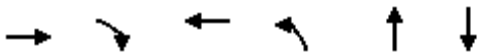
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	1099	59	760	564	689	177	923
v/c Ratio	0.60	1.00	0.39	0.90	0.95	0.60	0.82	0.97
Control Delay	32.2	37.5	59.2	55.3	74.5	34.6	73.4	58.5
Queue Delay	0.0	35.7	0.0	4.1	12.1	0.0	0.0	0.1
Total Delay	32.2	73.2	59.2	59.5	86.6	34.6	73.4	58.7
Queue Length 50th (ft)	122	~470	44	281	224	232	133	362
Queue Length 95th (ft)	m135	#602	81	315	#327	293	#232	#504
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	265	1100	153	921	596	1148	237	955
Starvation Cap Reductn	0	105	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	37	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.10	0.39	0.93	1.01	0.60	0.75	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	106	108	23	116	925	1050
v/c Ratio	0.53	0.36	0.11	0.33	0.34	0.42
Control Delay	55.5	10.9	39.4	4.6	2.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	55.5	10.9	39.4	4.6	2.5	4.6
Queue Length 50th (ft)	79	0	15	10	41	81
Queue Length 95th (ft)	126	48	18	m28	78	181
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	510	427	348	2694	2513
Starvation Cap Reductn	0	0	0	0	763	0
Spillback Cap Reductn	0	5	0	0	0	168
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.21	0.05	0.33	0.48	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



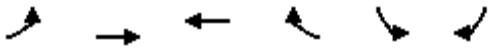
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	98	100	933	1008
v/c Ratio	0.25	0.30	0.38	0.40
Control Delay	11.4	10.3	7.0	7.2
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	11.4	10.3	7.0	7.3
Queue Length 50th (ft)	12	27	141	155
Queue Length 95th (ft)	36	62	181	198
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	546	331	2472	2515
Starvation Cap Reductn	0	0	0	574
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.30	0.38	0.52

Intersection Summary



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	57	64	37	31	902	24	1044
v/c Ratio	0.28	0.22	0.17	0.16	0.35	0.13	0.42
Control Delay	39.0	5.1	25.2	41.8	7.4	42.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	5.1	25.2	41.8	7.4	42.1	9.3
Queue Length 50th (ft)	34	0	14	18	47	14	141
Queue Length 95th (ft)	49	11	29	46	258	39	322
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	452	527	476	201	2583	201	2461
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.12	0.08	0.15	0.35	0.12	0.42

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	442	882	750	837	175
v/c Ratio	0.45	0.26	0.73	0.77	0.85	0.26
Control Delay	51.8	11.0	21.2	16.2	40.3	3.8
Queue Delay	0.0	0.0	5.2	11.4	0.0	0.0
Total Delay	51.8	11.0	26.4	27.7	40.3	3.8
Queue Length 50th (ft)	72	60	179	316	364	0
Queue Length 95th (ft)	130	103	m316	m482	426	38
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1725	1214	970	1147	748
Starvation Cap Reductn	0	0	266	203	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.26	0.93	0.98	0.73	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1051	1258	521	419	557	550
v/c Ratio	0.63	0.41	0.53	0.55	0.79	1.01	0.90
Control Delay	84.8	5.2	18.4	3.1	46.7	70.2	48.4
Queue Delay	0.0	0.7	0.3	0.3	0.0	5.8	2.1
Total Delay	84.8	5.9	18.8	3.4	46.7	76.1	50.5
Queue Length 50th (ft)	66	35	220	11	291	~376	357
Queue Length 95th (ft)	m95	66	253	25	#452	#638	#592
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2535	2380	955	531	553	610
Starvation Cap Reductn	0	1025	505	105	0	0	0
Spillback Cap Reductn	0	104	165	0	0	11	17
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.70	0.67	0.61	0.79	1.03	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

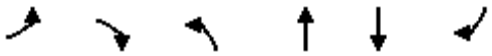
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	990	321	179	370
v/c Ratio	0.81	0.17	0.21	0.23
Control Delay	13.5	3.7	0.5	15.0
Queue Delay	0.1	0.0	0.3	0.0
Total Delay	13.5	3.7	0.7	15.0
Queue Length 50th (ft)	63	14	0	70
Queue Length 95th (ft)	76	14	0	111
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1727	1840	863	1588
Starvation Cap Reductn	0	0	288	0
Spillback Cap Reductn	60	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.17	0.31	0.23

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	86	761	608	299	239
v/c Ratio	0.71	0.09	0.58	0.44	0.49	0.56
Control Delay	79.7	10.6	14.9	1.3	34.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.7	10.6	14.9	1.3	34.3	10.5
Queue Length 50th (ft)	123	21	188	12	172	0
Queue Length 95th (ft)	171	48	182	29	284	67
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1016	1312	1381	607	515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.08	0.58	0.44	0.49	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	330	927	694	363	726	170	123	123	112	384	788
v/c Ratio	0.57	0.92	1.00	1.46	0.72	0.34	0.68	0.67	0.41	0.85	0.65
Control Delay	42.7	36.3	47.6	252.9	25.9	9.6	68.1	67.3	11.4	44.6	7.1
Queue Delay	0.0	2.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	22.6	0.1
Total Delay	42.7	39.2	48.3	252.9	25.9	9.6	68.1	67.3	11.4	67.2	7.2
Queue Length 50th (ft)	107	297	440	~361	226	52	92	92	0	157	86
Queue Length 95th (ft)	m133	m#409	m#694	#481	275	m58	#180	#178	45	#419	87
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1006	697	249	1014	498	181	183	274	454	1212
Starvation Cap Reductn	0	35	2	0	0	0	0	0	0	75	37
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.95	1.00	1.46	0.72	0.34	0.68	0.67	0.41	1.01	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	268	969	77	202	1174	395
v/c Ratio	0.65	0.65	0.69	0.49	0.63	0.77	0.49
Control Delay	62.1	54.6	4.7	59.4	15.8	16.8	24.7
Queue Delay	4.4	3.1	1.8	0.0	0.0	0.0	0.0
Total Delay	66.5	57.7	6.5	59.4	15.8	16.8	24.7
Queue Length 50th (ft)	97	103	4	55	0	405	140
Queue Length 95th (ft)	165	147	57	102	70	#578	#202
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	223	469	1398	220	369	1524	812
Starvation Cap Reductn	48	116	261	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.76	0.85	0.35	0.55	0.77	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	125	190	16	1053	146	235	1204
v/c Ratio	0.29	0.09	0.46	0.51	0.12	0.61	0.20	0.81	0.54
Control Delay	59.3	1.0	50.1	11.6	50.5	23.8	9.3	58.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0
Total Delay	59.3	1.0	50.1	11.6	50.5	25.0	9.3	58.7	15.5
Queue Length 50th (ft)	20	0	43	1	11	294	23	174	291
Queue Length 95th (ft)	45	0	70	54	34	433	72	254	398
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1738	748	396	2248
Starvation Cap Reductn	0	0	0	0	0	439	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.38	0.47	0.11	0.81	0.20	0.59	0.54

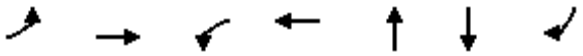
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	758	89	697	293	249	43	224	149
v/c Ratio	0.56	0.74	0.52	0.76	0.82	0.35	0.13	0.48	0.23
Control Delay	41.6	36.5	59.8	43.9	61.2	28.3	37.7	42.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	36.5	59.8	43.9	61.2	28.3	37.7	42.2	4.7
Queue Length 50th (ft)	79	285	62	239	212	139	25	143	0
Queue Length 95th (ft)	m91	m323	117	325	300	240	59	238	41
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1083	181	918	433	702	335	462	776
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.70	0.49	0.76	0.68	0.35	0.13	0.48	0.19

Intersection Summary

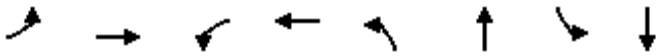
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	53	18	12	55	468	519	42
v/c Ratio	0.19	0.05	0.04	0.15	0.19	0.41	0.04
Control Delay	18.5	12.2	15.6	7.3	2.3	5.7	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	12.2	15.6	7.3	2.3	5.7	3.0
Queue Length 50th (ft)	16	3	3	2	13	163	5
Queue Length 95th (ft)	31	13	11	20	28	258	m16
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	569	730	587	702	2458	1262	1148
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.02	0.02	0.08	0.19	0.41	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



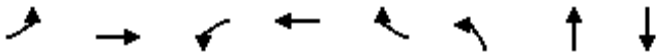
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	9	14	71	3	397	75	400
v/c Ratio	0.11	0.03	0.06	0.22	0.00	0.28	0.10	0.29
Control Delay	18.5	16.0	17.5	7.9	4.7	4.4	4.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	16.0	17.5	7.9	4.7	4.4	4.5	6.0
Queue Length 50th (ft)	7	2	4	2	0	32	19	128
Queue Length 95th (ft)	19	10	13	24	3	124	28	187
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	428	592	451	551	736	1401	738	1400
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.02	0.03	0.13	0.00	0.28	0.10	0.29

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	136	90	60	28	268	30	341
v/c Ratio	0.47	0.31	0.18	0.12	0.23	0.13	0.30
Control Delay	19.8	22.3	3.1	23.3	8.8	23.4	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	22.3	3.1	23.3	8.8	23.4	9.2
Queue Length 50th (ft)	31	29	0	9	22	9	29
Queue Length 95th (ft)	60	52	12	28	125	29	161
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	517	513	528	245	1155	245	1148
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.18	0.11	0.11	0.23	0.12	0.30

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	47	1098	226	757	27	298	313	130
v/c Ratio	0.36	1.08	0.84	0.52	0.04	0.88	0.75	0.49
Control Delay	59.8	89.4	93.2	14.5	0.1	71.7	42.8	45.6
Queue Delay	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	99.1	93.2	14.5	0.1	71.7	42.8	45.6
Queue Length 50th (ft)	35	~604	156	97	0	222	162	78
Queue Length 95th (ft)	74	#742	m#304	131	m0	#344	261	125
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	154	1020	278	1451	618	391	468	353
Starvation Cap Reductn	0	41	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.12	0.81	0.52	0.04	0.76	0.67	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

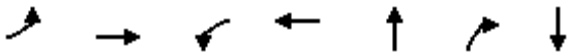


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	985	182	783	90	96	141	131	76	338
v/c Ratio	0.45	0.78	0.81	0.50	0.14	0.58	0.32	0.28	0.48	0.88
Control Delay	32.5	16.7	75.7	25.6	6.2	65.3	39.1	6.9	61.5	67.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	16.7	75.7	25.6	6.2	65.3	39.1	6.9	61.5	67.9
Queue Length 50th (ft)	34	100	137	230	3	73	91	0	57	241
Queue Length 95th (ft)	m37	m103	#228	316	37	125	148	46	104	#383
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1263	265	1574	639	223	454	474	223	421
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.78	0.69	0.50	0.14	0.43	0.31	0.28	0.34	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

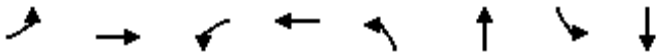


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1164	121	1062	260	169	130
v/c Ratio	0.08	0.85	0.70	0.61	0.84	0.42	0.51
Control Delay	52.7	40.1	68.4	10.2	69.7	9.0	48.2
Queue Delay	0.0	28.5	0.0	1.2	0.0	0.1	0.0
Total Delay	52.7	68.5	68.4	11.4	69.7	9.0	48.2
Queue Length 50th (ft)	7	395	98	51	195	0	90
Queue Length 95th (ft)	25	#726	m87	m#531	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1364	188	1743	384	459	399
Starvation Cap Reductn	0	0	0	427	0	0	0
Spillback Cap Reductn	0	257	0	0	0	13	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	1.05	0.64	0.81	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



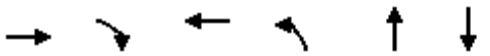
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	1098	59	760	563	689	177	923
v/c Ratio	0.60	1.00	0.39	0.90	0.94	0.60	0.82	0.97
Control Delay	32.3	37.3	59.2	55.4	74.2	34.6	73.4	58.6
Queue Delay	0.0	35.9	0.0	4.2	11.8	0.0	0.0	0.1
Total Delay	32.3	73.2	59.2	59.6	86.0	34.6	73.4	58.7
Queue Length 50th (ft)	122	~470	44	281	224	232	133	362
Queue Length 95th (ft)	m135	#602	81	315	#327	293	#232	#504
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	265	1100	153	920	596	1148	237	955
Starvation Cap Reductn	0	105	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	37	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.10	0.39	0.93	1.01	0.60	0.75	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	104	108	23	116	926	1048
v/c Ratio	0.52	0.36	0.11	0.33	0.34	0.42
Control Delay	55.2	10.9	39.5	4.5	2.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	55.2	10.9	39.5	4.5	2.5	4.6
Queue Length 50th (ft)	78	0	15	10	41	80
Queue Length 95th (ft)	124	48	18	m28	79	181
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	510	427	350	2696	2515
Starvation Cap Reductn	0	0	0	0	765	0
Spillback Cap Reductn	0	5	0	0	0	168
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.21	0.05	0.33	0.48	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



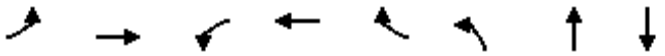
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	98	101	931	1006
v/c Ratio	0.25	0.30	0.38	0.40
Control Delay	11.4	10.3	7.0	7.2
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	11.4	10.3	7.0	7.3
Queue Length 50th (ft)	12	27	140	154
Queue Length 95th (ft)	36	62	181	197
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	546	332	2472	2515
Starvation Cap Reductn	0	0	0	575
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.30	0.38	0.52

Intersection Summary



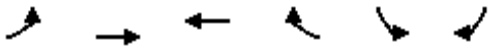
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	57	64	37	31	900	24	1043
v/c Ratio	0.28	0.22	0.17	0.16	0.35	0.13	0.42
Control Delay	39.0	5.1	25.2	41.8	7.4	42.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	5.1	25.2	41.8	7.4	42.1	9.3
Queue Length 50th (ft)	34	0	14	18	47	14	140
Queue Length 95th (ft)	49	11	29	46	257	39	321
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	452	527	476	201	2583	201	2461
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.12	0.08	0.15	0.35	0.12	0.42

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	22	367	112	257	237	99	237	116
v/c Ratio	0.15	0.28	0.58	0.15	0.27	0.40	0.81	0.50
Control Delay	42.4	19.4	52.0	15.9	4.2	40.9	57.1	41.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	19.4	52.0	15.9	4.2	40.9	57.1	41.8
Queue Length 50th (ft)	12	65	64	33	0	54	127	66
Queue Length 95th (ft)	36	131	120	96	55	93	189	98
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	158	1334	207	1748	863	282	331	452
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.28	0.54	0.15	0.27	0.35	0.72	0.26

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	856	1090	877	646	273
v/c Ratio	0.36	0.42	0.76	0.83	0.87	0.44
Control Delay	47.3	6.5	10.6	17.3	50.5	5.7
Queue Delay	0.0	0.0	0.8	42.6	0.0	0.0
Total Delay	47.3	6.5	11.4	59.9	50.5	5.7
Queue Length 50th (ft)	63	81	79	378	292	0
Queue Length 95th (ft)	116	130	m98	m490	375	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2037	1428	1055	838	663
Starvation Cap Reductn	0	0	120	246	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.83	1.08	0.77	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	907	1457	425	486	588	646
v/c Ratio	0.58	0.47	0.80	0.58	0.85	1.05	0.84
Control Delay	41.8	12.9	25.0	5.3	49.3	85.9	33.1
Queue Delay	0.0	1.1	3.2	0.5	4.7	19.8	0.1
Total Delay	41.8	14.1	28.2	5.8	54.0	105.7	33.1
Queue Length 50th (ft)	75	119	205	12	343	~501	384
Queue Length 95th (ft)	m134	143	m300	m31	#537	#745	#640
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	561	770
Starvation Cap Reductn	0	742	261	77	0	0	0
Spillback Cap Reductn	0	284	73	0	46	44	2
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.75	0.94	0.65	0.92	1.14	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

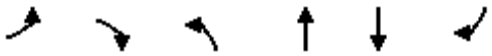
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	676	363	106	506
v/c Ratio	0.46	0.23	0.14	0.36
Control Delay	10.8	3.8	0.3	20.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.1	3.8	0.3	20.1
Queue Length 50th (ft)	72	15	0	121
Queue Length 95th (ft)	108	m16	m0	162
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1463	1582	742	1396
Starvation Cap Reductn	279	0	0	0
Spillback Cap Reductn	116	0	0	49
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.23	0.14	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	100	79	472	507	198	169
v/c Ratio	0.53	0.07	0.23	0.35	0.69	0.53
Control Delay	80.1	5.1	2.2	1.0	56.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	5.1	2.2	1.0	56.8	12.9
Queue Length 50th (ft)	77	5	9	10	140	0
Queue Length 95th (ft)	119	54	23	13	200	55
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1367	2015	1443	572	507
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.06	0.23	0.35	0.35	0.33

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	393	1050	461	241	1001	127	98	99	114	371	702
v/c Ratio	0.77	1.04	0.62	0.97	0.91	0.24	0.55	0.55	0.42	0.82	0.60
Control Delay	52.8	62.4	8.1	83.7	38.8	7.5	60.5	59.9	11.8	50.6	8.2
Queue Delay	0.0	9.9	0.3	0.0	3.7	0.0	0.0	0.0	0.0	19.1	0.1
Total Delay	52.8	72.3	8.4	83.7	42.5	7.5	60.5	59.9	11.8	69.7	8.3
Queue Length 50th (ft)	127	~458	86	169	325	17	72	73	0	251	33
Queue Length 95th (ft)	m162	m#540	m108	m#285	m#405	m32	132	133	47	#411	72
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1014	741	249	1102	538	181	185	278	452	1162
Starvation Cap Reductn	0	26	38	0	0	0	0	0	0	79	44
Spillback Cap Reductn	0	0	0	0	56	0	0	0	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.06	0.66	0.97	0.96	0.24	0.54	0.54	0.41	0.99	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	71	148	676	62	132	846	278
v/c Ratio	0.49	0.49	0.58	0.42	0.53	0.53	0.31
Control Delay	59.9	54.0	4.2	57.5	16.2	24.8	18.7
Queue Delay	0.3	0.0	1.3	0.0	0.0	0.0	0.0
Total Delay	60.2	54.0	5.5	57.5	16.2	24.8	18.7
Queue Length 50th (ft)	56	58	0	44	0	238	105
Queue Length 95th (ft)	101	86	42	79	44	347	126
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	448	1159	191	284	1609	895
Starvation Cap Reductn	16	0	276	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.77	0.32	0.46	0.53	0.31

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	101	106	10	701	105	103	814
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.44	0.14	0.45	0.41
Control Delay	36.2	0.6	25.3	8.0	30.5	19.1	1.3	36.4	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.3	8.0	30.5	19.1	1.3	36.4	12.5
Queue Length 50th (ft)	13	0	19	1	4	135	0	45	111
Queue Length 95th (ft)	29	0	34	27	18	202	11	88	221
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1605	777	290	1984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.21	0.24	0.05	0.44	0.14	0.36	0.41

Intersection Summary



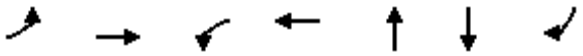
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	896	109	530	457	604	167	341	312
v/c Ratio	0.70	0.90	0.73	0.65	1.00	0.92	0.74	1.01	0.57
Control Delay	31.2	30.0	77.5	41.9	80.4	55.7	66.0	98.5	23.1
Queue Delay	0.0	0.0	0.0	0.0	6.5	46.2	0.0	0.0	0.0
Total Delay	31.2	30.0	77.5	41.9	86.9	101.9	66.0	98.5	23.1
Queue Length 50th (ft)	95	353	79	174	~375	444	111	~256	123
Queue Length 95th (ft)	m87	m360	#159	253	#584	#676	#208	#447	188
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1036	161	821	459	655	226	337	632
Starvation Cap Reductn	0	0	0	0	11	119	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.86	0.68	0.65	1.02	1.13	0.74	1.01	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

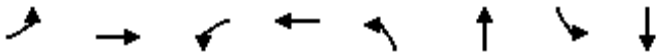


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	280	228	28	60	1029	580	81
v/c Ratio	0.74	0.41	0.10	0.12	0.62	0.71	0.10
Control Delay	29.3	9.9	12.4	5.5	10.2	12.2	3.7
Queue Delay	0.1	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay	29.3	9.9	12.4	5.5	10.8	12.2	3.7
Queue Length 50th (ft)	84	32	7	3	81	158	11
Queue Length 95th (ft)	106	50	15	14	147	m#262	m15
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	550	755	418	692	1667	812	819
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	12	0	0	19	298	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.30	0.07	0.09	0.75	0.71	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	145	49	144	16	757	70	621
v/c Ratio	0.63	0.38	0.21	0.36	0.04	0.62	0.20	0.52
Control Delay	31.8	13.0	18.7	8.4	5.7	11.0	3.7	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	13.0	18.7	8.4	5.7	11.0	3.7	5.7
Queue Length 50th (ft)	48	23	14	9	2	123	5	118
Queue Length 95th (ft)	54	31	26	27	10	#390	m11	261
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	384	579	380	579	451	1230	355	1202
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.25	0.13	0.25	0.04	0.62	0.20	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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m Volume for 95th percentile queue is metered by upstream signal.

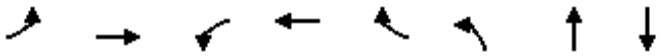


Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	227	89	144	12	483	71	600
v/c Ratio	0.67	0.33	0.39	0.06	0.52	0.31	0.56
Control Delay	28.5	21.6	6.9	26.2	13.3	26.5	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	21.6	6.9	26.2	13.3	26.5	13.6
Queue Length 50th (ft)	67	27	0	7	61	23	84
Queue Length 95th (ft)	100	52	32	m16	#257	51	#349
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	503	409	489	231	931	236	1079
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	2
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.22	0.29	0.05	0.52	0.30	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	21	816	164	557	71	335	366	404
v/c Ratio	0.17	0.96	0.77	0.43	0.12	0.93	0.88	1.06
Control Delay	53.7	62.7	95.3	14.9	1.0	77.9	63.0	104.4
Queue Delay	0.0	42.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	105.2	95.3	14.9	1.0	77.9	63.0	104.4
Queue Length 50th (ft)	15	309	131	64	0	244	245	~341
Queue Length 95th (ft)	41	#450	m#218	85	m3	#357	#344	#539
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	130	852	231	1297	590	375	434	382
Starvation Cap Reductn	0	119	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	1.11	0.71	0.43	0.12	0.89	0.84	1.06

Intersection Summary

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m Volume for 95th percentile queue is metered by upstream signal.

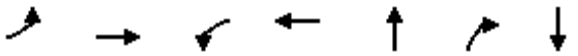


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	891	110	632	158	80	288	86	171	393
v/c Ratio	0.33	0.67	0.65	0.42	0.23	0.57	0.81	0.20	0.80	0.83
Control Delay	37.0	19.0	67.1	25.0	8.5	67.2	61.3	1.0	72.3	51.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	37.0	19.0	67.1	25.0	8.5	67.2	61.3	1.0	72.3	51.6
Queue Length 50th (ft)	29	136	80	177	17	58	206	0	130	265
Queue Length 95th (ft)	m30	m200	137	251	67	#112	292	0	#220	335
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1327	216	1515	680	144	438	489	245	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	5
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.67	0.51	0.42	0.23	0.56	0.66	0.18	0.70	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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m Volume for 95th percentile queue is metered by upstream signal.

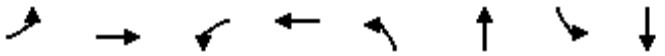


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	1011	69	880	346	324	235
v/c Ratio	0.16	0.81	0.46	0.62	0.92	0.61	0.75
Control Delay	52.6	40.4	61.7	11.2	74.8	13.6	59.2
Queue Delay	0.0	8.9	0.0	2.4	0.0	0.2	0.0
Total Delay	52.6	49.3	61.7	13.7	74.8	13.8	59.2
Queue Length 50th (ft)	16	360	45	37	250	34	169
Queue Length 95th (ft)	43	#595	m42	m365	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1241	174	1426	398	546	416
Starvation Cap Reductn	0	0	0	401	0	0	0
Spillback Cap Reductn	0	206	0	0	0	17	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.98	0.40	0.86	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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m Volume for 95th percentile queue is metered by upstream signal.



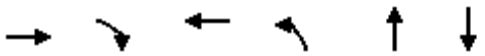
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	1096	67	788	374	931	248	1071
v/c Ratio	0.76	1.01	0.42	1.01	0.79	0.90	0.90	0.98
Control Delay	39.9	44.4	58.4	76.1	60.5	51.1	81.6	49.6
Queue Delay	0.0	23.7	0.0	32.6	0.0	0.0	0.0	4.1
Total Delay	39.9	68.1	58.4	108.7	60.5	51.1	81.6	53.7
Queue Length 50th (ft)	156	~460	48	~300	140	351	145	177
Queue Length 95th (ft)	m184	#574	88	#385	#206	#479	#318	#547
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1085	158	781	476	1031	288	1090
Starvation Cap Reductn	0	68	0	0	0	0	0	21
Spillback Cap Reductn	0	0	0	95	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.08	0.42	1.15	0.79	0.90	0.86	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	282	162	47	66	1245	1161
v/c Ratio	0.91	0.39	0.12	0.28	0.54	0.53
Control Delay	75.2	18.0	18.1	5.6	5.0	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	75.2	18.0	18.1	5.6	5.2	19.6
Queue Length 50th (ft)	198	40	12	10	140	393
Queue Length 95th (ft)	#280	81	9	m11	m143	481
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	452	419	236	2319	2173
Starvation Cap Reductn	0	0	0	0	341	0
Spillback Cap Reductn	0	2	0	0	0	96
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.36	0.11	0.28	0.63	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	200	146	1329	1124
v/c Ratio	0.54	0.50	0.53	0.44
Control Delay	25.5	11.5	4.8	6.8
Queue Delay	0.0	0.0	0.2	0.4
Total Delay	25.5	11.5	4.9	7.2
Queue Length 50th (ft)	63	17	104	182
Queue Length 95th (ft)	129	m43	277	226
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	498	291	2490	2526
Starvation Cap Reductn	0	0	347	758
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.50	0.62	0.64

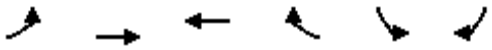
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	163	53	66	1412	20	1125
v/c Ratio	0.43	0.44	0.20	0.32	0.58	0.13	0.51
Control Delay	46.6	9.0	30.7	50.7	11.8	50.3	13.9
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Total Delay	46.6	9.0	30.7	50.7	12.9	50.3	13.9
Queue Length 50th (ft)	72	0	27	45	117	14	193
Queue Length 95th (ft)	97	39	36	90	488	39	372
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	400	525	449	216	2451	216	2191
Starvation Cap Reductn	0	0	0	0	732	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.31	0.12	0.31	0.82	0.09	0.51

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	440	874	740	822	175
v/c Ratio	0.45	0.25	0.72	0.76	0.84	0.26
Control Delay	51.8	10.7	20.9	15.6	40.2	3.8
Queue Delay	0.0	0.0	4.2	9.5	0.0	0.0
Total Delay	51.8	10.7	25.1	25.1	40.2	3.8
Queue Length 50th (ft)	72	58	175	285	357	0
Queue Length 95th (ft)	130	103	m308	m464	414	38
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1739	1222	969	1147	748
Starvation Cap Reductn	0	0	266	202	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.25	0.91	0.96	0.72	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1034	1239	518	419	554	547
v/c Ratio	0.63	0.41	0.52	0.54	0.79	1.00	0.90
Control Delay	84.9	5.2	18.4	3.2	46.7	67.7	47.3
Queue Delay	0.0	0.6	0.3	0.3	0.0	4.8	1.8
Total Delay	84.9	5.9	18.7	3.5	46.7	72.6	49.0
Queue Length 50th (ft)	66	34	216	11	291	363	352
Queue Length 95th (ft)	m98	65	249	26	#452	#629	#584
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2535	2380	954	531	555	611
Starvation Cap Reductn	0	1033	506	104	0	0	0
Spillback Cap Reductn	0	103	152	0	0	10	16
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.69	0.66	0.61	0.79	1.02	0.92

Intersection Summary

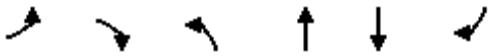
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	974	321	179	370
v/c Ratio	0.81	0.17	0.21	0.23
Control Delay	13.9	3.6	0.5	14.5
Queue Delay	0.0	0.0	0.3	0.0
Total Delay	13.9	3.6	0.7	14.5
Queue Length 50th (ft)	64	14	0	69
Queue Length 95th (ft)	77	14	0	108
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1727	1861	871	1606
Starvation Cap Reductn	0	0	292	0
Spillback Cap Reductn	57	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.17	0.31	0.23

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	86	746	601	299	239
v/c Ratio	0.71	0.09	0.57	0.44	0.49	0.56
Control Delay	79.1	10.4	14.9	1.3	34.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.1	10.4	14.9	1.3	34.3	10.5
Queue Length 50th (ft)	123	21	186	12	172	0
Queue Length 95th (ft)	169	46	174	29	284	67
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1016	1312	1381	607	515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.08	0.57	0.44	0.49	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	330	919	679	363	720	170	123	123	112	384	772
v/c Ratio	0.57	0.92	0.97	1.46	0.71	0.34	0.68	0.67	0.41	0.85	0.64
Control Delay	42.6	35.8	42.4	252.9	25.6	9.5	68.1	67.3	11.4	44.1	6.8
Queue Delay	0.0	2.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	21.2	0.1
Total Delay	42.6	38.5	42.9	252.9	25.6	9.5	68.1	67.3	11.4	65.3	6.9
Queue Length 50th (ft)	106	294	319	~360	223	53	92	92	0	155	80
Queue Length 95th (ft)	m134	m#408	m#673	#481	272	m57	#180	#178	45	#419	81
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1003	697	249	1014	498	181	183	274	454	1213
Starvation Cap Reductn	0	36	2	0	0	0	0	0	0	73	37
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.95	0.98	1.46	0.71	0.34	0.68	0.67	0.41	1.01	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	268	946	77	202	1152	395
v/c Ratio	0.65	0.65	0.68	0.49	0.63	0.76	0.49
Control Delay	62.1	54.6	4.4	59.4	15.8	16.5	24.6
Queue Delay	4.4	3.1	1.6	0.0	0.0	0.0	0.0
Total Delay	66.5	57.7	6.0	59.4	15.8	16.5	24.6
Queue Length 50th (ft)	97	103	0	55	0	393	140
Queue Length 95th (ft)	165	147	52	102	70	#568	#201
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	223	469	1391	220	369	1522	812
Starvation Cap Reductn	48	116	266	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.76	0.84	0.35	0.55	0.76	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	125	190	16	1030	146	235	1180
v/c Ratio	0.29	0.09	0.46	0.51	0.12	0.59	0.19	0.81	0.53
Control Delay	59.3	1.0	50.1	11.6	50.5	23.4	9.2	58.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Total Delay	59.3	1.0	50.1	11.6	50.5	24.6	9.2	58.8	15.2
Queue Length 50th (ft)	20	0	43	1	11	284	22	174	286
Queue Length 95th (ft)	45	0	70	54	34	420	71	254	387
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1738	749	396	2247
Starvation Cap Reductn	0	0	0	0	0	444	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.38	0.47	0.11	0.80	0.19	0.59	0.53

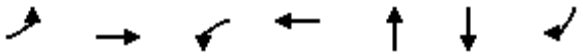
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	757	88	697	283	254	43	223	155
v/c Ratio	0.56	0.74	0.51	0.76	0.81	0.36	0.13	0.47	0.23
Control Delay	41.4	36.5	59.5	43.9	60.8	28.8	37.4	41.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.4	36.5	59.5	43.9	60.8	28.8	37.4	41.6	4.6
Queue Length 50th (ft)	78	285	61	239	204	143	24	141	0
Queue Length 95th (ft)	m91	m323	117	325	292	246	59	237	42
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1083	181	918	433	702	339	470	785
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.70	0.49	0.76	0.65	0.36	0.13	0.47	0.20

Intersection Summary

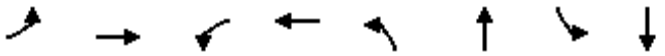
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	49	22	12	46	475	497	61
v/c Ratio	0.18	0.06	0.04	0.13	0.19	0.39	0.05
Control Delay	18.2	11.6	15.6	7.6	2.4	5.4	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	11.6	15.6	7.6	2.4	5.4	2.9
Queue Length 50th (ft)	15	3	3	2	14	156	7
Queue Length 95th (ft)	29	14	11	18	30	223	m22
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	573	724	585	701	2448	1279	1150
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.03	0.02	0.07	0.19	0.39	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



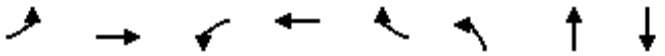
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	9	14	67	7	399	75	391
v/c Ratio	0.14	0.03	0.06	0.21	0.01	0.28	0.10	0.28
Control Delay	19.1	13.6	17.5	7.3	4.5	4.4	4.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	13.6	17.5	7.3	4.5	4.4	4.5	6.0
Queue Length 50th (ft)	9	2	4	1	0	32	20	120
Queue Length 95th (ft)	22	9	13	22	6	124	30	200
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	430	559	451	545	743	1401	736	1406
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.02	0.03	0.12	0.01	0.28	0.10	0.28

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	108	77	60	17	272	30	346
v/c Ratio	0.40	0.27	0.18	0.07	0.23	0.13	0.28
Control Delay	20.0	21.7	3.1	22.8	8.8	23.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	21.7	3.1	22.8	8.8	23.4	7.6
Queue Length 50th (ft)	26	25	0	5	22	9	29
Queue Length 95th (ft)	52	45	12	20	127	29	163
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	504	513	528	245	1160	245	1222
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.15	0.11	0.07	0.23	0.12	0.28

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	23	1098	226	748	32	298	309	130
v/c Ratio	0.19	1.08	0.84	0.48	0.05	0.88	0.73	0.49
Control Delay	56.2	89.4	93.2	12.9	0.1	71.7	41.2	45.6
Queue Delay	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	99.1	93.2	12.9	0.1	71.7	41.2	45.6
Queue Length 50th (ft)	17	~604	155	96	0	222	156	78
Queue Length 95th (ft)	44	#742	m#304	116	m0	#344	253	125
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	153	1020	278	1544	652	391	470	353
Starvation Cap Reductn	0	41	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	1.12	0.81	0.48	0.05	0.76	0.66	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

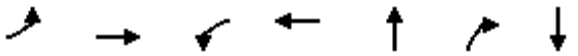


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	987	182	781	83	95	141	131	64	338
v/c Ratio	0.45	0.78	0.81	0.50	0.13	0.58	0.32	0.28	0.42	0.88
Control Delay	32.8	16.7	75.7	25.5	5.3	65.3	38.5	6.8	60.0	67.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	16.7	75.7	25.5	5.3	65.3	38.5	6.8	60.0	67.6
Queue Length 50th (ft)	33	101	137	229	0	72	91	0	48	241
Queue Length 95th (ft)	m36	m104	#228	315	32	125	146	45	92	#382
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1263	265	1575	639	223	461	479	223	422
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.78	0.69	0.50	0.13	0.43	0.31	0.27	0.29	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

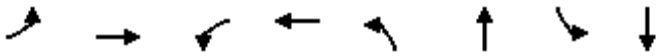


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1154	121	1055	260	169	130
v/c Ratio	0.08	0.85	0.70	0.61	0.84	0.42	0.51
Control Delay	52.7	39.7	68.5	10.3	69.7	9.0	48.2
Queue Delay	0.0	24.0	0.0	1.2	0.0	0.1	0.0
Total Delay	52.7	63.7	68.5	11.4	69.7	9.0	48.2
Queue Length 50th (ft)	7	390	98	52	195	0	90
Queue Length 95th (ft)	25	#718	m87	m#526	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1363	188	1743	384	459	399
Starvation Cap Reductn	0	0	0	433	0	0	0
Spillback Cap Reductn	0	252	0	0	0	13	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	1.04	0.64	0.81	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



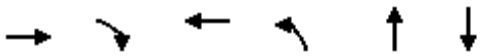
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	1088	59	747	564	677	176	911
v/c Ratio	0.59	0.99	0.39	0.90	0.95	0.59	0.81	0.95
Control Delay	31.8	34.9	59.2	55.0	74.5	34.3	72.9	56.1
Queue Delay	0.0	34.9	0.0	3.4	12.1	0.0	0.0	0.1
Total Delay	31.8	69.8	59.2	58.4	86.6	34.3	72.9	56.2
Queue Length 50th (ft)	121	~458	44	277	224	226	133	354
Queue Length 95th (ft)	m136	#212	81	308	#327	286	#231	#492
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	270	1101	153	920	596	1147	237	955
Starvation Cap Reductn	0	105	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	37	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	1.09	0.39	0.91	1.01	0.59	0.74	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	104	97	23	103	922	1048
v/c Ratio	0.52	0.34	0.11	0.29	0.34	0.42
Control Delay	55.2	11.0	39.5	4.1	2.4	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	55.2	11.0	39.5	4.1	2.5	4.6
Queue Length 50th (ft)	78	0	15	8	41	80
Queue Length 95th (ft)	124	45	18	m25	78	181
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	502	427	350	2696	2515
Starvation Cap Reductn	0	0	0	0	757	0
Spillback Cap Reductn	0	4	0	0	0	156
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.19	0.05	0.29	0.48	0.44

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



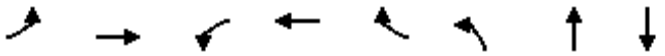
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	92	94	935	1008
v/c Ratio	0.23	0.28	0.38	0.40
Control Delay	11.6	10.0	7.0	7.2
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	11.6	10.0	7.0	7.3
Queue Length 50th (ft)	11	25	141	155
Queue Length 95th (ft)	35	57	182	198
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	543	331	2472	2518
Starvation Cap Reductn	0	0	0	578
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.28	0.38	0.52

Intersection Summary



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	67	36	33	901	24	1039
v/c Ratio	0.26	0.23	0.16	0.17	0.35	0.13	0.42
Control Delay	38.7	5.8	24.9	42.0	7.4	42.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	5.8	24.9	42.0	7.4	42.1	9.3
Queue Length 50th (ft)	31	0	13	19	47	14	140
Queue Length 95th (ft)	45	13	28	48	258	39	319
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	427	527	475	201	2584	201	2465
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.13	0.08	0.16	0.35	0.12	0.42

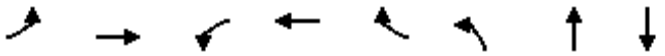
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	367	112	260	246	99	247	147
v/c Ratio	0.20	0.29	0.58	0.16	0.30	0.39	0.82	0.59
Control Delay	43.1	20.3	52.0	18.1	4.5	40.5	58.7	44.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	20.3	52.0	18.1	4.5	40.5	58.7	44.1
Queue Length 50th (ft)	17	68	64	49	0	53	134	83
Queue Length 95th (ft)	45	131	120	98	57	93	#202	121
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	160	1287	207	1604	816	282	331	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.29	0.54	0.16	0.30	0.35	0.75	0.33

Intersection Summary

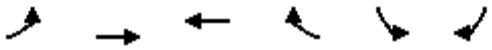
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	30	367	112	260	246	99	247	138
v/c Ratio	0.20	0.28	0.58	0.16	0.30	0.39	0.82	0.57
Control Delay	43.1	20.1	52.0	18.0	4.5	40.5	58.7	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	20.1	52.0	18.0	4.5	40.5	58.7	43.6
Queue Length 50th (ft)	17	67	64	48	0	53	134	78
Queue Length 95th (ft)	45	131	120	98	57	93	#202	115
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	160	1297	207	1615	820	282	331	452
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.28	0.54	0.16	0.30	0.35	0.75	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	863	1103	890	667	273
v/c Ratio	0.36	0.43	0.78	0.84	0.88	0.44
Control Delay	47.3	6.8	10.6	17.9	51.3	5.6
Queue Delay	0.0	0.0	1.0	48.9	0.0	0.0
Total Delay	47.3	6.8	11.6	66.8	51.3	5.6
Queue Length 50th (ft)	63	86	79	398	302	0
Queue Length 95th (ft)	116	133	m97	m502	390	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2025	1416	1060	838	663
Starvation Cap Reductn	0	0	121	259	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.43	0.85	1.11	0.80	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	935	1483	431	486	594	666
v/c Ratio	0.58	0.48	0.82	0.59	0.85	1.06	0.86
Control Delay	42.4	13.0	25.5	5.4	49.3	89.6	35.5
Queue Delay	0.0	1.2	4.3	0.5	5.5	15.5	0.1
Total Delay	42.4	14.2	29.8	5.9	54.8	105.1	35.6
Queue Length 50th (ft)	76	121	214	12	343	~510	407
Queue Length 95th (ft)	m131	149	m301	m31	#537	#756	#675
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	560	770
Starvation Cap Reductn	0	731	261	78	0	0	0
Spillback Cap Reductn	0	310	69	0	50	48	2
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.77	0.95	0.66	0.93	1.16	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

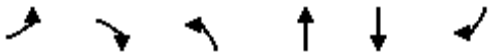
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	685	363	106	506
v/c Ratio	0.47	0.23	0.14	0.36
Control Delay	10.8	4.1	0.3	20.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.1	4.1	0.3	20.1
Queue Length 50th (ft)	73	15	0	121
Queue Length 95th (ft)	109	m16	m0	162
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1464	1582	742	1396
Starvation Cap Reductn	274	0	0	0
Spillback Cap Reductn	114	0	0	51
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.23	0.14	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	100	79	479	513	198	169
v/c Ratio	0.53	0.07	0.24	0.36	0.69	0.53
Control Delay	80.1	5.1	2.1	1.0	56.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	5.1	2.1	1.0	56.8	12.9
Queue Length 50th (ft)	77	5	9	10	140	0
Queue Length 95th (ft)	120	54	23	13	200	55
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1367	2015	1443	572	507
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.06	0.24	0.36	0.35	0.33

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	393	1091	480	241	1024	127	98	99	114	371	710
v/c Ratio	0.77	1.07	0.64	0.97	0.93	0.24	0.55	0.55	0.42	0.82	0.61
Control Delay	53.0	74.9	8.6	82.1	40.0	7.2	60.5	59.9	11.8	50.6	8.3
Queue Delay	0.0	8.8	0.2	0.0	6.8	0.0	0.0	0.0	0.0	18.5	0.1
Total Delay	53.0	83.7	8.9	82.1	46.8	7.2	60.5	59.9	11.8	69.1	8.4
Queue Length 50th (ft)	128	~493	94	169	333	16	72	73	0	249	34
Queue Length 95th (ft)	m161	m#571	m120	m#275	m#395	m31	132	133	47	#409	72
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1015	741	249	1102	538	181	185	278	452	1161
Starvation Cap Reductn	0	20	30	0	0	0	0	0	0	78	43
Spillback Cap Reductn	0	0	0	0	63	0	0	0	0	0	2
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.10	0.68	0.97	0.99	0.24	0.54	0.54	0.41	0.99	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	71	148	702	62	132	860	278
v/c Ratio	0.49	0.49	0.59	0.42	0.53	0.54	0.31
Control Delay	59.5	53.7	4.2	57.5	16.2	25.0	18.9
Queue Delay	0.3	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	59.8	53.7	5.5	57.5	16.2	25.0	18.9
Queue Length 50th (ft)	56	58	0	44	0	243	105
Queue Length 95th (ft)	100	86	43	79	44	356	126
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	449	1188	191	284	1607	893
Starvation Cap Reductn	17	0	272	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.77	0.32	0.46	0.54	0.31

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	101	106	10	714	105	103	839
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.44	0.14	0.45	0.42
Control Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Length 50th (ft)	13	0	19	1	4	139	0	45	116
Queue Length 95th (ft)	29	0	34	27	18	207	11	88	229
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1605	777	290	1984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.21	0.24	0.05	0.44	0.14	0.36	0.42

Intersection Summary



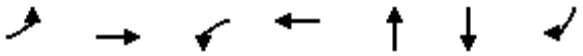
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	928	119	530	480	616	167	353	312
v/c Ratio	0.70	0.92	0.78	0.63	1.07	0.96	0.74	1.05	0.57
Control Delay	30.6	29.5	82.7	41.1	100.0	61.2	66.1	107.1	23.1
Queue Delay	0.0	0.0	0.0	0.0	10.3	42.8	0.0	0.0	0.0
Total Delay	30.6	29.5	82.7	41.1	110.3	103.9	66.1	107.1	23.1
Queue Length 50th (ft)	95	363	86	174	~410	454	111	~282	123
Queue Length 95th (ft)	m82	m358	#179	253	#623	#697	#208	#467	188
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1039	161	842	448	644	226	337	632
Starvation Cap Reductn	0	0	0	0	11	118	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.89	0.74	0.63	1.10	1.17	0.74	1.05	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

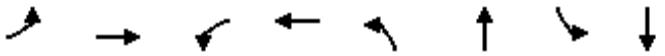


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	301	239	28	72	1039	616	94
v/c Ratio	0.77	0.42	0.09	0.14	0.64	0.79	0.12
Control Delay	30.2	10.2	11.8	5.6	11.0	15.3	4.0
Queue Delay	0.2	0.0	0.0	0.0	0.8	0.0	0.0
Total Delay	30.3	10.2	11.8	5.6	11.8	15.3	4.0
Queue Length 50th (ft)	90	36	7	4	97	175	14
Queue Length 95th (ft)	113	55	14	16	160	m#324	m18
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	544	754	411	690	1620	776	799
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	19	0	0	29	291	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.32	0.07	0.11	0.78	0.79	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	158	151	49	151	16	762	70	651
v/c Ratio	0.65	0.38	0.20	0.36	0.04	0.68	0.23	0.59
Control Delay	32.0	13.1	18.4	8.7	5.9	12.6	4.2	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	13.1	18.4	8.7	5.9	12.6	4.2	7.0
Queue Length 50th (ft)	50	24	14	11	2	129	4	94
Queue Length 95th (ft)	57	33	26	29	10	#393	m9	273
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	381	581	378	584	376	1125	299	1095
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.26	0.13	0.26	0.04	0.68	0.23	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

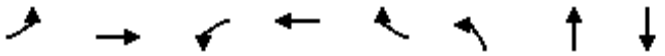


Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	264	110	144	23	485	71	607
v/c Ratio	0.72	0.38	0.37	0.11	0.53	0.32	0.58
Control Delay	29.8	21.7	6.5	27.3	14.1	26.8	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	21.7	6.5	27.3	14.1	26.8	14.6
Queue Length 50th (ft)	76	33	0	13	70	23	93
Queue Length 95th (ft)	114	61	31	m27	#261	51	#361
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	506	413	489	231	910	233	1053
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	3
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.27	0.29	0.10	0.53	0.30	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	46	816	164	571	79	335	380	433
v/c Ratio	0.37	0.96	0.77	0.50	0.15	0.93	0.91	1.13
Control Delay	59.6	62.7	95.3	16.8	1.3	77.9	67.8	128.1
Queue Delay	0.0	42.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	105.2	95.3	16.8	1.3	77.9	67.8	128.1
Queue Length 50th (ft)	33	309	130	70	0	244	259	~388
Queue Length 95th (ft)	72	#450	m#219	86	m3	#357	#368	#592
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	130	852	231	1149	532	375	435	382
Starvation Cap Reductn	0	119	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.11	0.71	0.50	0.15	0.89	0.87	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

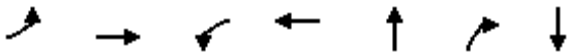


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	907	110	652	167	82	292	86	185	395
v/c Ratio	0.33	0.69	0.65	0.43	0.25	0.58	0.83	0.20	0.83	0.83
Control Delay	37.1	19.4	67.1	25.4	9.2	68.1	63.4	1.1	75.2	50.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	37.1	19.4	67.1	25.4	9.2	68.1	63.4	1.1	75.2	50.8
Queue Length 50th (ft)	28	143	80	185	22	60	210	0	139	252
Queue Length 95th (ft)	m29	m208	137	260	74	#120	295	0	#250	341
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1319	216	1507	677	144	438	489	245	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	5
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.69	0.51	0.43	0.25	0.57	0.67	0.18	0.76	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

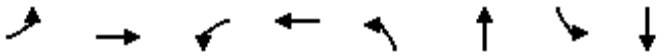


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	1037	69	910	346	324	235
v/c Ratio	0.16	0.84	0.46	0.64	0.92	0.61	0.75
Control Delay	52.6	41.5	61.5	11.5	74.8	13.6	59.2
Queue Delay	0.0	15.1	0.0	3.1	0.0	0.2	0.0
Total Delay	52.6	56.6	61.5	14.7	74.8	13.8	59.2
Queue Length 50th (ft)	16	374	45	37	250	34	169
Queue Length 95th (ft)	43	#618	m41	m376	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1241	174	1426	398	546	416
Starvation Cap Reductn	0	0	0	399	0	0	0
Spillback Cap Reductn	0	212	0	0	0	17	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	1.01	0.40	0.89	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



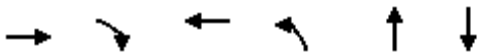
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	1123	67	819	382	949	253	1088
v/c Ratio	0.76	1.04	0.42	1.05	0.80	0.92	0.91	1.00
Control Delay	39.2	51.4	58.4	86.4	61.7	53.5	83.4	53.6
Queue Delay	0.0	24.9	0.0	20.4	0.0	0.0	0.0	5.1
Total Delay	39.2	76.3	58.4	106.8	61.7	53.5	83.4	58.7
Queue Length 50th (ft)	152	~484	48	~336	144	361	152	216
Queue Length 95th (ft)	m178	#597	88	#411	#213	#494	#327	#560
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1084	158	781	476	1029	288	1091
Starvation Cap Reductn	0	66	0	0	0	0	0	21
Spillback Cap Reductn	0	0	0	99	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.10	0.42	1.20	0.80	0.92	0.88	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	285	179	47	83	1254	1171
v/c Ratio	0.92	0.43	0.12	0.36	0.54	0.54
Control Delay	75.4	20.1	18.0	6.3	5.0	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.1
Total Delay	75.4	20.1	18.0	6.3	5.2	19.7
Queue Length 50th (ft)	200	51	11	14	145	398
Queue Length 95th (ft)	#285	96	9	m15	m140	485
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	452	419	232	2313	2163
Starvation Cap Reductn	0	0	0	0	341	0
Spillback Cap Reductn	0	3	0	0	0	118
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.40	0.11	0.36	0.64	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



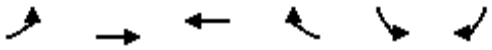
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	208	153	1331	1128
v/c Ratio	0.56	0.53	0.53	0.45
Control Delay	26.7	12.7	4.8	6.8
Queue Delay	0.0	0.0	0.2	0.4
Total Delay	26.7	12.7	5.0	7.2
Queue Length 50th (ft)	68	24	118	183
Queue Length 95th (ft)	136	m52	281	227
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	499	290	2490	2524
Starvation Cap Reductn	0	0	353	756
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.53	0.62	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	102	163	55	66	1414	20	1133
v/c Ratio	0.44	0.44	0.21	0.32	0.58	0.13	0.52
Control Delay	47.1	8.9	31.0	50.7	11.9	50.3	14.0
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Total Delay	47.1	8.9	31.0	50.7	13.0	50.3	14.0
Queue Length 50th (ft)	74	0	28	45	121	14	196
Queue Length 95th (ft)	100	39	37	90	490	39	375
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	397	525	451	216	2449	216	2186
Starvation Cap Reductn	0	0	0	0	728	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.31	0.12	0.31	0.82	0.09	0.52

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	95	863	1103	890	667	273
v/c Ratio	0.36	0.43	0.78	0.84	0.88	0.44
Control Delay	47.3	6.8	10.6	17.9	51.3	5.6
Queue Delay	0.0	0.0	1.0	48.9	0.0	0.0
Total Delay	47.3	6.8	11.6	66.8	51.3	5.6
Queue Length 50th (ft)	63	86	79	398	302	0
Queue Length 95th (ft)	116	133	m97	m502	390	58
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					380
Base Capacity (vph)	264	2025	1416	1060	838	663
Starvation Cap Reductn	0	0	121	259	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.43	0.85	1.11	0.80	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	153	935	1483	431	486	594	666
v/c Ratio	0.58	0.48	0.82	0.59	0.85	1.06	0.86
Control Delay	42.4	13.0	25.5	5.4	49.3	89.6	35.5
Queue Delay	0.0	1.2	4.3	0.5	5.5	15.5	0.1
Total Delay	42.4	14.2	29.8	5.9	54.8	105.1	35.6
Queue Length 50th (ft)	76	121	214	12	343	~510	407
Queue Length 95th (ft)	m131	149	m301	m31	#537	#756	#675
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)	150			350			
Base Capacity (vph)	264	1944	1817	730	572	560	770
Starvation Cap Reductn	0	731	261	78	0	0	0
Spillback Cap Reductn	0	310	69	0	50	48	2
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.77	0.95	0.66	0.93	1.16	0.87

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

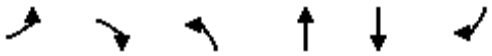
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	685	363	106	506
v/c Ratio	0.47	0.23	0.14	0.36
Control Delay	10.8	4.1	0.3	20.1
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	11.1	4.1	0.3	20.1
Queue Length 50th (ft)	73	15	0	121
Queue Length 95th (ft)	109	m16	m0	162
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1464	1582	742	1396
Starvation Cap Reductn	274	0	0	0
Spillback Cap Reductn	114	0	0	51
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.23	0.14	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	100	79	479	513	198	169
v/c Ratio	0.53	0.07	0.24	0.36	0.69	0.53
Control Delay	80.1	5.1	2.1	1.0	56.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	5.1	2.1	1.0	56.8	12.9
Queue Length 50th (ft)	77	5	9	10	140	0
Queue Length 95th (ft)	120	54	23	13	200	55
Internal Link Dist (ft)	330			589	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	426	1367	2015	1443	572	507
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.06	0.24	0.36	0.35	0.33

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	393	1091	480	241	1024	127	98	99	114	371	710
v/c Ratio	0.77	1.07	0.64	0.97	0.93	0.24	0.55	0.55	0.42	0.82	0.61
Control Delay	53.0	74.9	8.6	82.2	40.0	7.2	60.5	59.9	11.8	50.6	8.3
Queue Delay	0.0	8.8	0.2	0.0	6.8	0.0	0.0	0.0	0.0	18.5	0.1
Total Delay	53.0	83.7	8.9	82.2	46.8	7.2	60.5	59.9	11.8	69.1	8.4
Queue Length 50th (ft)	128	~493	94	169	333	16	72	73	0	249	34
Queue Length 95th (ft)	m161	m#571	m120	m#275	m#396	m31	132	133	47	#409	72
Internal Link Dist (ft)		345			1552			180		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	508	1015	741	249	1102	538	181	185	278	452	1161
Starvation Cap Reductn	0	20	30	0	0	0	0	0	0	78	43
Spillback Cap Reductn	0	0	0	0	63	0	0	0	0	0	2
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.10	0.68	0.97	0.99	0.24	0.54	0.54	0.41	0.99	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	71	148	702	62	132	860	278
v/c Ratio	0.49	0.49	0.59	0.42	0.53	0.54	0.31
Control Delay	59.5	53.7	4.2	57.5	16.2	25.0	18.9
Queue Delay	0.3	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	59.8	53.7	5.5	57.5	16.2	25.0	18.9
Queue Length 50th (ft)	56	58	0	44	0	243	105
Queue Length 95th (ft)	100	86	43	79	44	356	126
Internal Link Dist (ft)		145				790	102
Turn Bay Length (ft)							
Base Capacity (vph)	214	449	1188	191	284	1607	893
Starvation Cap Reductn	17	0	272	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.33	0.77	0.32	0.46	0.54	0.31

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	29	19	101	106	10	714	105	103	839
v/c Ratio	0.22	0.08	0.23	0.26	0.05	0.44	0.14	0.45	0.42
Control Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	0.6	25.3	8.0	30.5	19.2	1.3	36.4	12.7
Queue Length 50th (ft)	13	0	19	1	4	139	0	45	116
Queue Length 95th (ft)	29	0	34	27	18	207	11	88	229
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		140	600	
Base Capacity (vph)	157	261	486	442	201	1605	777	290	1984
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.21	0.24	0.05	0.44	0.14	0.36	0.42

Intersection Summary



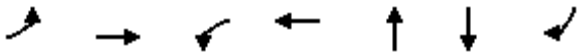
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	168	928	120	530	480	616	167	351	312
v/c Ratio	0.70	0.92	0.78	0.63	1.07	0.96	0.74	1.04	0.57
Control Delay	30.6	29.5	83.2	41.1	100.2	61.6	66.1	105.6	23.1
Queue Delay	0.0	0.0	0.0	0.0	10.3	42.4	0.0	0.0	0.0
Total Delay	30.6	29.5	83.2	41.1	110.4	104.0	66.1	105.6	23.1
Queue Length 50th (ft)	95	363	87	174	~410	454	111	~279	123
Queue Length 95th (ft)	m82	m358	#181	253	#623	#697	#208	#464	188
Internal Link Dist (ft)		1552		700		344		580	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	338	1039	161	843	448	642	226	337	632
Starvation Cap Reductn	0	0	0	0	11	117	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.89	0.75	0.63	1.10	1.17	0.74	1.04	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

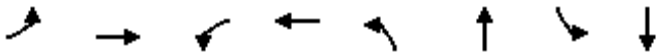


Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	301	239	28	72	1039	616	95
v/c Ratio	0.77	0.42	0.09	0.14	0.64	0.80	0.12
Control Delay	30.2	10.2	11.8	5.6	11.0	15.7	4.0
Queue Delay	0.2	0.0	0.0	0.0	0.8	0.0	0.0
Total Delay	30.3	10.2	11.8	5.6	11.8	15.7	4.0
Queue Length 50th (ft)	90	36	7	4	97	175	14
Queue Length 95th (ft)	113	55	14	16	161	m#331	m18
Internal Link Dist (ft)		484		617	690	344	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	544	754	411	690	1620	770	799
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	19	0	0	29	291	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.32	0.07	0.11	0.78	0.80	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	161	153	49	153	16	758	70	650
v/c Ratio	0.66	0.38	0.20	0.37	0.04	0.67	0.23	0.60
Control Delay	32.6	13.1	18.3	8.8	5.9	12.5	4.2	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	13.1	18.3	8.8	5.9	12.5	4.2	7.0
Queue Length 50th (ft)	51	25	14	11	2	129	4	93
Queue Length 95th (ft)	58	33	26	30	10	#390	m9	272
Internal Link Dist (ft)		571		289		1070		70
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	379	582	376	584	374	1123	300	1090
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.26	0.13	0.26	0.04	0.67	0.23	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

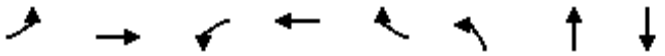
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	264	107	144	25	485	71	602
v/c Ratio	0.73	0.37	0.37	0.12	0.53	0.32	0.57
Control Delay	29.8	21.6	6.5	27.7	14.0	26.8	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	21.6	6.5	27.7	14.0	26.8	14.5
Queue Length 50th (ft)	76	32	0	15	71	23	92
Queue Length 95th (ft)	114	60	31	m29	#261	51	#357
Internal Link Dist (ft)	236	271			410		592
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	507	410	489	231	911	233	1055
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	4
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.26	0.29	0.11	0.53	0.30	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	46	816	164	568	79	335	378	428
v/c Ratio	0.37	0.96	0.77	0.49	0.15	0.93	0.90	1.12
Control Delay	59.6	62.7	95.4	16.8	1.3	77.9	67.1	123.8
Queue Delay	0.0	42.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	105.2	95.4	16.8	1.3	77.9	67.1	123.8
Queue Length 50th (ft)	33	309	131	70	0	244	257	~380
Queue Length 95th (ft)	72	#450	m#221	85	m3	#357	#363	#583
Internal Link Dist (ft)		250		550			353	167
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	130	852	231	1149	532	375	435	382
Starvation Cap Reductn	0	119	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.11	0.71	0.49	0.15	0.89	0.87	1.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

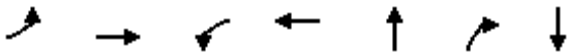
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	905	110	650	167	82	293	86	187	395
v/c Ratio	0.33	0.69	0.65	0.43	0.25	0.58	0.83	0.20	0.84	0.83
Control Delay	37.3	19.4	67.1	25.3	9.2	68.1	63.9	1.1	76.0	50.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	37.3	19.4	67.1	25.3	9.2	68.1	63.9	1.1	76.0	50.8
Queue Length 50th (ft)	28	142	80	184	22	60	211	0	141	252
Queue Length 95th (ft)	m30	m207	137	259	74	#120	296	0	#253	340
Internal Link Dist (ft)		550		555			314			410
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	144	1319	216	1507	677	144	438	489	245	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	5
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.69	0.51	0.43	0.25	0.57	0.67	0.18	0.76	0.74

Intersection Summary

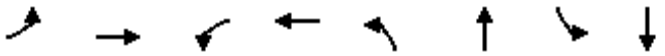
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	22	1037	69	908	346	324	235
v/c Ratio	0.16	0.84	0.46	0.64	0.92	0.61	0.75
Control Delay	52.6	41.5	61.5	11.5	74.8	13.6	59.2
Queue Delay	0.0	15.1	0.0	3.1	0.0	0.2	0.0
Total Delay	52.6	56.6	61.5	14.6	74.8	13.8	59.2
Queue Length 50th (ft)	16	374	45	37	250	34	169
Queue Length 95th (ft)	43	#618	m40	m371	#356	95	223
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50					150	
Base Capacity (vph)	144	1241	174	1426	398	546	416
Starvation Cap Reductn	0	0	0	400	0	0	0
Spillback Cap Reductn	0	212	0	0	0	17	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	1.01	0.40	0.88	0.87	0.61	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



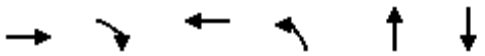
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	220	1123	67	819	382	950	253	1088
v/c Ratio	0.76	1.04	0.42	1.05	0.80	0.92	0.91	1.00
Control Delay	39.2	51.4	58.4	86.3	61.7	53.6	83.4	53.4
Queue Delay	0.0	24.9	0.0	20.4	0.0	0.0	0.0	5.1
Total Delay	39.2	76.3	58.4	106.7	61.7	53.6	83.4	58.5
Queue Length 50th (ft)	152	~484	48	~336	144	361	152	213
Queue Length 95th (ft)	m178	#597	88	#410	#213	#495	#327	#561
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	288	1084	158	781	476	1029	288	1091
Starvation Cap Reductn	0	66	0	0	0	0	0	21
Spillback Cap Reductn	0	0	0	99	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.10	0.42	1.20	0.80	0.92	0.88	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	282	179	47	83	1255	1168
v/c Ratio	0.91	0.43	0.12	0.35	0.54	0.54
Control Delay	75.2	20.4	18.1	6.3	5.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.1
Total Delay	75.2	20.4	18.1	6.3	5.2	19.5
Queue Length 50th (ft)	198	51	12	14	142	394
Queue Length 95th (ft)	#280	97	9	m15	m141	482
Internal Link Dist (ft)	102		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	345	451	419	234	2319	2173
Starvation Cap Reductn	0	0	0	0	350	0
Spillback Cap Reductn	0	3	0	0	0	118
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.40	0.11	0.35	0.64	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	209	155	1329	1126
v/c Ratio	0.56	0.53	0.53	0.45
Control Delay	26.6	13.1	4.8	6.8
Queue Delay	0.0	0.0	0.2	0.4
Total Delay	26.6	13.1	5.0	7.2
Queue Length 50th (ft)	68	22	101	183
Queue Length 95th (ft)	136	m54	283	226
Internal Link Dist (ft)	528		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	499	290	2490	2523
Starvation Cap Reductn	0	0	349	756
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.53	0.62	0.64

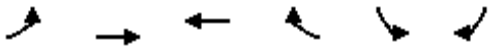
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	104	163	55	66	1412	20	1131
v/c Ratio	0.45	0.44	0.20	0.32	0.58	0.13	0.52
Control Delay	47.4	8.9	30.9	50.7	11.9	50.3	14.0
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Total Delay	47.4	8.9	30.9	50.7	13.0	50.3	14.0
Queue Length 50th (ft)	75	0	28	45	122	14	197
Queue Length 95th (ft)	101	39	37	90	488	39	374
Internal Link Dist (ft)	1265		526		490		575
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	395	525	451	216	2446	216	2183
Starvation Cap Reductn	0	0	0	0	727	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.31	0.12	0.31	0.82	0.09	0.52

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	445	892	761	837	175
v/c Ratio	0.45	0.26	0.73	0.78	0.85	0.26
Control Delay	51.8	11.1	21.2	16.8	40.3	3.8
Queue Delay	0.0	0.0	6.0	14.1	0.0	0.0
Total Delay	51.8	11.1	27.2	30.9	40.3	3.8
Queue Length 50th (ft)	72	61	180	321	364	0
Queue Length 95th (ft)	130	105	m326	m502	426	38
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1725	1214	970	1147	748
Starvation Cap Reductn	0	0	267	203	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.26	0.94	0.99	0.73	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1054	1282	526	419	570	566
v/c Ratio	0.63	0.42	0.54	0.55	0.79	1.03	0.93
Control Delay	84.7	5.2	18.6	3.1	46.7	76.9	52.5
Queue Delay	0.0	0.7	0.4	0.3	0.0	7.1	3.3
Total Delay	84.7	5.9	19.0	3.4	46.7	84.0	55.8
Queue Length 50th (ft)	66	35	221	9	291	~419	376
Queue Length 95th (ft)	m96	67	264	26	#452	#662	#620
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2535	2380	958	531	552	610
Starvation Cap Reductn	0	1025	505	107	0	0	0
Spillback Cap Reductn	0	140	173	0	0	11	18
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.70	0.68	0.62	0.79	1.05	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

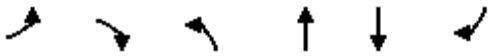
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	990	321	179	370
v/c Ratio	0.81	0.17	0.21	0.23
Control Delay	13.5	3.8	0.5	15.0
Queue Delay	0.1	0.0	0.3	0.0
Total Delay	13.5	3.8	0.7	15.0
Queue Length 50th (ft)	63	15	0	70
Queue Length 95th (ft)	76	14	0	111
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1727	1840	863	1588
Starvation Cap Reductn	0	0	288	0
Spillback Cap Reductn	60	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.17	0.31	0.23

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	86	761	608	299	239
v/c Ratio	0.71	0.09	0.58	0.44	0.49	0.56
Control Delay	79.6	10.5	14.9	1.3	34.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	10.5	14.9	1.3	34.3	10.5
Queue Length 50th (ft)	123	21	188	12	172	0
Queue Length 95th (ft)	172	48	182	29	284	67
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1016	1312	1381	607	515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.08	0.58	0.44	0.49	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	330	959	694	363	758	170	123	123	112	384	788
v/c Ratio	0.57	0.96	1.00	1.46	0.75	0.34	0.68	0.67	0.41	0.85	0.65
Control Delay	42.4	42.3	47.2	253.0	27.6	10.2	68.1	67.3	11.4	44.6	7.2
Queue Delay	0.0	5.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	22.6	0.1
Total Delay	42.4	48.1	47.9	253.0	27.6	10.2	68.1	67.3	11.4	67.2	7.4
Queue Length 50th (ft)	107	324	445	~362	240	50	92	92	0	157	87
Queue Length 95th (ft)	m131	m#434	m#679	#481	286	m60	#180	#178	45	#419	88
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1000	697	249	1014	498	181	183	274	454	1208
Starvation Cap Reductn	0	35	2	0	0	0	0	0	0	75	36
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.99	1.00	1.46	0.75	0.34	0.68	0.67	0.41	1.01	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	268	969	77	202	1174	395
v/c Ratio	0.65	0.65	0.69	0.49	0.63	0.77	0.49
Control Delay	62.1	54.6	4.7	59.4	15.8	16.8	24.7
Queue Delay	4.4	3.1	1.8	0.0	0.0	0.0	0.0
Total Delay	66.5	57.7	6.5	59.4	15.8	16.8	24.7
Queue Length 50th (ft)	97	103	4	55	0	405	140
Queue Length 95th (ft)	165	147	57	102	70	#578	#202
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	223	469	1398	220	369	1524	812
Starvation Cap Reductn	48	116	261	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.76	0.85	0.35	0.55	0.77	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	125	190	16	1053	146	235	1204
v/c Ratio	0.29	0.09	0.46	0.51	0.12	0.61	0.20	0.81	0.54
Control Delay	59.3	1.0	50.1	11.6	50.5	23.8	9.3	58.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0
Total Delay	59.3	1.0	50.1	11.6	50.5	25.0	9.3	58.7	15.5
Queue Length 50th (ft)	20	0	43	1	11	294	23	174	291
Queue Length 95th (ft)	45	0	70	54	34	433	72	254	398
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1738	748	396	2248
Starvation Cap Reductn	0	0	0	0	0	439	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.38	0.47	0.11	0.81	0.20	0.59	0.54

Intersection Summary

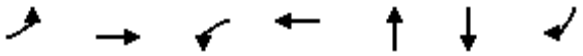


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	793	98	697	316	264	43	233	155
v/c Ratio	0.56	0.84	0.52	0.76	0.84	0.38	0.13	0.52	0.24
Control Delay	40.2	39.3	59.2	43.9	63.5	28.5	38.5	44.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	39.3	59.2	43.9	63.5	28.5	38.5	44.0	6.3
Queue Length 50th (ft)	76	294	69	239	234	147	25	153	7
Queue Length 95th (ft)	m88	m324	#129	325	323	251	59	248	50
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1043	188	918	433	702	322	444	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.76	0.52	0.76	0.73	0.38	0.13	0.52	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

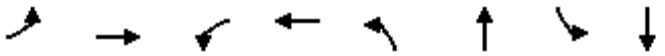
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	72	28	12	54	491	532	80
v/c Ratio	0.26	0.08	0.04	0.15	0.20	0.42	0.07
Control Delay	19.8	12.2	15.6	7.3	2.5	5.8	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	12.2	15.6	7.3	2.5	5.8	2.8
Queue Length 50th (ft)	22	5	3	2	16	172	10
Queue Length 95th (ft)	39	17	11	20	33	286	m27
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	569	739	582	702	2448	1264	1151
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	4	0	0	5	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.04	0.02	0.08	0.20	0.42	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



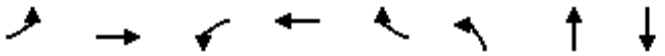
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	40	14	14	72	7	406	75	418
v/c Ratio	0.19	0.05	0.06	0.23	0.01	0.29	0.10	0.30
Control Delay	20.1	14.8	17.5	8.0	4.5	4.4	4.4	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	14.8	17.5	8.0	4.5	4.4	4.4	5.9
Queue Length 50th (ft)	12	3	4	2	0	33	18	130
Queue Length 95th (ft)	27	12	13	24	6	127	27	192
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	427	576	449	552	720	1401	729	1396
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.02	0.03	0.13	0.01	0.29	0.10	0.30

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	141	93	60	27	273	30	351
v/c Ratio	0.49	0.32	0.18	0.12	0.24	0.13	0.29
Control Delay	21.0	22.3	3.1	23.3	8.9	23.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	22.3	3.1	23.3	8.9	23.4	7.8
Queue Length 50th (ft)	34	30	0	8	23	9	31
Queue Length 95th (ft)	64	53	12	27	127	29	166
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	511	513	528	245	1151	245	1211
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.18	0.11	0.11	0.24	0.12	0.29

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	47	1098	226	758	41	298	315	153
v/c Ratio	0.36	1.09	0.84	0.53	0.07	0.88	0.76	0.57
Control Delay	59.8	92.6	93.4	14.4	0.2	71.7	43.7	49.2
Queue Delay	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	98.5	93.4	14.4	0.2	71.7	43.7	49.2
Queue Length 50th (ft)	35	~604	157	96	0	222	166	95
Queue Length 95th (ft)	74	#742	m#304	125	m0	#344	266	147
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	154	1011	278	1442	614	391	466	353
Starvation Cap Reductn	0	41	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.13	0.81	0.53	0.07	0.76	0.68	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

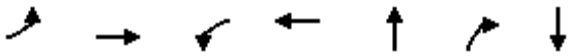


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	1001	182	798	93	96	143	131	78	339
v/c Ratio	0.45	0.79	0.81	0.51	0.15	0.58	0.33	0.28	0.49	0.89
Control Delay	33.2	17.6	75.7	25.8	6.6	65.3	39.2	7.0	61.8	67.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	17.6	75.7	25.8	6.6	65.3	39.2	7.0	61.8	67.8
Queue Length 50th (ft)	33	108	137	236	4	73	92	0	59	242
Queue Length 95th (ft)	m37	m110	#228	323	39	125	150	46	107	#383
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1263	265	1573	638	223	454	474	223	421
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.79	0.69	0.51	0.15	0.43	0.31	0.28	0.35	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

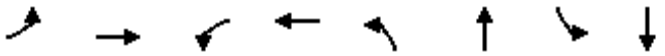


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1182	121	1080	260	169	130
v/c Ratio	0.08	0.87	0.70	0.62	0.84	0.42	0.51
Control Delay	52.7	40.9	68.0	10.3	69.7	9.0	48.2
Queue Delay	0.0	34.8	0.0	1.2	0.0	0.1	0.0
Total Delay	52.7	75.7	68.0	11.5	69.7	9.0	48.2
Queue Length 50th (ft)	7	404	98	51	195	0	90
Queue Length 95th (ft)	25	#743	m85	m#541	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1364	188	1743	384	459	399
Starvation Cap Reductn	0	0	0	417	0	0	0
Spillback Cap Reductn	0	258	0	0	0	13	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	1.07	0.64	0.81	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



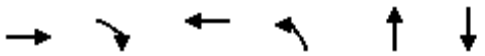
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	1114	59	772	572	692	180	926
v/c Ratio	0.62	1.01	0.39	0.91	0.96	0.60	0.83	0.97
Control Delay	32.6	40.7	59.2	55.9	77.0	34.7	74.3	59.1
Queue Delay	0.0	32.2	0.0	5.2	15.4	0.0	0.0	0.2
Total Delay	32.6	73.0	59.2	61.0	92.4	34.7	74.3	59.3
Queue Length 50th (ft)	123	~482	44	286	228	233	136	363
Queue Length 95th (ft)	m132	#615	81	322	#334	294	#239	#506
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	260	1100	153	920	596	1146	237	955
Starvation Cap Reductn	0	105	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	39	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.12	0.39	0.94	1.03	0.60	0.76	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	106	109	23	117	930	1055
v/c Ratio	0.53	0.37	0.11	0.34	0.35	0.42
Control Delay	55.5	10.9	39.4	4.6	2.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	55.5	10.9	39.4	4.6	2.5	4.7
Queue Length 50th (ft)	79	0	15	10	41	82
Queue Length 95th (ft)	126	48	18	m28	80	182
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	510	427	346	2694	2513
Starvation Cap Reductn	0	0	0	0	763	0
Spillback Cap Reductn	0	6	0	0	0	173
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.22	0.05	0.34	0.48	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



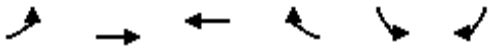
Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	100	101	938	1011
v/c Ratio	0.25	0.31	0.38	0.40
Control Delay	11.3	10.4	7.0	7.2
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	11.3	10.4	7.0	7.3
Queue Length 50th (ft)	12	27	141	155
Queue Length 95th (ft)	36	63	183	200
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	547	330	2472	2515
Starvation Cap Reductn	0	0	0	574
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.31	0.38	0.52

Intersection Summary



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	57	67	37	33	904	24	1046
v/c Ratio	0.28	0.23	0.17	0.17	0.35	0.13	0.43
Control Delay	39.0	5.8	25.2	42.0	7.4	42.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	5.8	25.2	42.0	7.4	42.1	9.3
Queue Length 50th (ft)	34	0	14	19	47	14	141
Queue Length 95th (ft)	49	13	29	48	259	39	322
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	452	527	476	201	2583	201	2461
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.13	0.08	0.16	0.35	0.12	0.43

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	106	445	892	761	837	175
v/c Ratio	0.45	0.26	0.73	0.78	0.85	0.26
Control Delay	51.8	11.1	21.2	16.8	40.3	3.8
Queue Delay	0.0	0.0	6.0	14.1	0.0	0.0
Total Delay	51.8	11.1	27.2	30.9	40.3	3.8
Queue Length 50th (ft)	72	61	180	321	364	0
Queue Length 95th (ft)	130	105	m326	m502	426	38
Internal Link Dist (ft)		760	250			
Turn Bay Length (ft)	340					
Base Capacity (vph)	235	1725	1214	970	1147	748
Starvation Cap Reductn	0	0	267	203	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.26	0.94	0.99	0.73	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	92	1054	1282	526	419	570	566
v/c Ratio	0.63	0.42	0.54	0.55	0.79	1.03	0.93
Control Delay	84.7	5.2	18.6	3.1	46.7	76.9	52.5
Queue Delay	0.0	0.7	0.4	0.3	0.0	7.1	3.3
Total Delay	84.7	5.9	19.0	3.4	46.7	84.0	55.8
Queue Length 50th (ft)	66	35	221	9	291	~419	376
Queue Length 95th (ft)	m96	67	264	26	#452	#662	#620
Internal Link Dist (ft)		250	345			645	
Turn Bay Length (ft)				350			
Base Capacity (vph)	176	2535	2380	958	531	552	610
Starvation Cap Reductn	0	1025	505	107	0	0	0
Spillback Cap Reductn	0	140	173	0	0	11	18
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.70	0.68	0.62	0.79	1.05	0.96

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

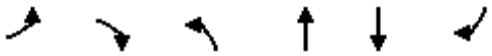
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	990	321	179	370
v/c Ratio	0.81	0.17	0.21	0.23
Control Delay	13.5	3.8	0.5	15.0
Queue Delay	0.1	0.0	0.3	0.0
Total Delay	13.5	3.8	0.7	15.0
Queue Length 50th (ft)	63	15	0	70
Queue Length 95th (ft)	76	14	0	111
Internal Link Dist (ft)	330	230		497
Turn Bay Length (ft)			85	
Base Capacity (vph)	1727	1840	863	1588
Starvation Cap Reductn	0	0	288	0
Spillback Cap Reductn	60	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.17	0.31	0.23

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	175	86	761	608	299	239
v/c Ratio	0.71	0.09	0.58	0.44	0.49	0.56
Control Delay	79.6	10.5	14.9	1.3	34.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	10.5	14.9	1.3	34.3	10.5
Queue Length 50th (ft)	123	21	188	12	172	0
Queue Length 95th (ft)	172	48	182	29	284	67
Internal Link Dist (ft)	330			613	612	
Turn Bay Length (ft)		220	200			
Base Capacity (vph)	367	1016	1312	1381	607	515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.08	0.58	0.44	0.49	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	330	959	694	363	758	170	123	123	112	384	788
v/c Ratio	0.57	0.96	1.00	1.46	0.75	0.34	0.68	0.67	0.41	0.85	0.65
Control Delay	42.4	42.3	47.2	253.0	27.7	10.2	68.1	67.3	11.4	44.6	7.2
Queue Delay	0.0	5.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	22.6	0.1
Total Delay	42.4	48.1	47.9	253.0	27.7	10.2	68.1	67.3	11.4	67.2	7.4
Queue Length 50th (ft)	107	324	445	~362	240	50	92	92	0	157	87
Queue Length 95th (ft)	m131	m#434	m#679	#481	286	m60	#180	#178	45	#419	88
Internal Link Dist (ft)		345			1533			169		230	
Turn Bay Length (ft)	290			135		55					
Base Capacity (vph)	584	1000	697	249	1014	498	181	183	274	454	1208
Starvation Cap Reductn	0	35	2	0	0	0	0	0	0	75	36
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.99	1.00	1.46	0.75	0.34	0.68	0.67	0.41	1.01	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	126	268	969	77	202	1174	395
v/c Ratio	0.65	0.65	0.69	0.49	0.63	0.77	0.49
Control Delay	62.1	54.6	4.7	59.4	15.8	16.8	24.7
Queue Delay	4.4	3.1	1.8	0.0	0.0	0.0	0.0
Total Delay	66.5	57.7	6.5	59.4	15.8	16.8	24.7
Queue Length 50th (ft)	97	103	4	55	0	405	140
Queue Length 95th (ft)	165	147	57	102	70	#578	#202
Internal Link Dist (ft)		145				790	80
Turn Bay Length (ft)							
Base Capacity (vph)	223	469	1398	220	369	1524	812
Starvation Cap Reductn	48	116	261	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.76	0.85	0.35	0.55	0.77	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	16	125	190	16	1053	146	235	1204
v/c Ratio	0.29	0.09	0.46	0.51	0.12	0.61	0.20	0.81	0.54
Control Delay	59.3	1.0	50.1	11.6	50.5	23.8	9.3	58.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0
Total Delay	59.3	1.0	50.1	11.6	50.5	25.0	9.3	58.7	15.5
Queue Length 50th (ft)	20	0	43	1	11	294	23	174	291
Queue Length 95th (ft)	45	0	70	54	34	433	72	254	398
Internal Link Dist (ft)	135			221		356			790
Turn Bay Length (ft)			50		65		135	560	
Base Capacity (vph)	149	205	326	408	147	1738	748	396	2248
Starvation Cap Reductn	0	0	0	0	0	439	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.08	0.38	0.47	0.11	0.81	0.20	0.59	0.54

Intersection Summary

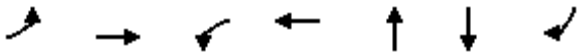


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	108	793	99	697	316	264	43	232	155
v/c Ratio	0.56	0.84	0.53	0.76	0.84	0.38	0.13	0.52	0.24
Control Delay	40.2	39.3	59.4	43.9	63.5	28.6	38.5	44.0	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	39.3	59.4	43.9	63.5	28.6	38.5	44.0	6.3
Queue Length 50th (ft)	76	294	70	239	234	146	25	152	7
Queue Length 95th (ft)	m88	m324	#131	325	324	251	59	247	50
Internal Link Dist (ft)		1533		751		364		1184	
Turn Bay Length (ft)	75		80				80		130
Base Capacity (vph)	345	1043	188	918	433	701	322	444	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.76	0.53	0.76	0.73	0.38	0.13	0.52	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

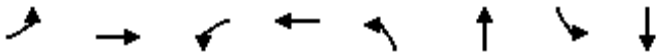
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	72	28	12	55	491	532	82
v/c Ratio	0.26	0.08	0.04	0.15	0.20	0.42	0.07
Control Delay	19.8	12.2	15.6	7.3	2.6	5.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	12.2	15.6	7.3	2.6	5.9	2.8
Queue Length 50th (ft)	22	5	3	2	18	172	10
Queue Length 95th (ft)	39	17	11	20	35	291	m27
Internal Link Dist (ft)		500		1506	468	364	
Turn Bay Length (ft)	60		100				20
Base Capacity (vph)	569	739	582	702	2448	1261	1151
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	4	0	0	5	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.04	0.02	0.08	0.20	0.42	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



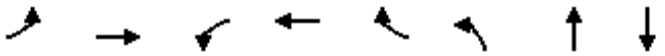
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	45	15	14	73	7	401	75	416
v/c Ratio	0.21	0.05	0.06	0.23	0.01	0.29	0.10	0.30
Control Delay	20.6	14.9	17.5	8.2	4.5	4.4	4.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	14.9	17.5	8.2	4.5	4.4	4.3	5.9
Queue Length 50th (ft)	14	3	4	3	0	33	18	129
Queue Length 95th (ft)	30	13	13	25	6	125	27	190
Internal Link Dist (ft)		580		572		1072		325
Turn Bay Length (ft)	100		95		105		100	
Base Capacity (vph)	427	578	449	553	721	1401	734	1393
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.03	0.03	0.13	0.01	0.29	0.10	0.30

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	137	91	60	28	273	30	347
v/c Ratio	0.47	0.32	0.18	0.12	0.24	0.13	0.30
Control Delay	20.0	22.4	3.1	23.3	8.9	23.4	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	22.4	3.1	23.3	8.9	23.4	9.3
Queue Length 50th (ft)	32	30	0	9	22	9	29
Queue Length 95th (ft)	61	52	12	28	127	29	164
Internal Link Dist (ft)	577	561			132		625
Turn Bay Length (ft)			50	105		75	
Base Capacity (vph)	517	513	528	245	1155	245	1148
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.18	0.11	0.11	0.24	0.12	0.30

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	47	1098	226	757	41	298	314	147
v/c Ratio	0.36	1.08	0.84	0.52	0.07	0.88	0.75	0.55
Control Delay	59.8	91.8	93.3	14.4	0.2	71.7	43.2	48.4
Queue Delay	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	98.6	93.3	14.4	0.2	71.7	43.2	48.4
Queue Length 50th (ft)	35	~604	157	97	0	222	164	91
Queue Length 95th (ft)	74	#742	m#304	124	m0	#344	264	141
Internal Link Dist (ft)		283		550			286	192
Turn Bay Length (ft)	50		190		95	65		
Base Capacity (vph)	154	1013	278	1444	615	391	467	352
Starvation Cap Reductn	0	41	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	1.13	0.81	0.52	0.07	0.76	0.67	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

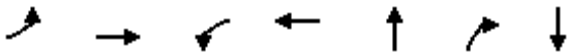


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	61	998	182	797	93	96	144	131	80	339
v/c Ratio	0.45	0.79	0.81	0.51	0.15	0.58	0.33	0.28	0.50	0.89
Control Delay	33.2	17.5	75.7	25.8	6.6	65.3	39.4	7.0	62.0	67.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	17.5	75.7	25.8	6.6	65.3	39.4	7.0	62.0	67.8
Queue Length 50th (ft)	34	106	137	236	4	73	93	0	60	242
Queue Length 95th (ft)	m37	m108	#228	322	39	125	151	46	108	#383
Internal Link Dist (ft)		550		555			314			190
Turn Bay Length (ft)	125		105		100	150			150	
Base Capacity (vph)	139	1262	265	1573	638	223	453	473	223	421
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.79	0.69	0.51	0.15	0.43	0.32	0.28	0.36	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

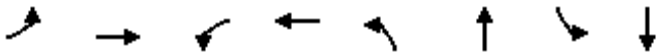


Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1180	121	1079	260	169	130
v/c Ratio	0.08	0.87	0.70	0.62	0.84	0.42	0.51
Control Delay	52.7	40.8	68.0	10.3	69.7	9.0	48.2
Queue Delay	0.0	34.5	0.0	1.2	0.0	0.1	0.0
Total Delay	52.7	75.3	68.0	11.5	69.7	9.0	48.2
Queue Length 50th (ft)	7	403	98	51	195	0	90
Queue Length 95th (ft)	25	#741	m84	m#541	245	40	97
Internal Link Dist (ft)		570		265	254		218
Turn Bay Length (ft)	50						
Base Capacity (vph)	139	1364	188	1743	384	459	399
Starvation Cap Reductn	0	0	0	418	0	0	0
Spillback Cap Reductn	0	259	0	0	0	13	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	1.07	0.64	0.81	0.68	0.38	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



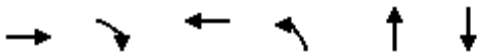
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	1114	59	773	571	694	180	927
v/c Ratio	0.62	1.01	0.39	0.91	0.96	0.61	0.83	0.97
Control Delay	32.7	40.8	59.2	55.8	76.7	34.8	74.3	59.4
Queue Delay	0.0	32.2	0.0	5.3	15.1	0.0	0.0	0.2
Total Delay	32.7	73.0	59.2	61.0	91.8	34.8	74.3	59.5
Queue Length 50th (ft)	123	~483	44	286	227	234	137	364
Queue Length 95th (ft)	m132	#617	81	322	#334	295	#240	#507
Internal Link Dist (ft)		265		400		740		410
Turn Bay Length (ft)			95		220		150	
Base Capacity (vph)	260	1100	153	920	596	1146	237	955
Starvation Cap Reductn	0	105	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	100	39	0	0	1
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.12	0.39	0.94	1.03	0.61	0.76	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	104	109	23	117	931	1053
v/c Ratio	0.52	0.37	0.11	0.34	0.35	0.42
Control Delay	55.2	10.9	39.5	4.6	2.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	55.2	10.9	39.5	4.6	2.5	4.6
Queue Length 50th (ft)	78	0	15	10	40	80
Queue Length 95th (ft)	124	48	18	m28	80	182
Internal Link Dist (ft)	98		246		410	635
Turn Bay Length (ft)				50		
Base Capacity (vph)	427	510	427	347	2696	2515
Starvation Cap Reductn	0	0	0	0	766	0
Spillback Cap Reductn	0	6	0	0	0	174
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.22	0.05	0.34	0.48	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	100	102	935	1009
v/c Ratio	0.25	0.31	0.38	0.40
Control Delay	11.3	10.4	7.0	7.2
Queue Delay	0.0	0.0	0.0	0.2
Total Delay	11.3	10.4	7.0	7.3
Queue Length 50th (ft)	12	27	141	155
Queue Length 95th (ft)	36	64	182	199
Internal Link Dist (ft)	372		635	450
Turn Bay Length (ft)		95		
Base Capacity (vph)	547	331	2472	2515
Starvation Cap Reductn	0	0	0	574
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.31	0.38	0.52

Intersection Summary



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	57	67	37	33	902	24	1044
v/c Ratio	0.28	0.23	0.17	0.17	0.35	0.13	0.42
Control Delay	39.0	5.8	25.2	42.0	7.4	42.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	5.8	25.2	42.0	7.4	42.1	9.3
Queue Length 50th (ft)	34	0	14	19	47	14	141
Queue Length 95th (ft)	49	13	29	48	258	39	322
Internal Link Dist (ft)	328		526		490		1345
Turn Bay Length (ft)		80		125		65	
Base Capacity (vph)	452	527	476	201	2583	201	2461
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.13	0.08	0.16	0.35	0.12	0.42

Intersection Summary

APPENDIX D SIGNAL WARRANT ANALYSIS

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

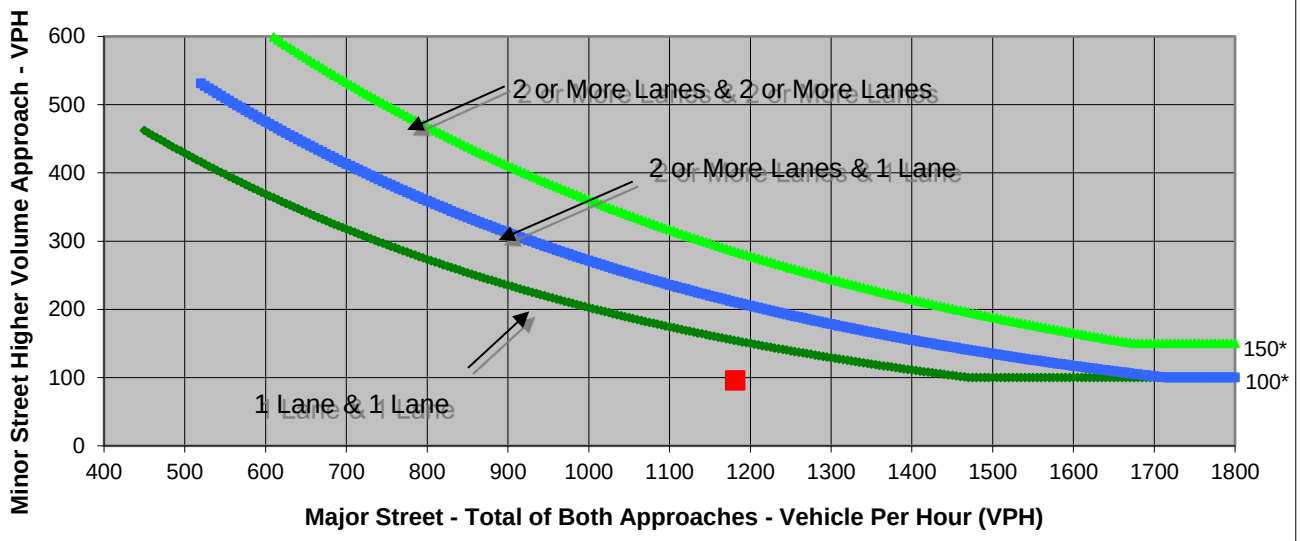
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	715	466
Right	96	0	0	0
Total	96	0	715	466

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,181**	**96**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

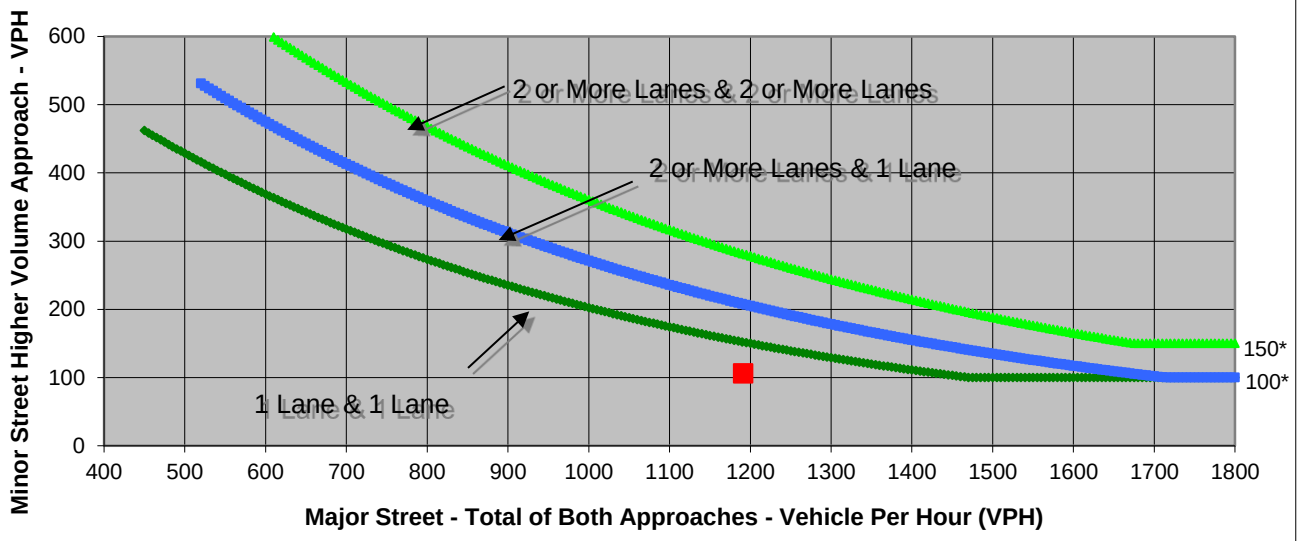
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	716	475
Right	106	0	0	0
Total	106	0	716	475

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,191**	**106**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

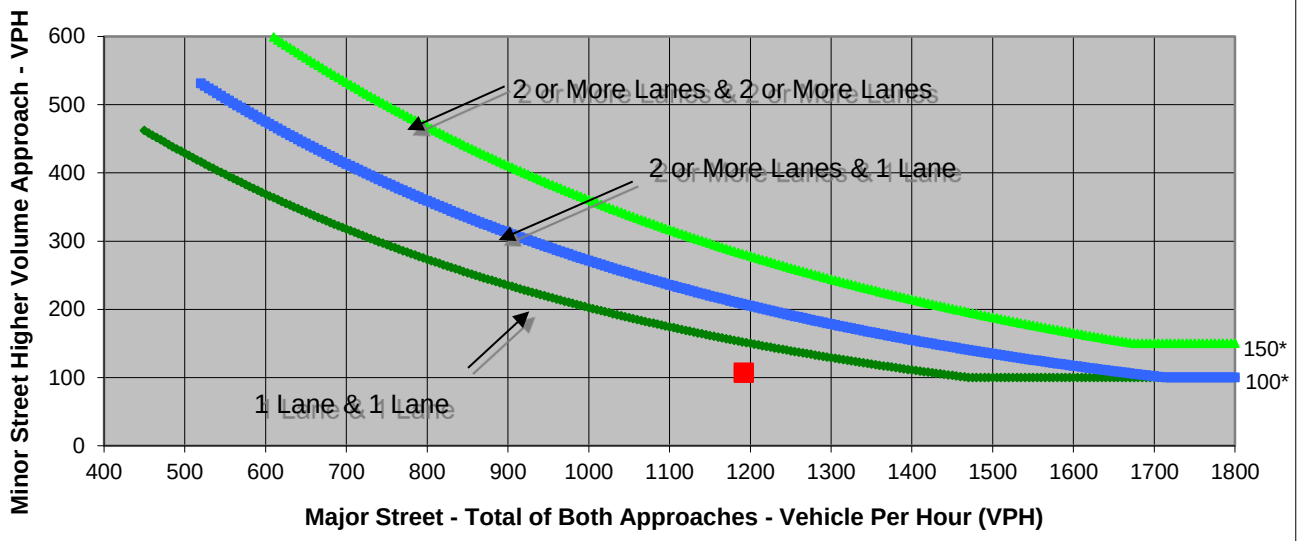
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	716	476
Right	107	0	0	0
Total	107	0	716	476

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,192**	**107**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

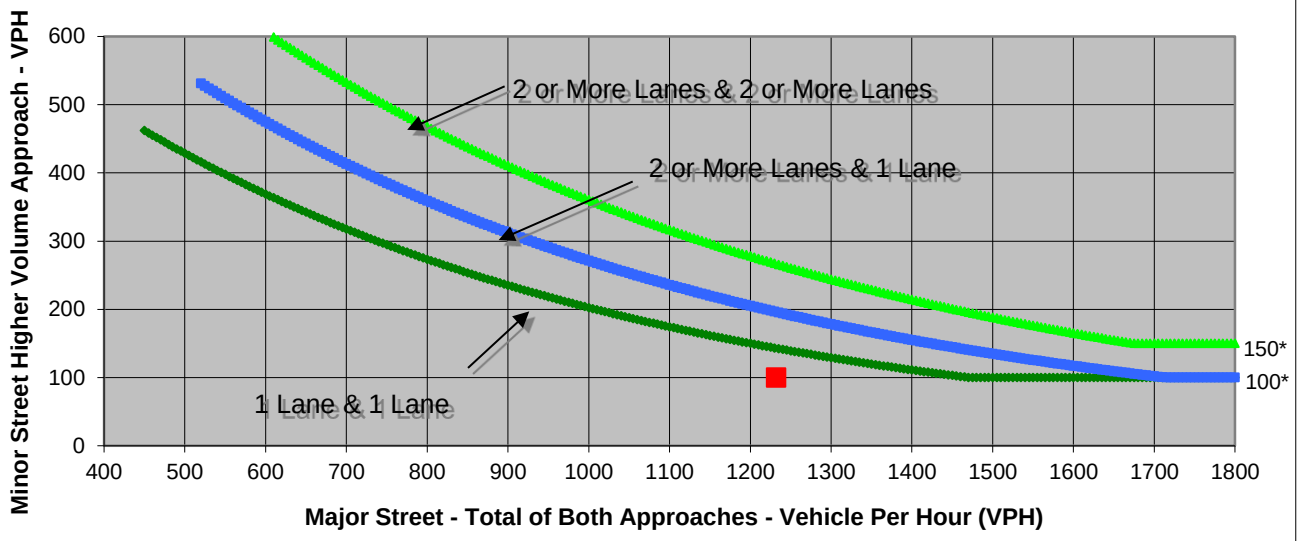
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	729	503
Right	100	0	0	0
Total	100	0	729	503

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,232**	**100**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

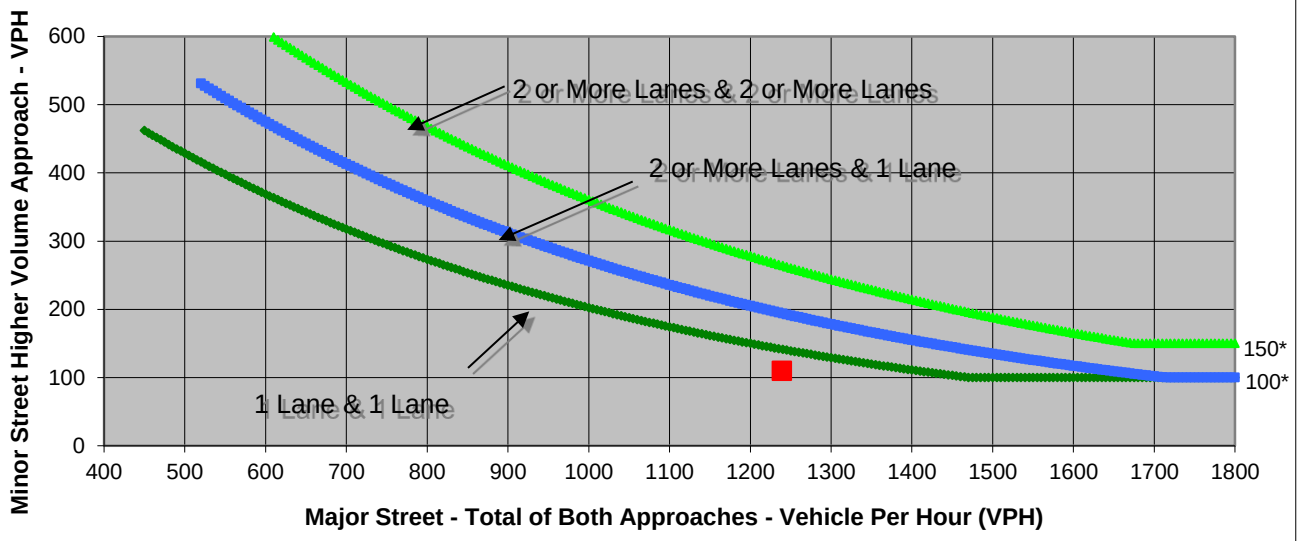
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	729	510
Right	110	0	0	0
Total	110	0	729	510

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,239**	**110**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

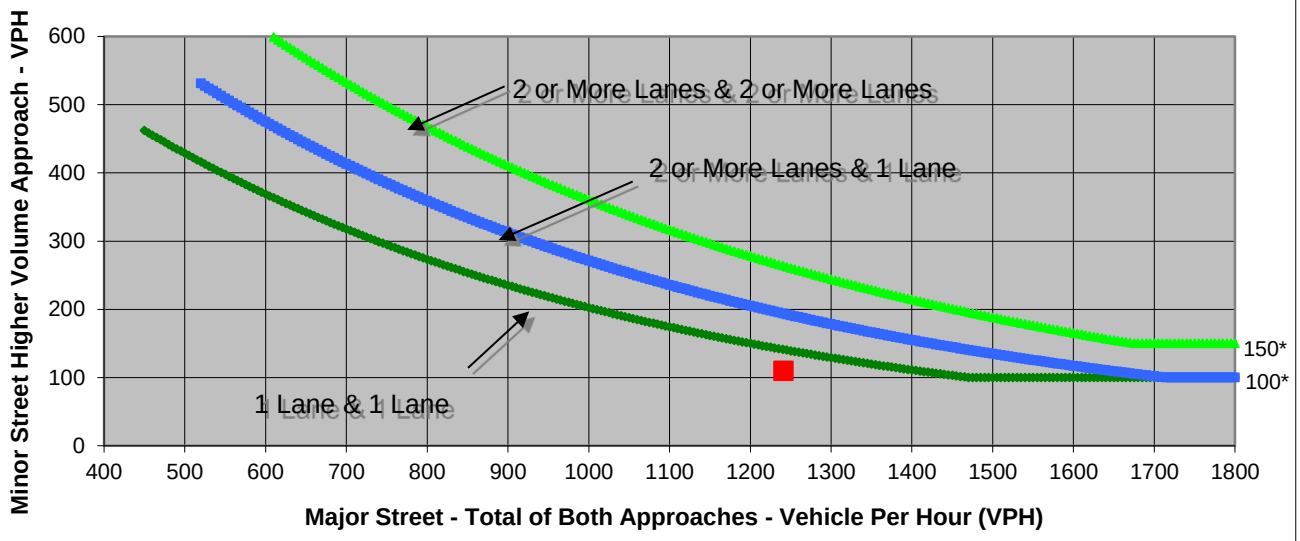
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	730	511
Right	110	0	0	0
Total	110	0	730	511

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,241**	**110**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

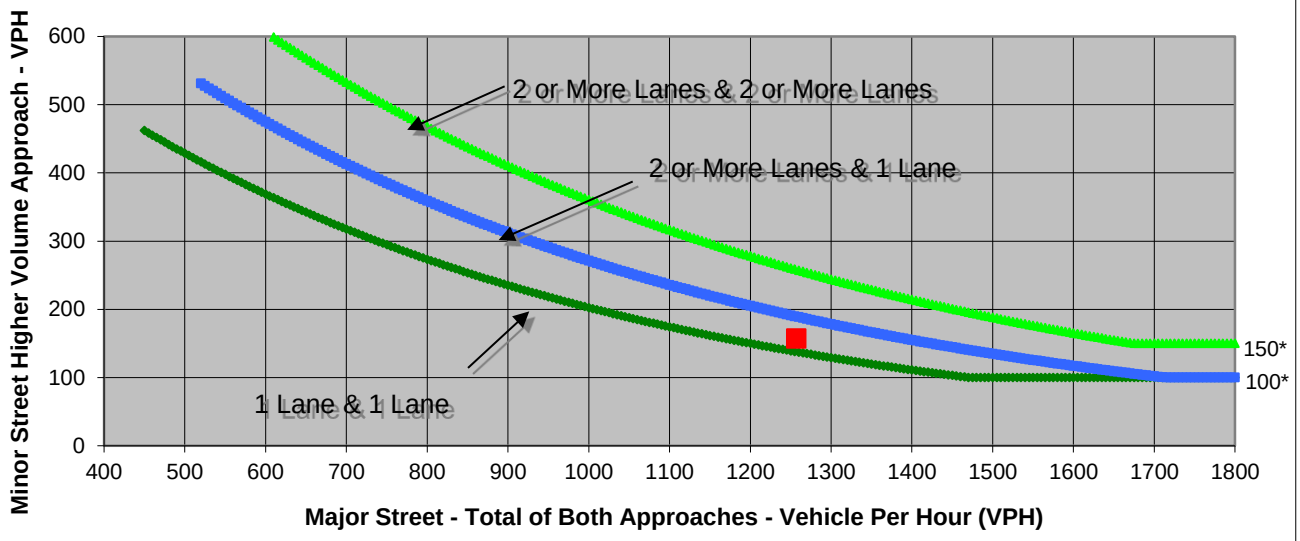
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	742	515
Right	157	0	0	0
Total	157	0	742	515

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,257**	**157**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

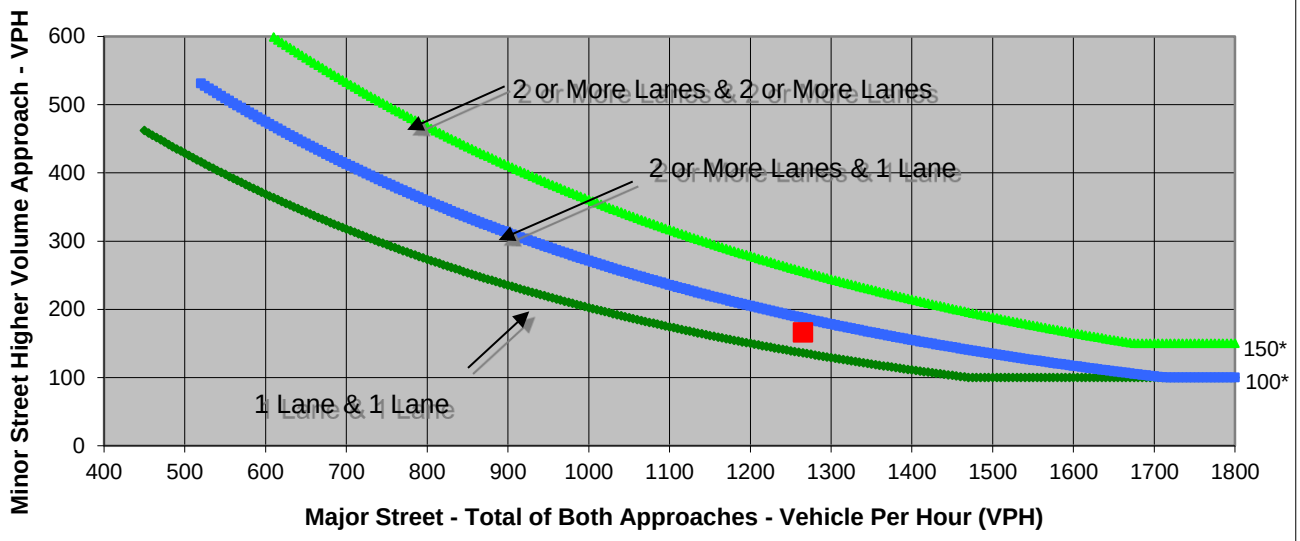
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	743	522
Right	166	0	0	0
Total	166	0	743	522

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,265**	**166**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Powell Street
Minor Street Stanford Avenue

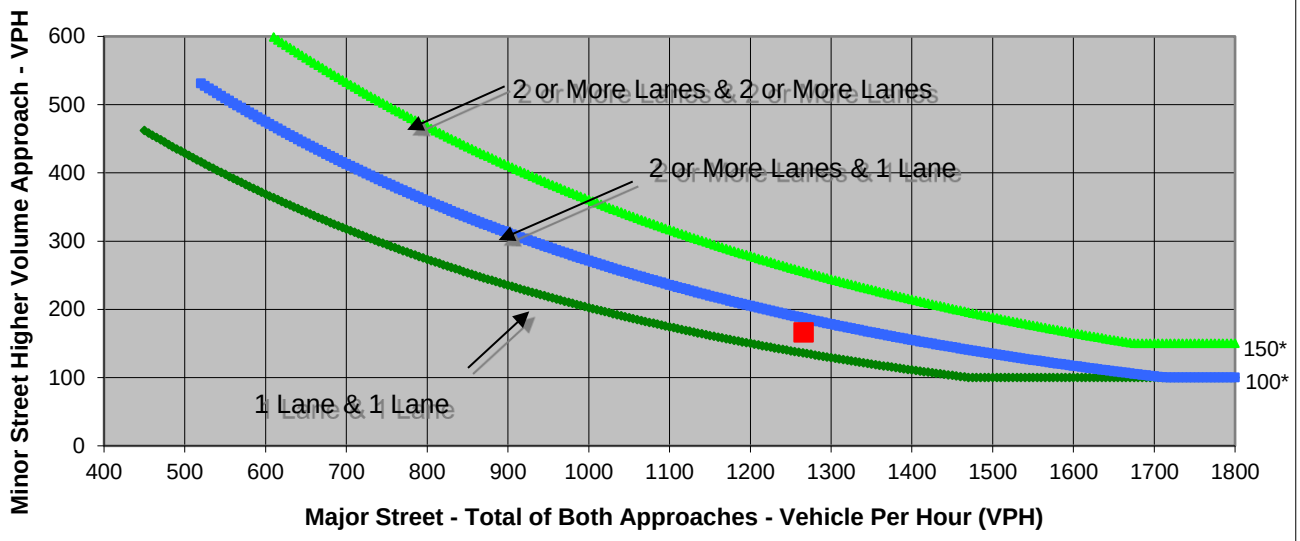
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	743	523
Right	166	0	0	0
Total	166	0	743	523

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,266**	**166**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

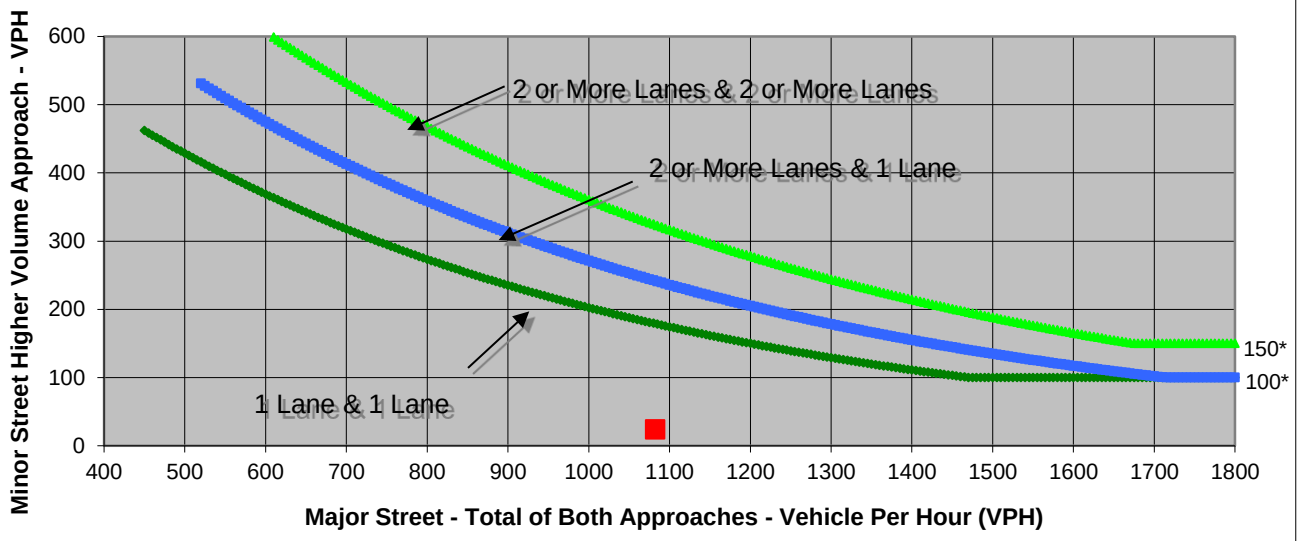
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	475	607
Right	24	0	0	0
Total	24	0	475	607

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,082**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

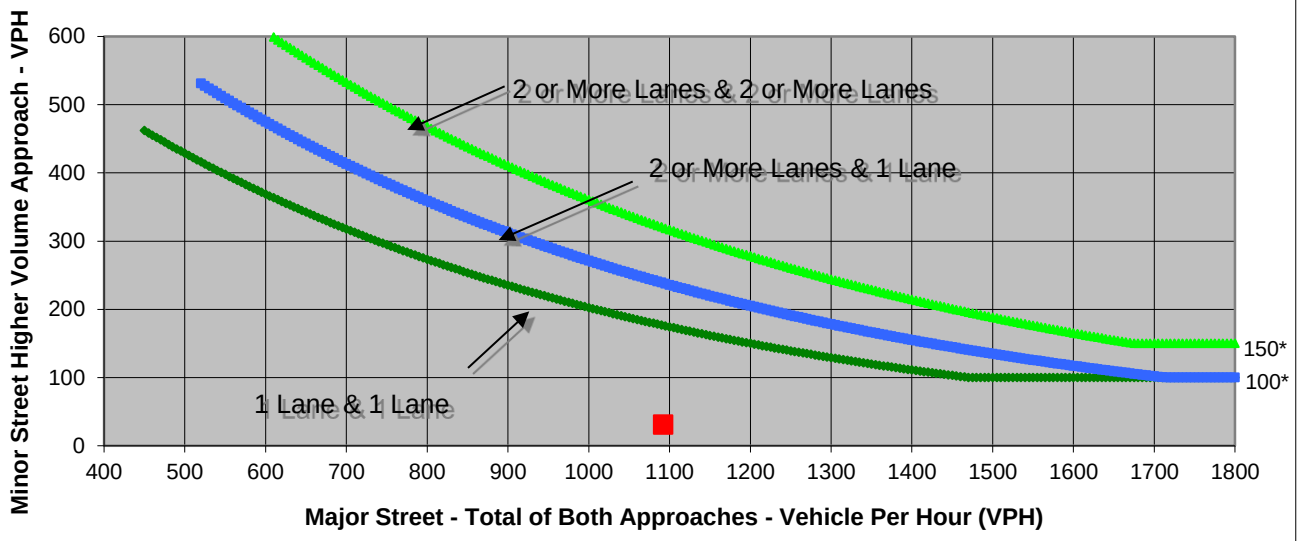
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	476	616
Right	31	0	0	0
Total	31	0	476	616

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,092**	**31**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

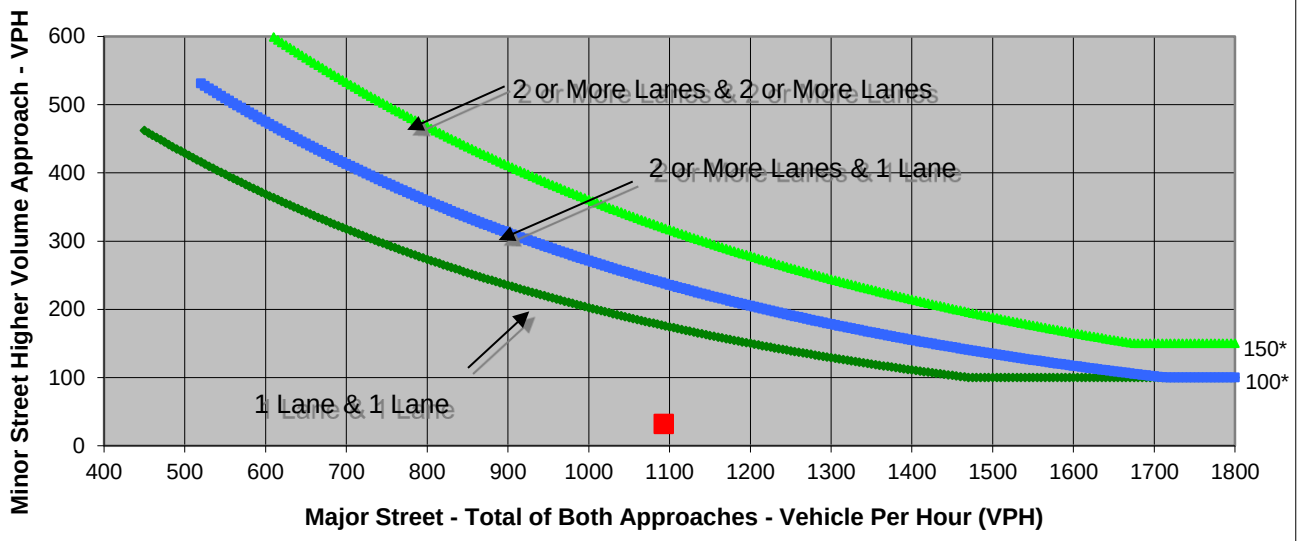
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	476	617
Right	32	0	0	0
Total	32	0	476	617

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,093**	**32**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Major Street	Powell Street
Minor Street	Stanford Avenue

Project	Sherwin Williams
Scenario	Near Term Conditions
Peak Hour	Saturday

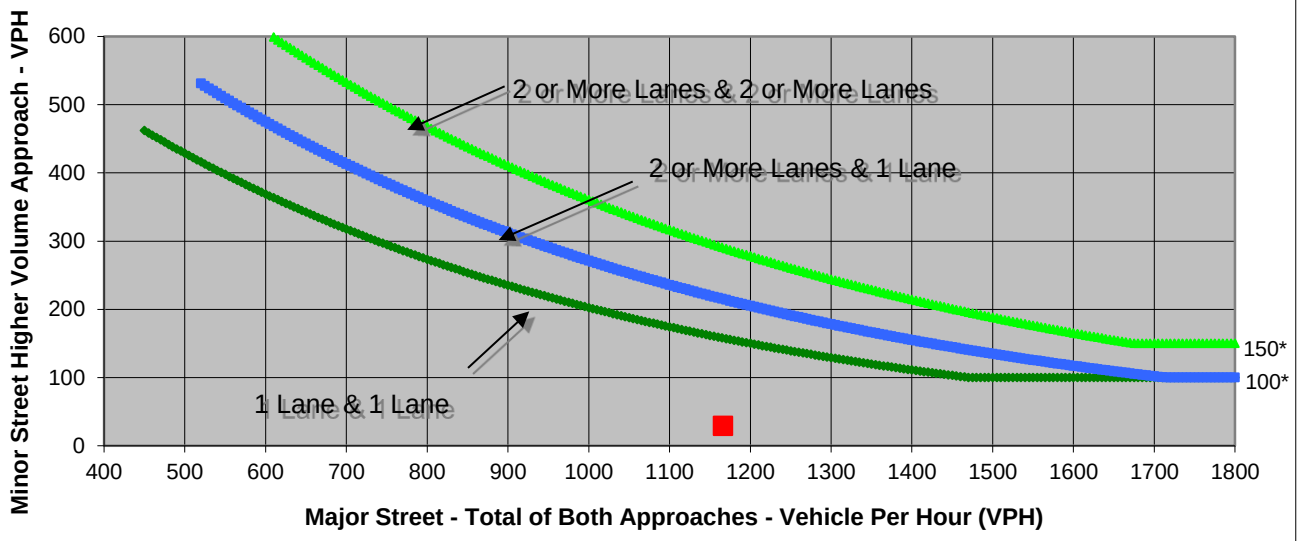
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	505	661
Right	29	0	0	0
Total	29	0	505	661

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,166**	**29**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

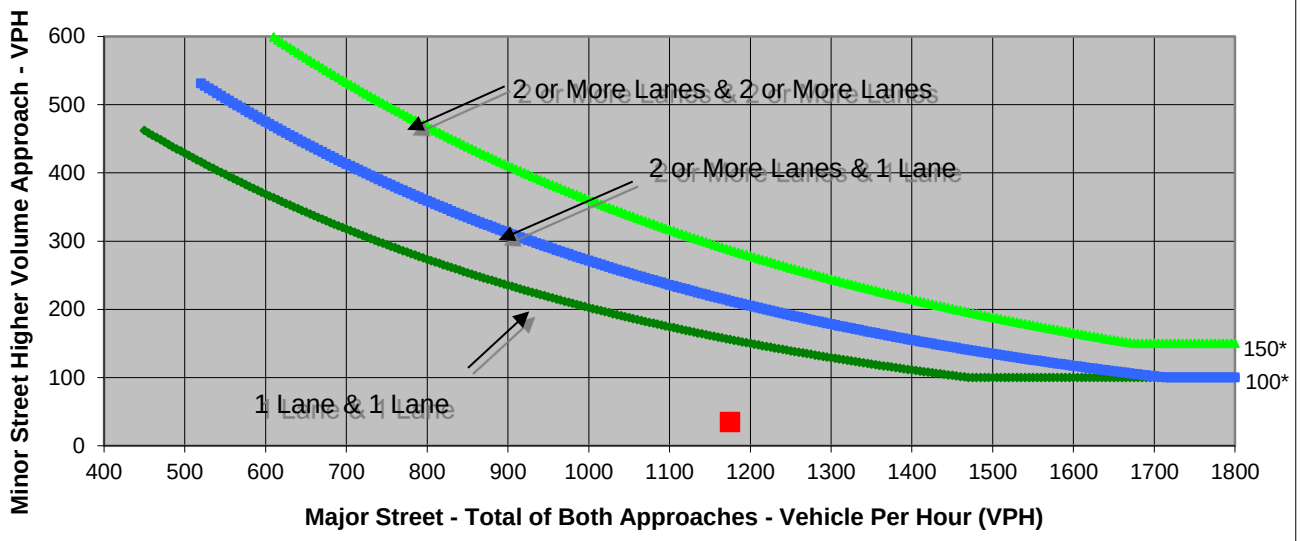
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	506	669
Right	35	0	0	0
Total	35	0	506	669

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,175**	**35**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

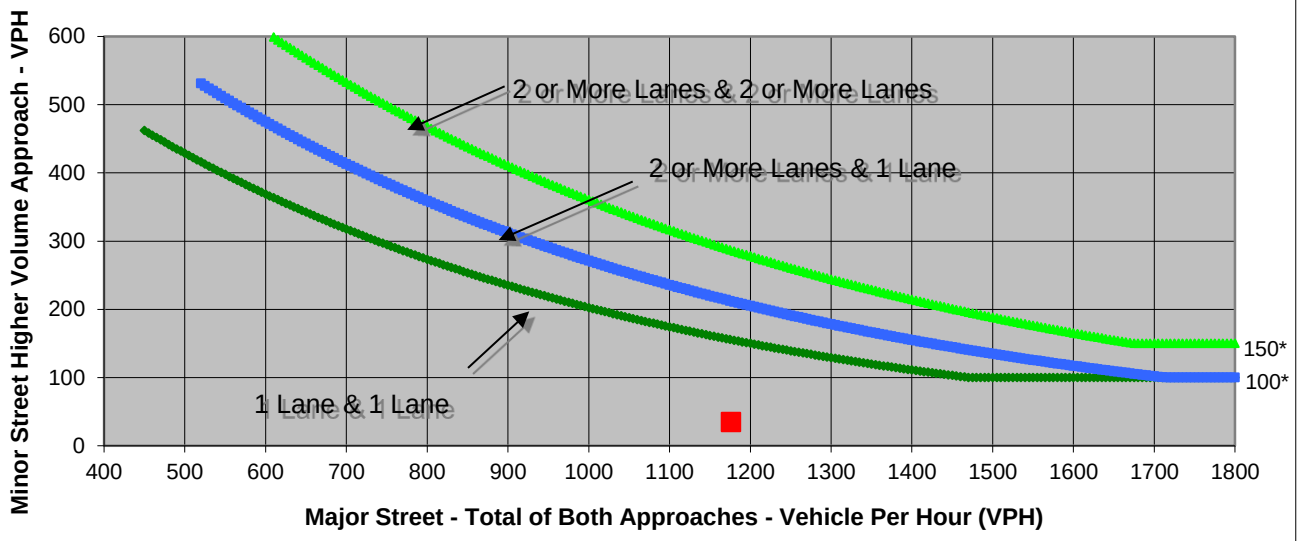
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	507	669
Right	35	0	0	0
Total	35	0	507	669

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,176**	**35**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

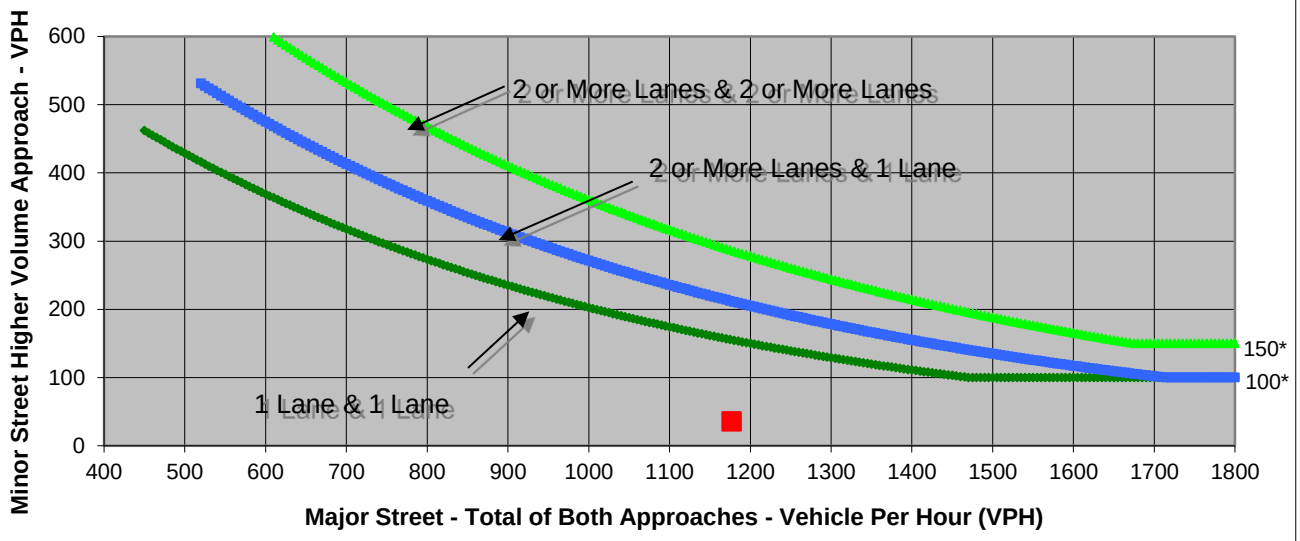
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	507	670
Right	36	0	0	0
Total	36	0	507	670

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,177**	**36**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

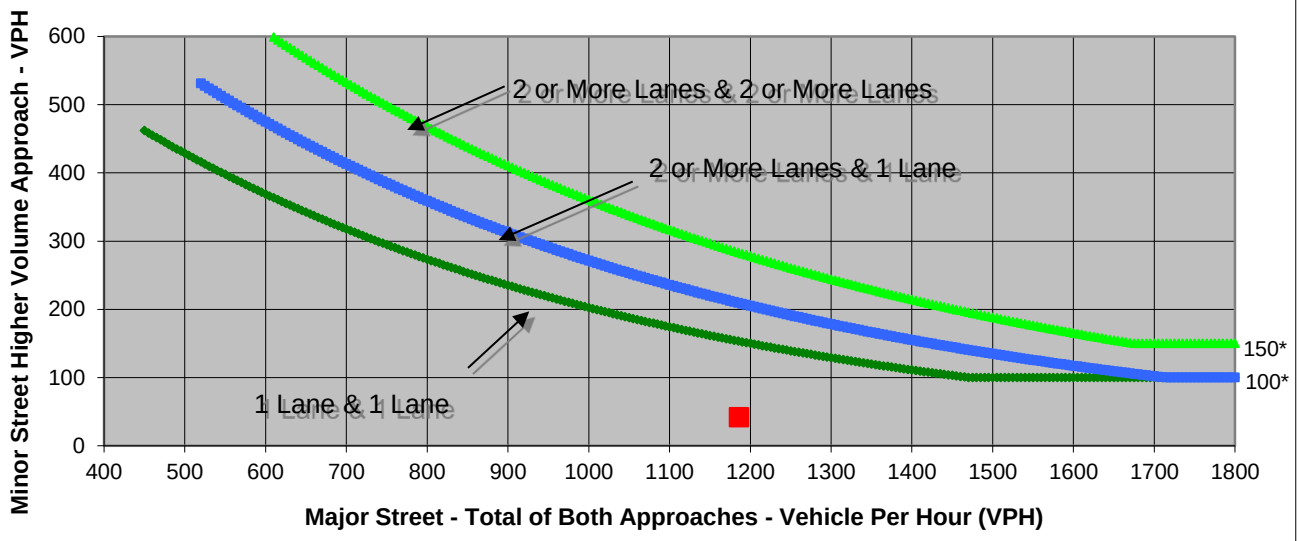
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	508	678
Right	42	0	0	0
Total	42	0	508	678

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,186**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Powell Street
Minor Street Stanford Avenue

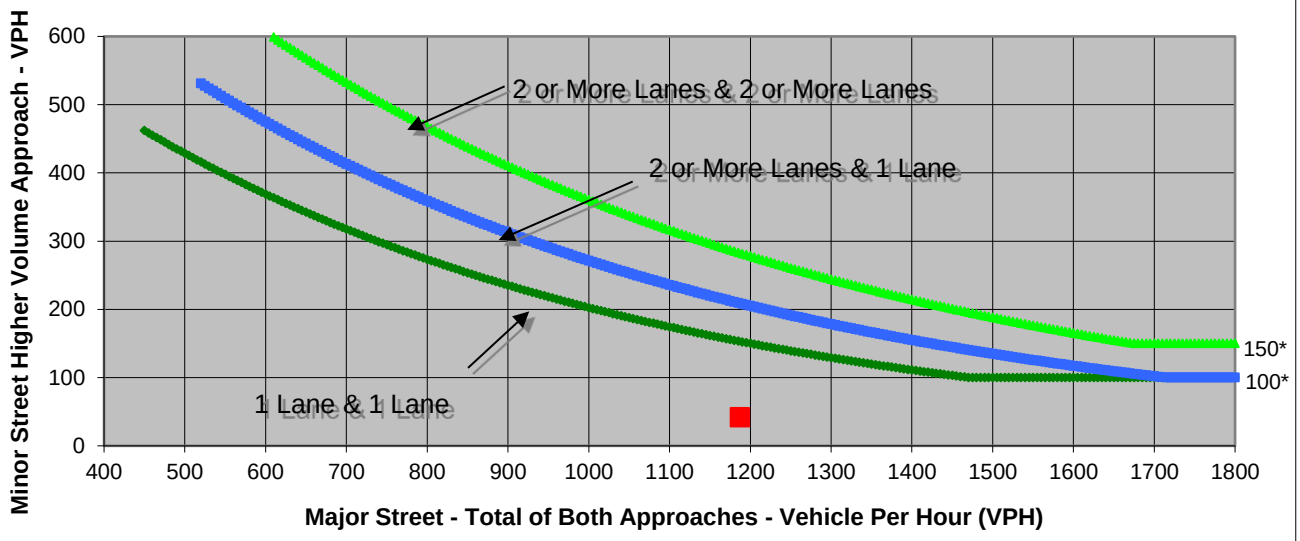
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	509	678
Right	42	0	0	0
Total	42	0	509	678

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Powell Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,187**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

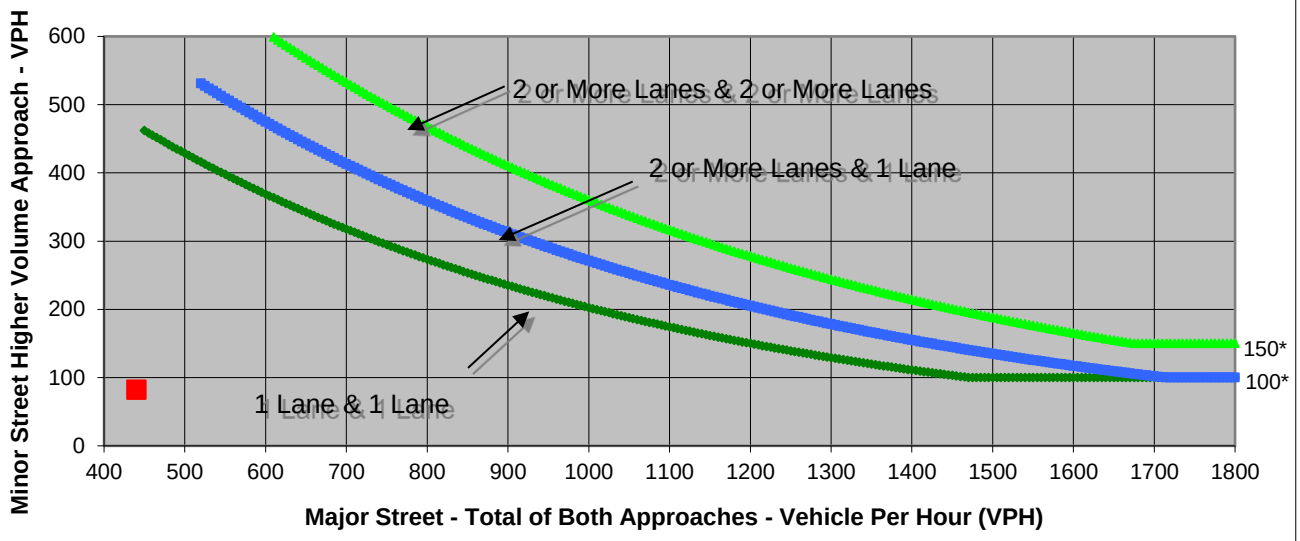
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	55
Through	236	95	1	0
Right	87	1	5	27
Total	324	116	7	82

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**440**	**82**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

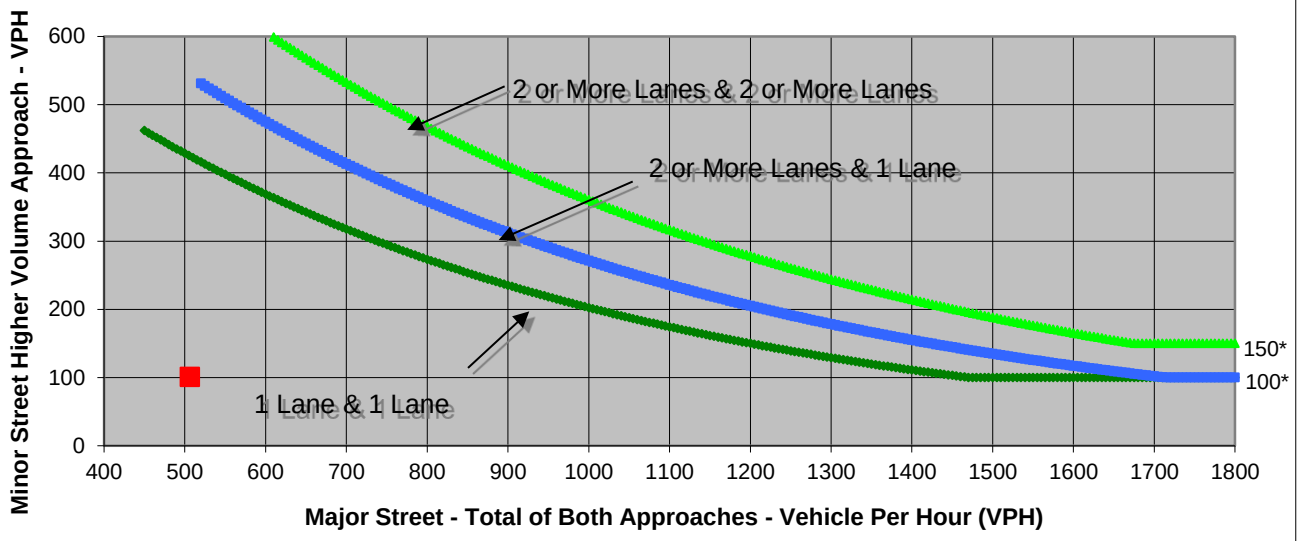
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	74
Through	255	108	1	0
Right	121	1	5	27
Total	377	129	7	101

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**506**	**101**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

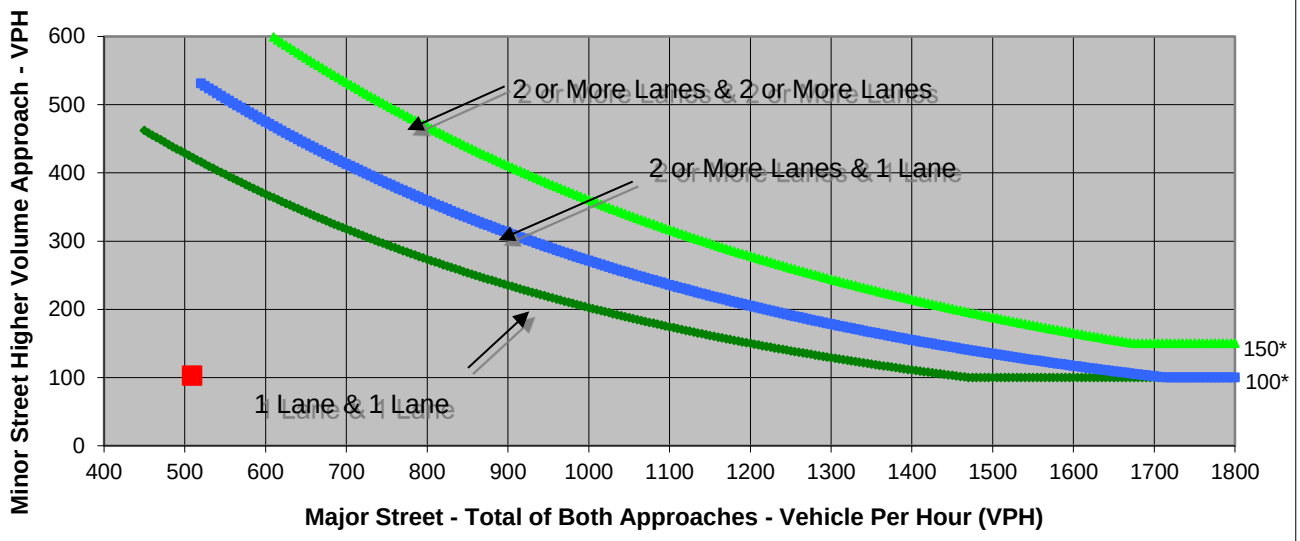
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	76
Through	256	109	1	0
Right	122	1	5	27
Total	379	130	7	103

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**509**	**103**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Major Street	Horton Street
Minor Street	Stanford Avenue
Project	Sherwin Williams
Scenario	Near Term Conditions
Peak Hour	PM

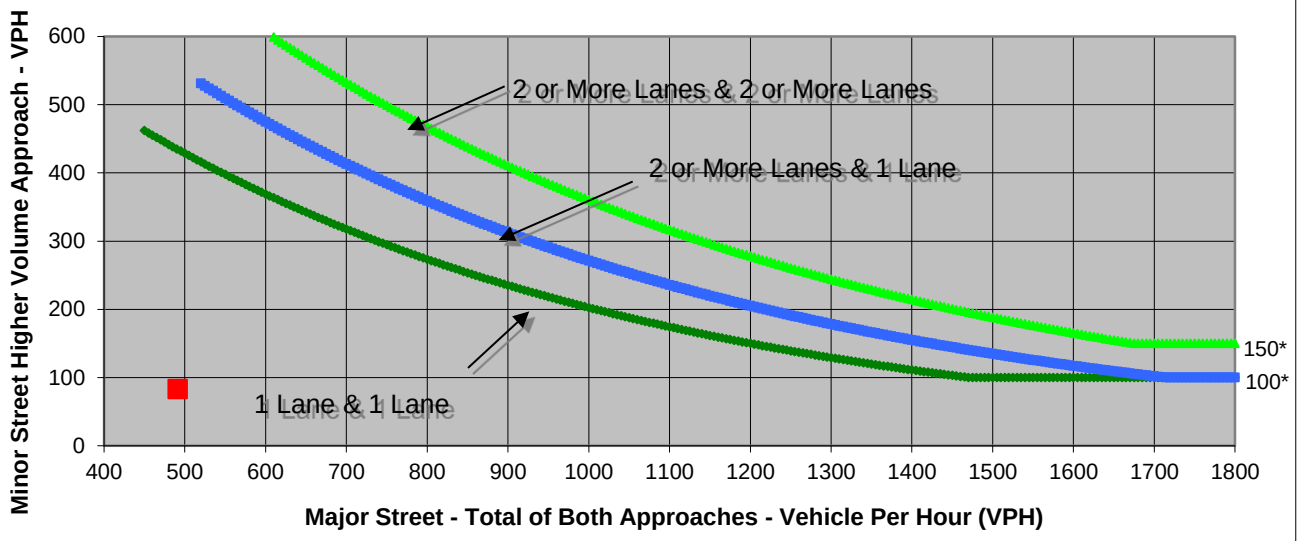
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	56
Through	245	135	1	0
Right	89	1	5	27
Total	335	156	7	83

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**491**	**83**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

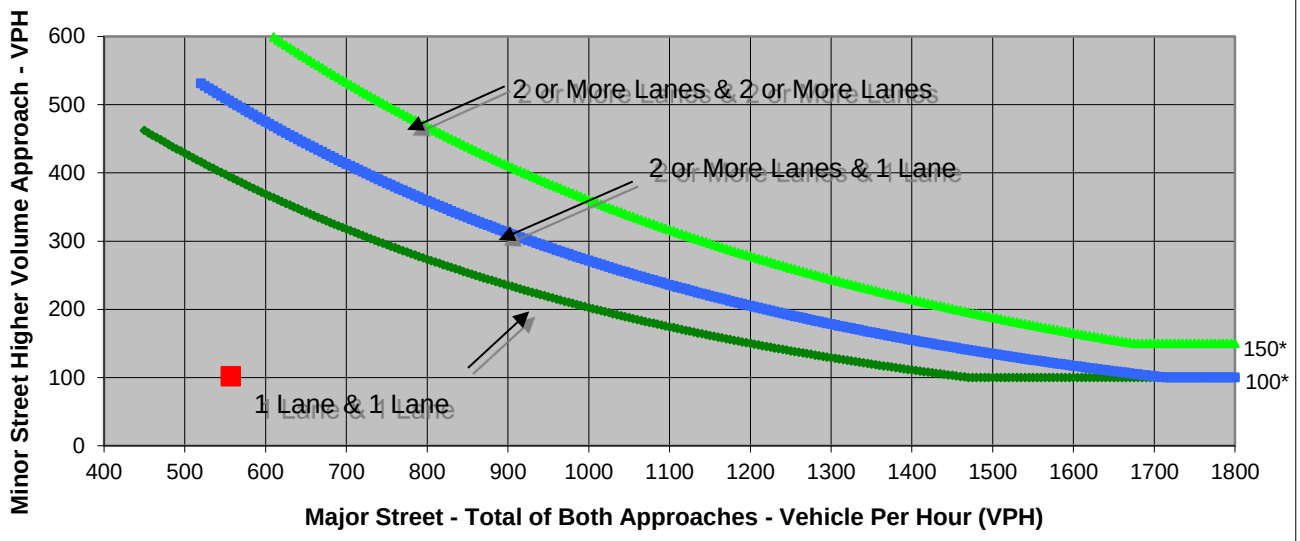
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	75
Through	264	148	1	0
Right	123	1	5	27
Total	388	169	7	102

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**557**	**102**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

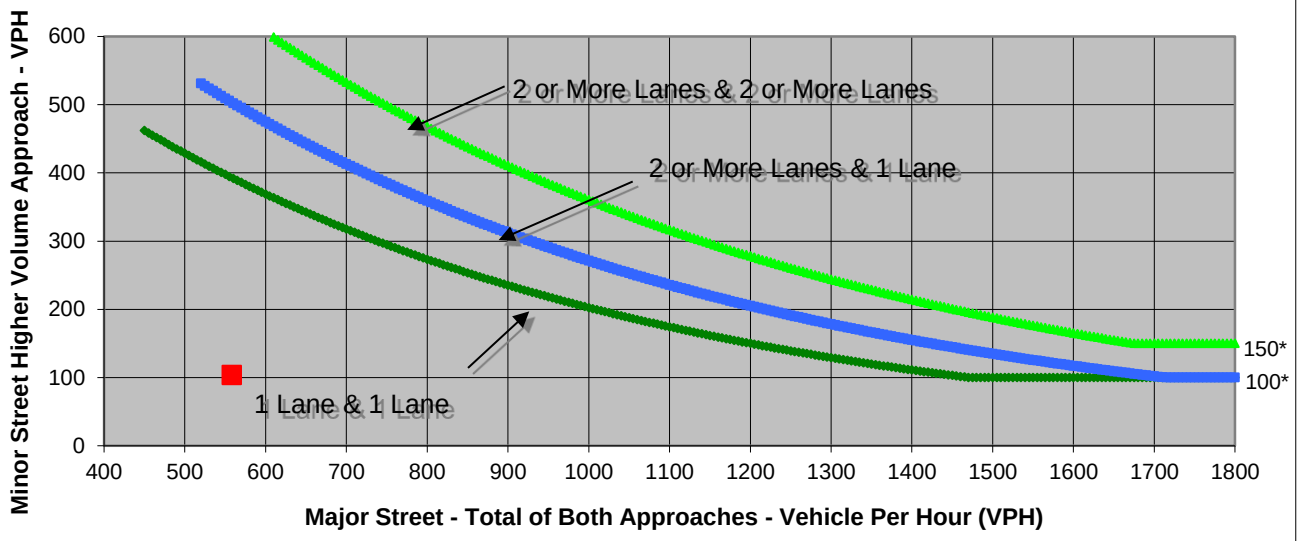
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	77
Through	264	149	1	0
Right	123	1	5	27
Total	388	170	7	104

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**558**	**104**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

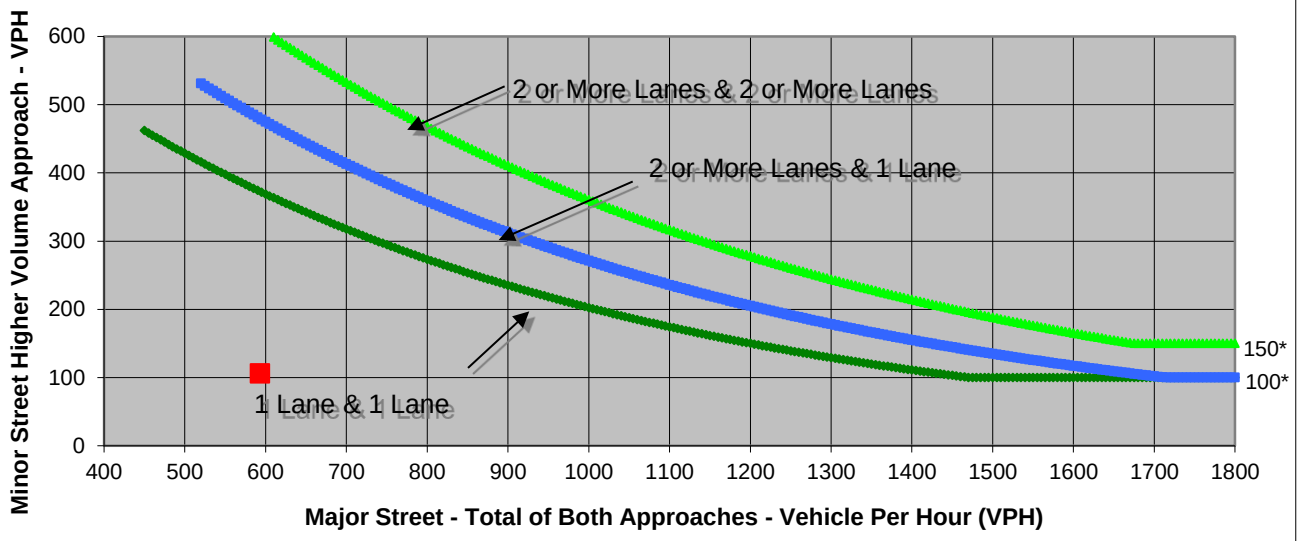
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	79
Through	272	135	1	0
Right	164	1	5	27
Total	437	156	7	106

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**593**	**106**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

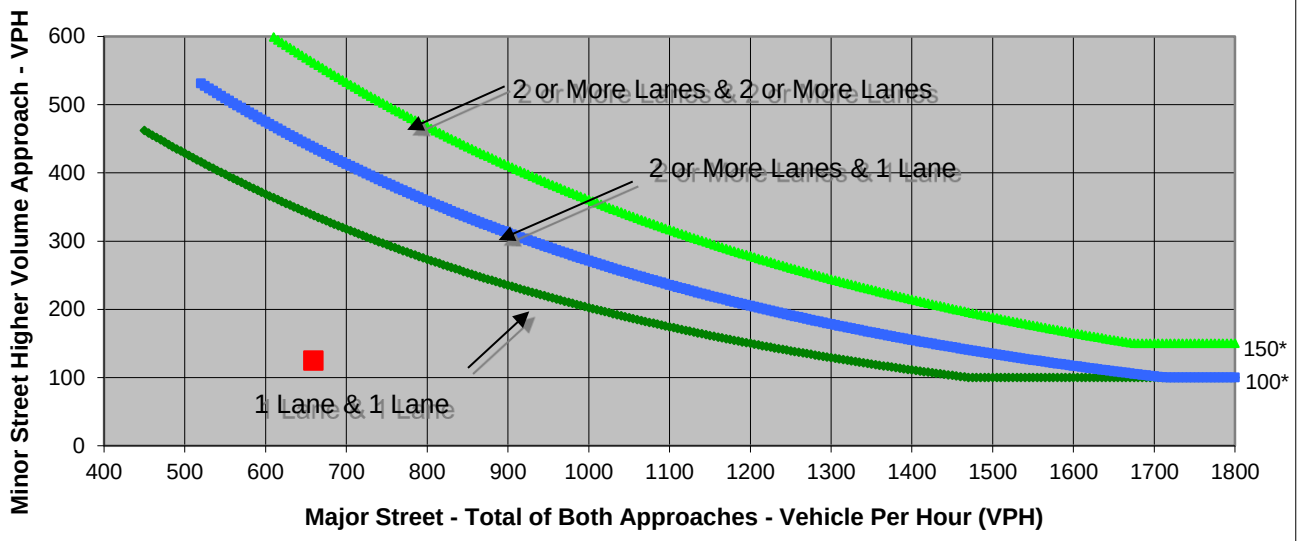
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	98
Through	291	148	1	0
Right	198	1	5	27
Total	490	169	7	125

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**659**	**125**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Horton Street
Minor Street Stanford Avenue

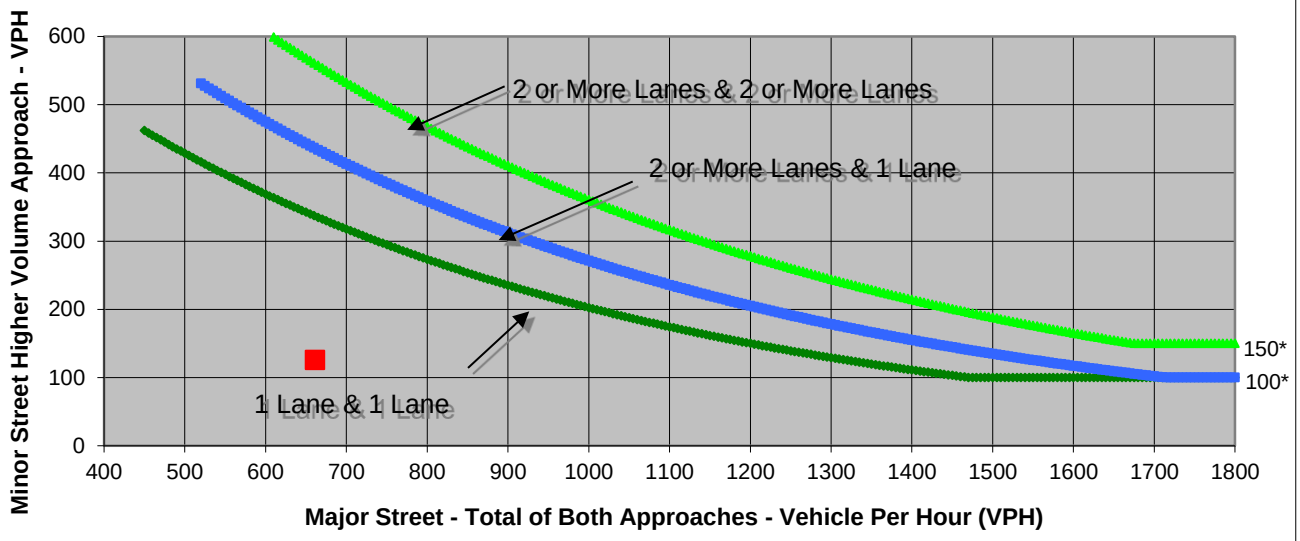
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	20	1	99
Through	291	149	1	0
Right	199	1	5	27
Total	491	170	7	126

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**661**	**126**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

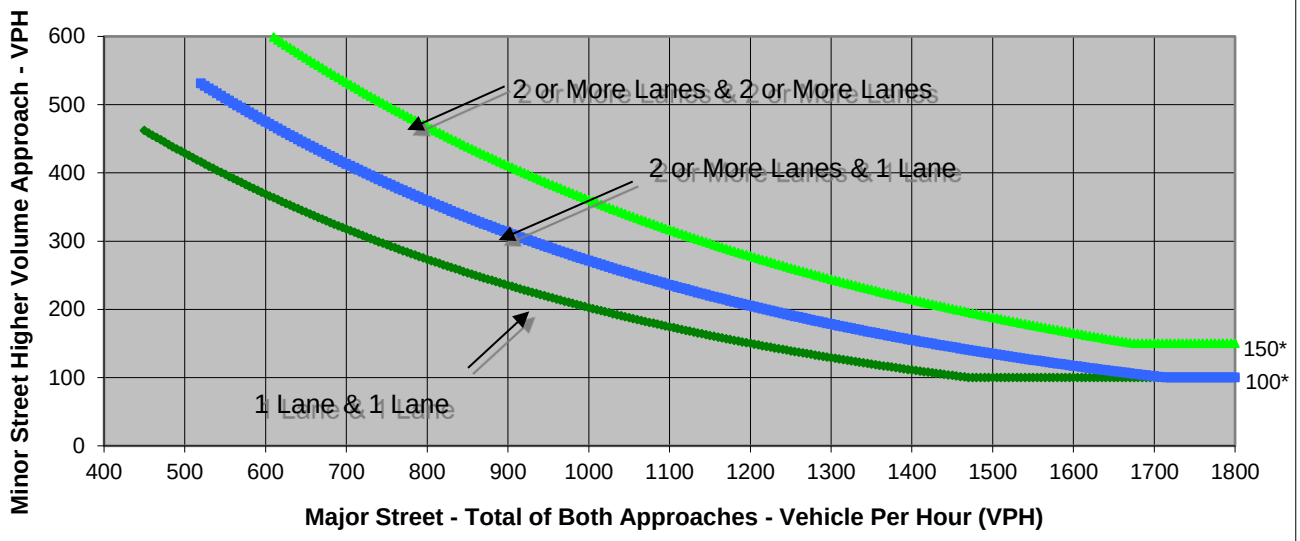
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	23
Through	55	36	0	0
Right	23	0	0	9
Total	78	40	1	32

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**118**	**32**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

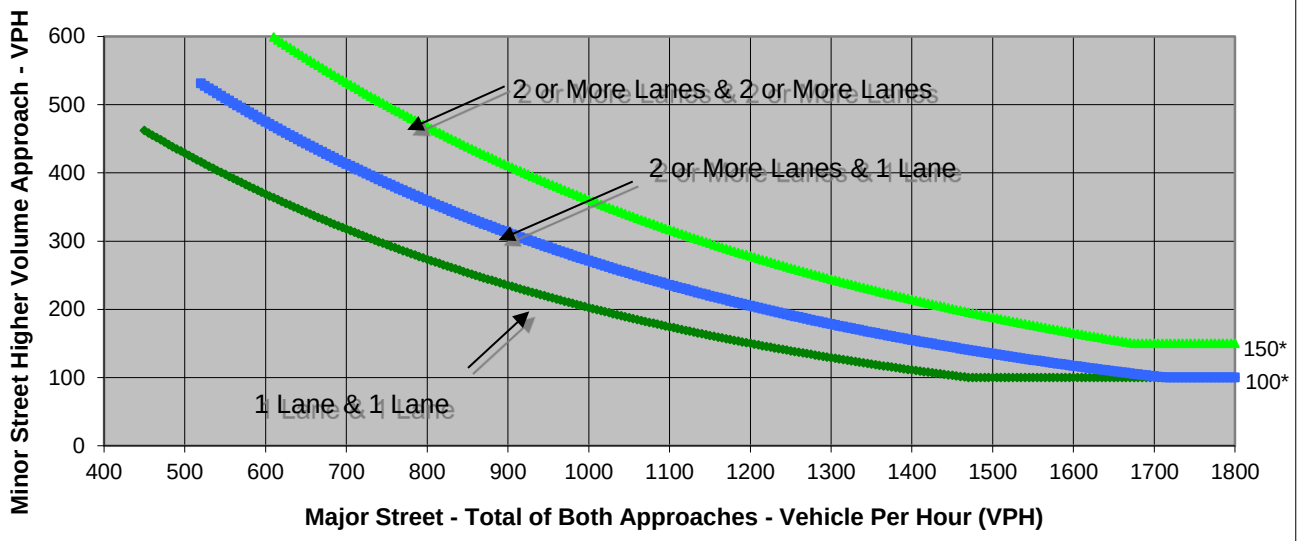
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	48
Through	68	50	0	0
Right	53	0	0	9
Total	121	54	1	57

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**175**	**57**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

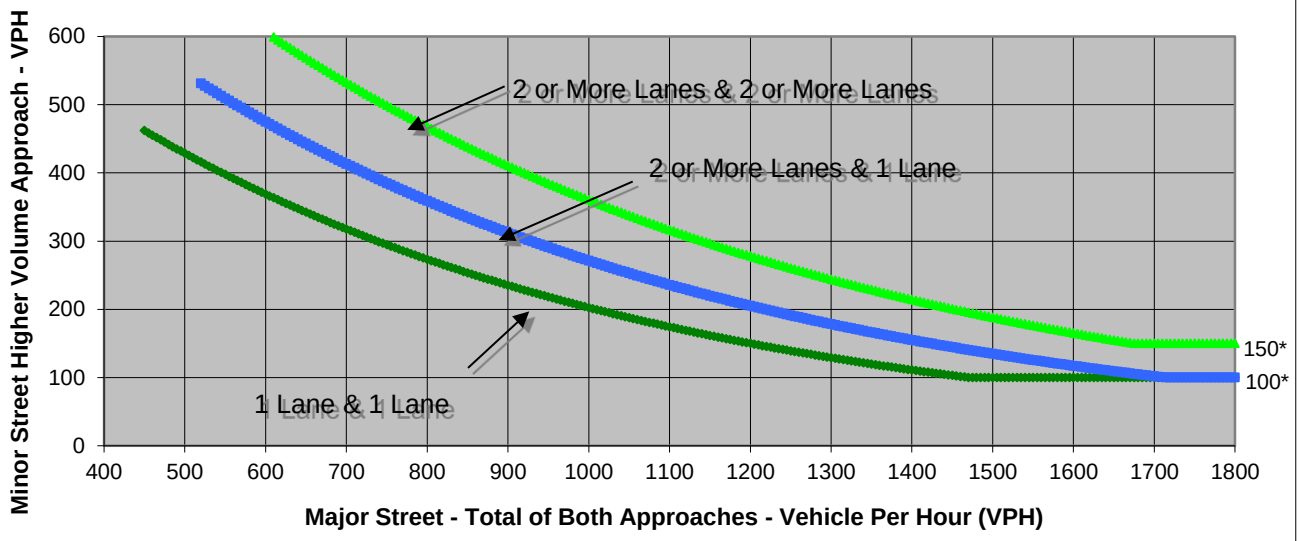
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	49
Through	69	51	0	0
Right	54	0	0	9
Total	123	55	1	58

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**178**	**58**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

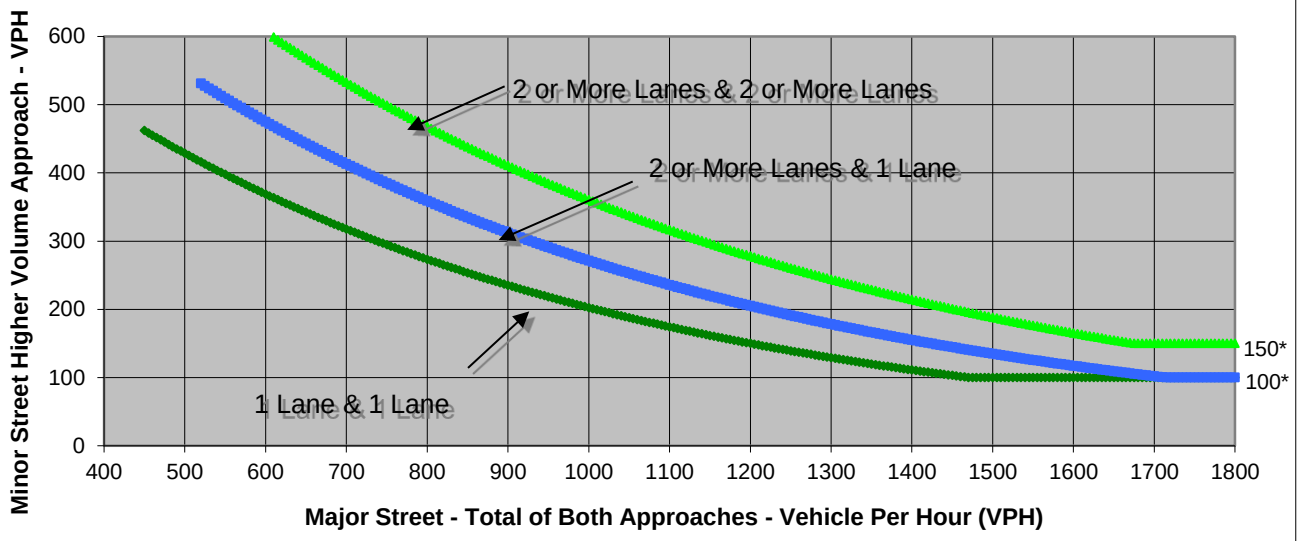
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	23
Through	59	40	0	0
Right	23	0	0	9
Total	82	44	1	32

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**126**	**32**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

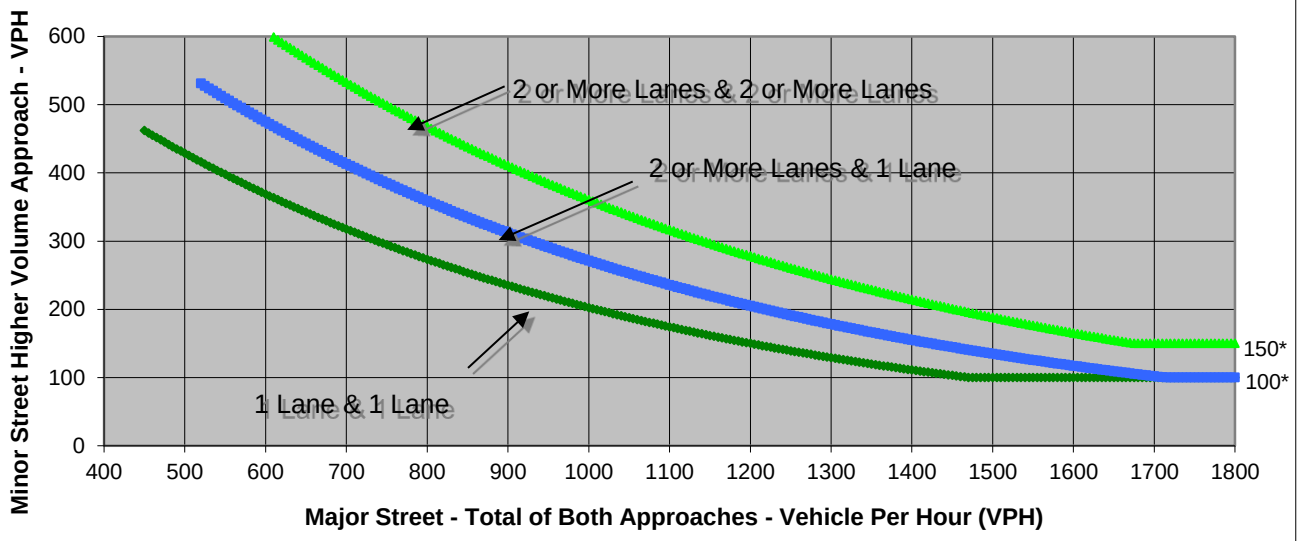
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	48
Through	72	53	0	0
Right	56	0	0	9
Total	128	57	1	57

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**185**	**57**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

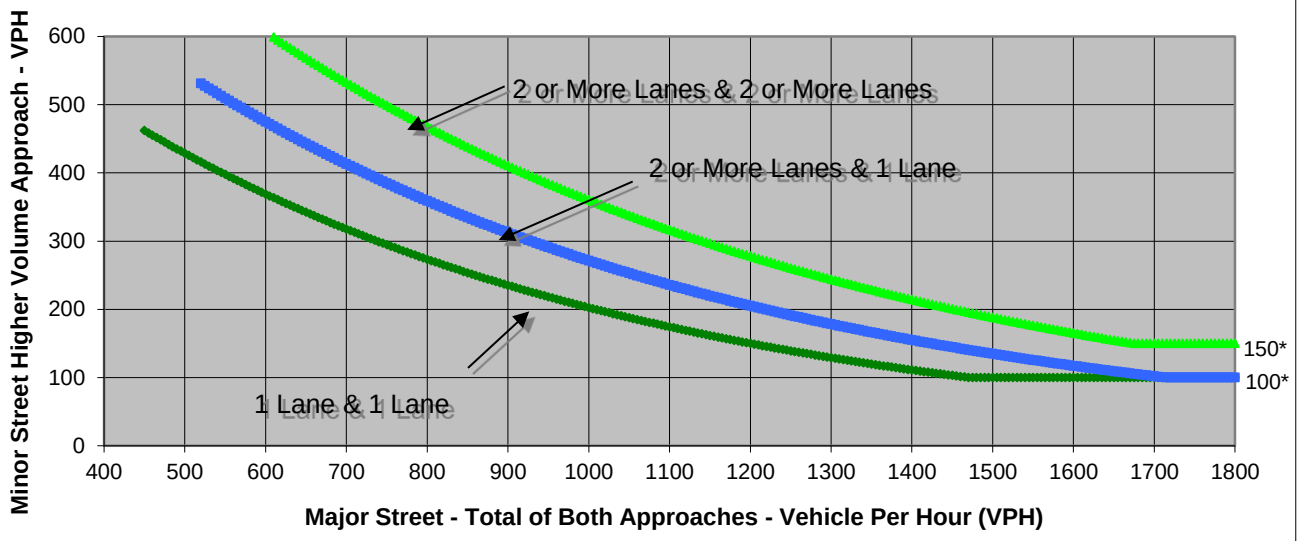
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	49
Through	73	54	0	0
Right	57	0	0	9
Total	130	58	1	58

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**188**	**58**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

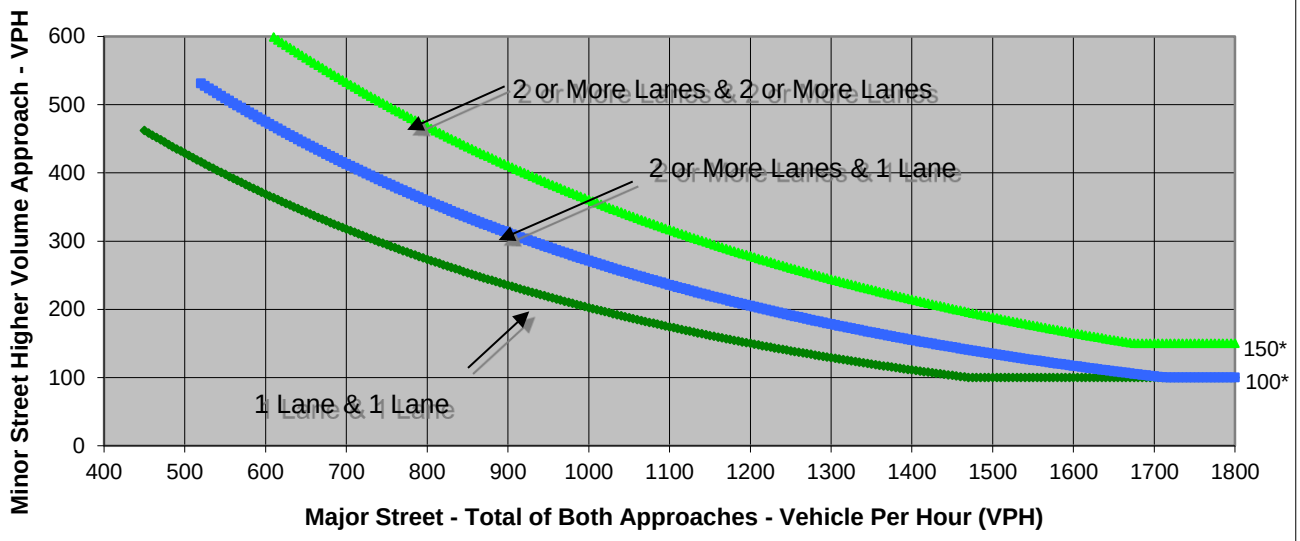
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	51
Through	64	40	0	0
Right	33	0	0	9
Total	97	44	1	60

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**141**	**60**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

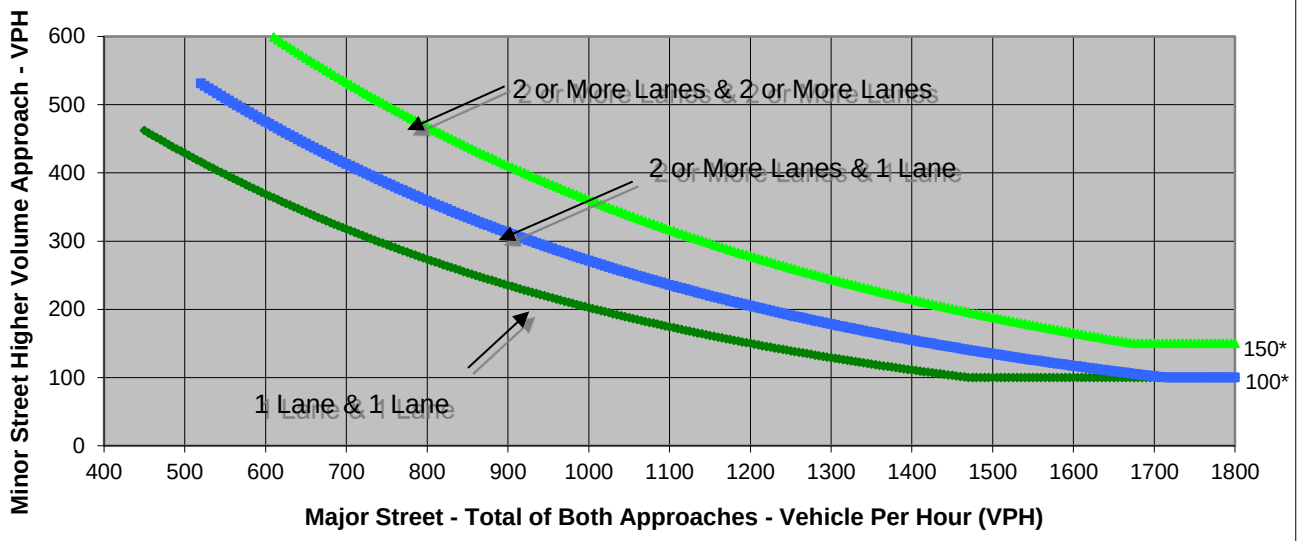
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	76
Through	77	53	0	0
Right	66	0	0	9
Total	143	57	1	85

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**200**	**85**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Stanford Avenue

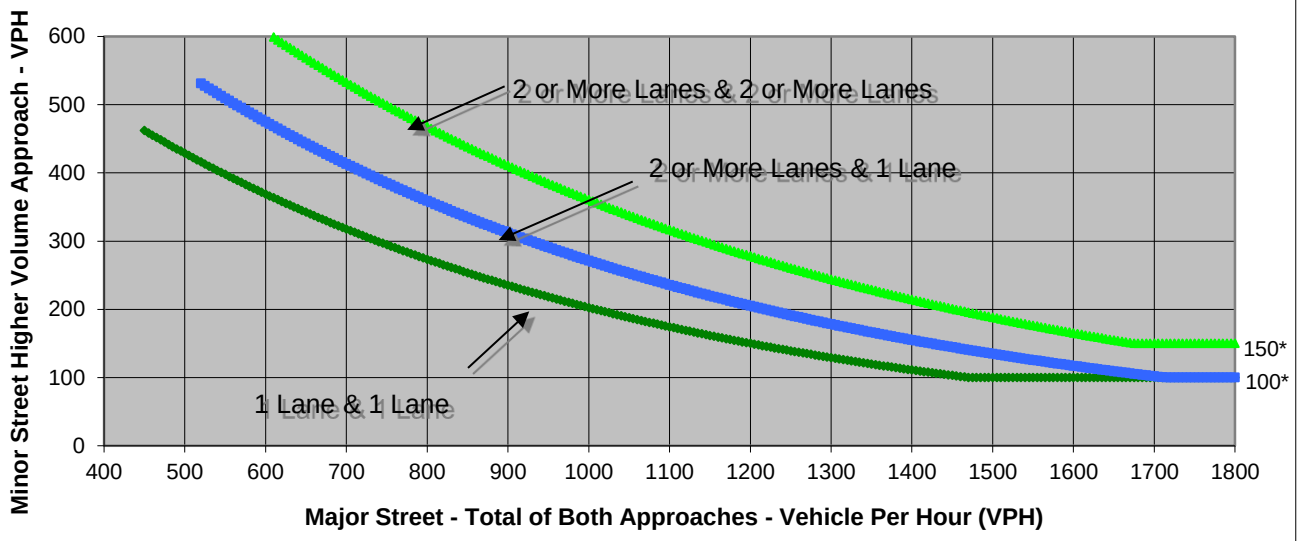
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	77
Through	78	54	0	0
Right	66	0	0	9
Total	144	58	1	86

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Stanford Avenue	Warrant Met
Number of Approach Lanes	**1**	**2**	**NO**
Traffic Volume (VPH) *	**202**	**86**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 53rd Street

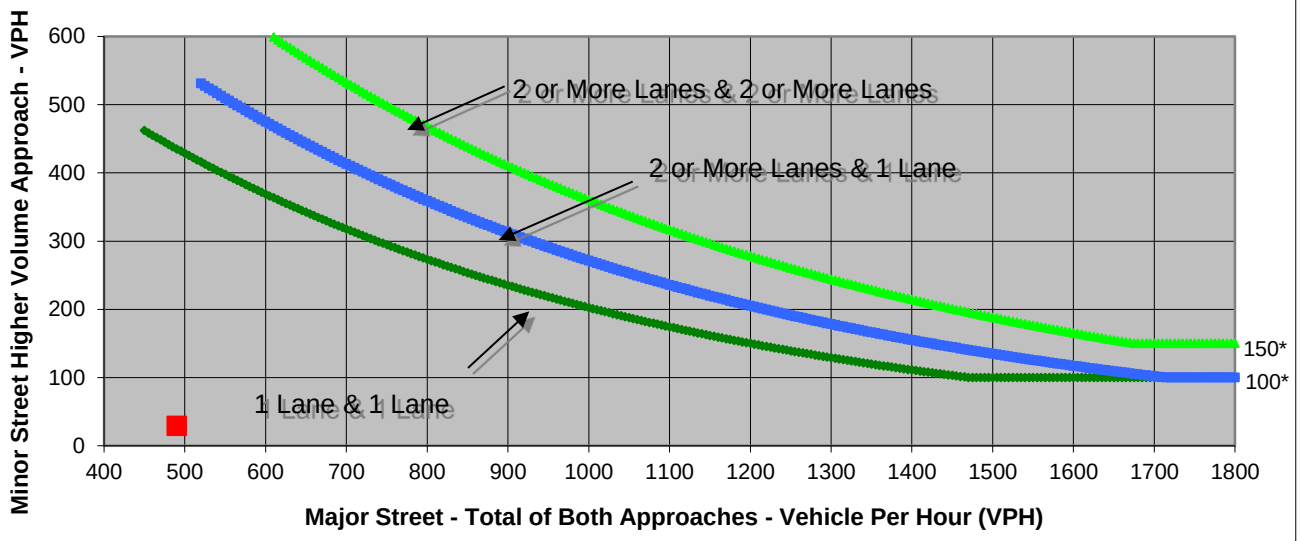
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	0	19
Through	310	149	0	0
Right	14	0	0	10
Total	324	166	0	29

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**490**	**29**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 53rd Street

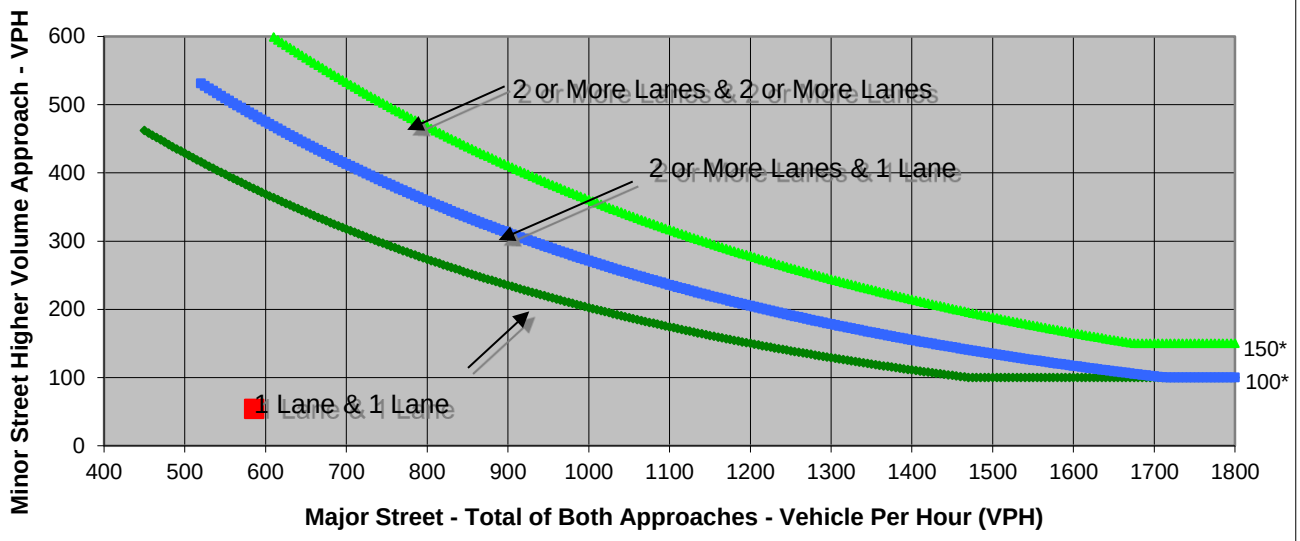
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	0	44
Through	363	181	0	0
Right	25	0	0	10
Total	388	198	0	54

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	53rd Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**586**	**54**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 53rd Street

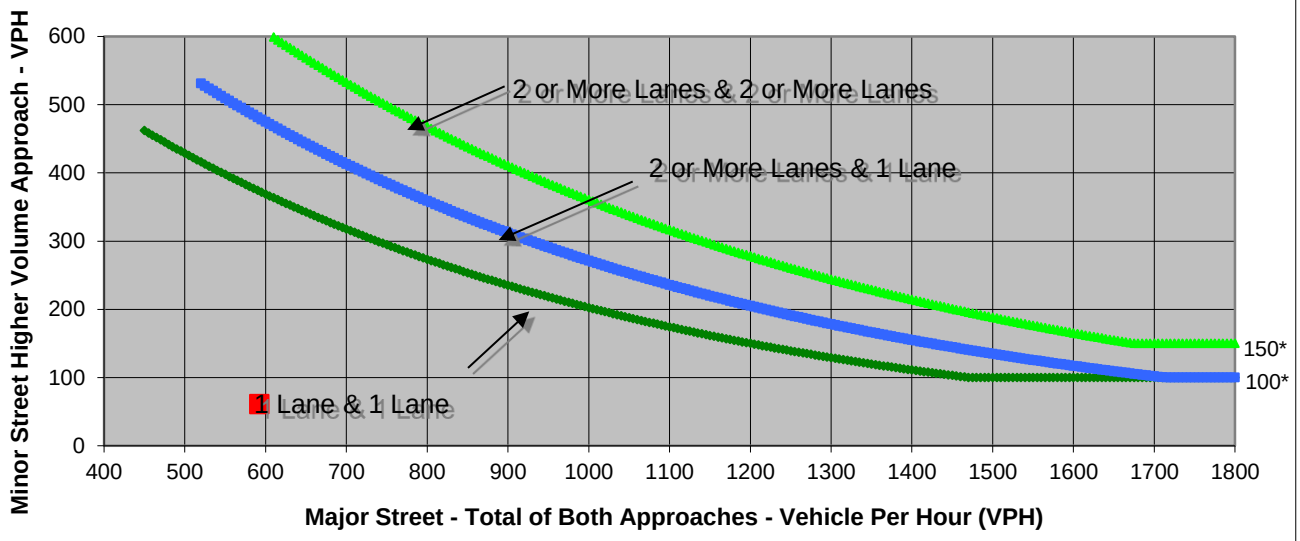
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	0	51
Through	364	184	0	0
Right	27	0	0	10
Total	391	201	0	61

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	53rd Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**592**	**61**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 53rd Street

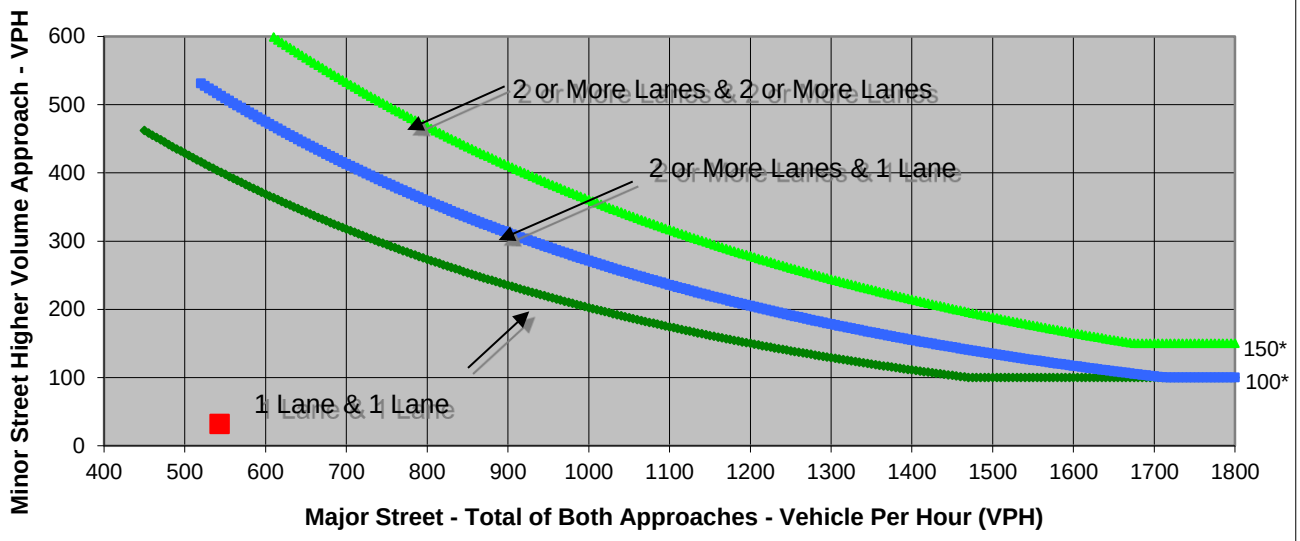
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	0	22
Through	320	190	0	0
Right	16	0	0	10
Total	336	207	0	32

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	53rd Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**543**	**32**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Major Street	Horton Street
Minor Street	53rd Street
Project	Sherwin Williams
Scenario	Near Term PPA Conditions
Peak Hour	PM

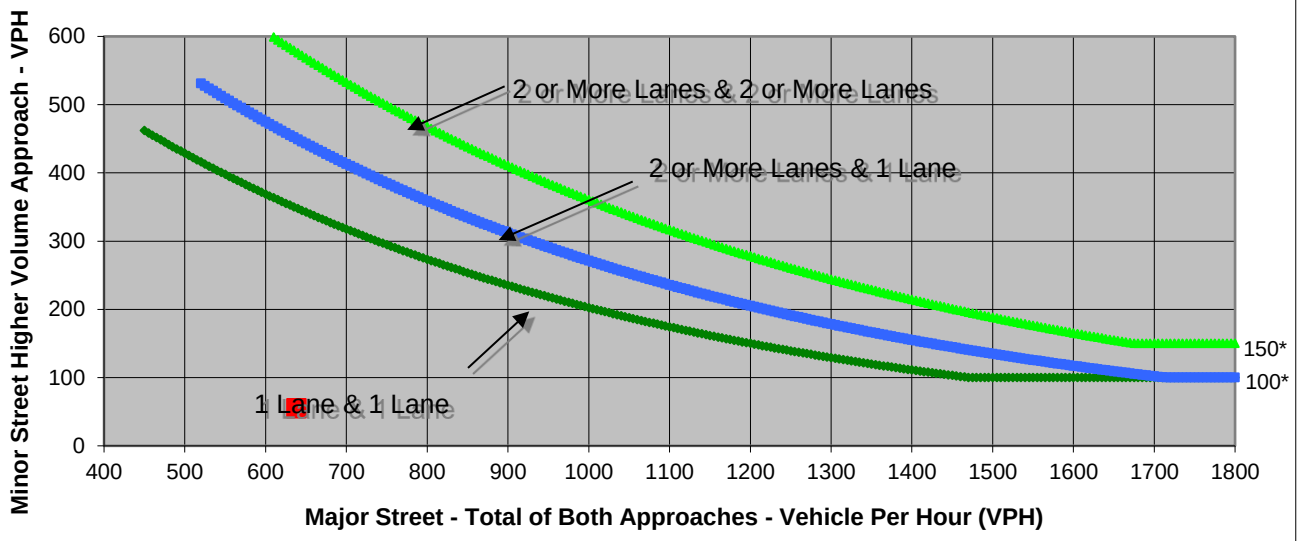
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	0	45
Through	374	222	0	0
Right	25	0	0	10
Total	399	239	0	55

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	53rd Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**638**	**55**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Major Street	Horton Street
Minor Street	53rd Street
Project	Sherwin Williams
Scenario	Near Term PPB Conditions
Peak Hour	PM

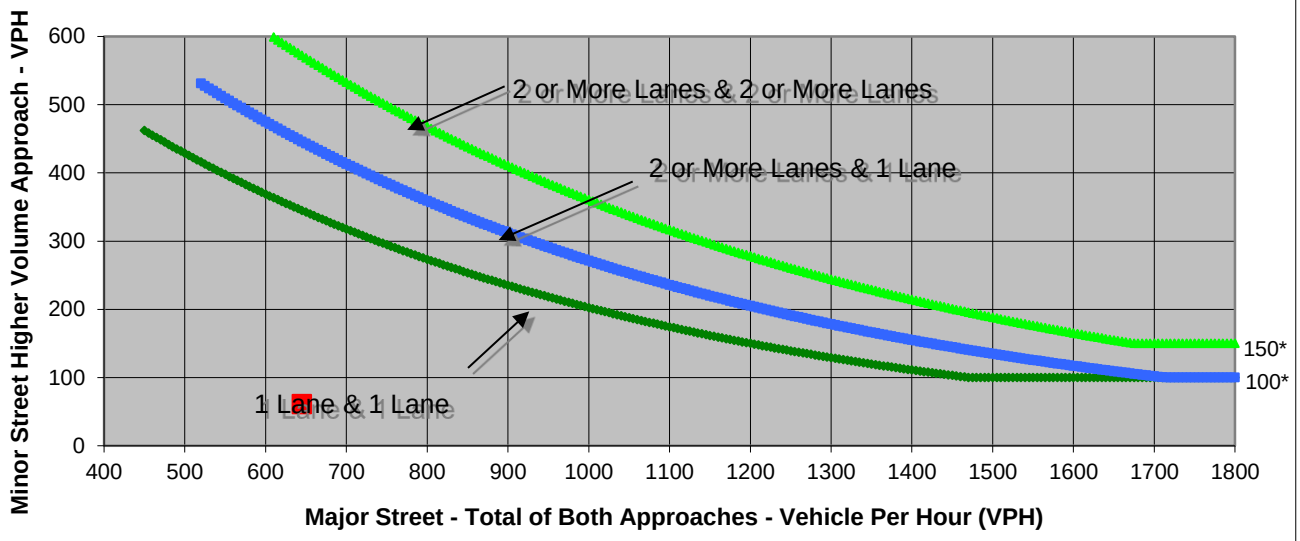
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	0	51
Through	375	225	0	0
Right	28	0	0	10
Total	403	242	0	61

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	53rd Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**645**	**61**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 53rd Street

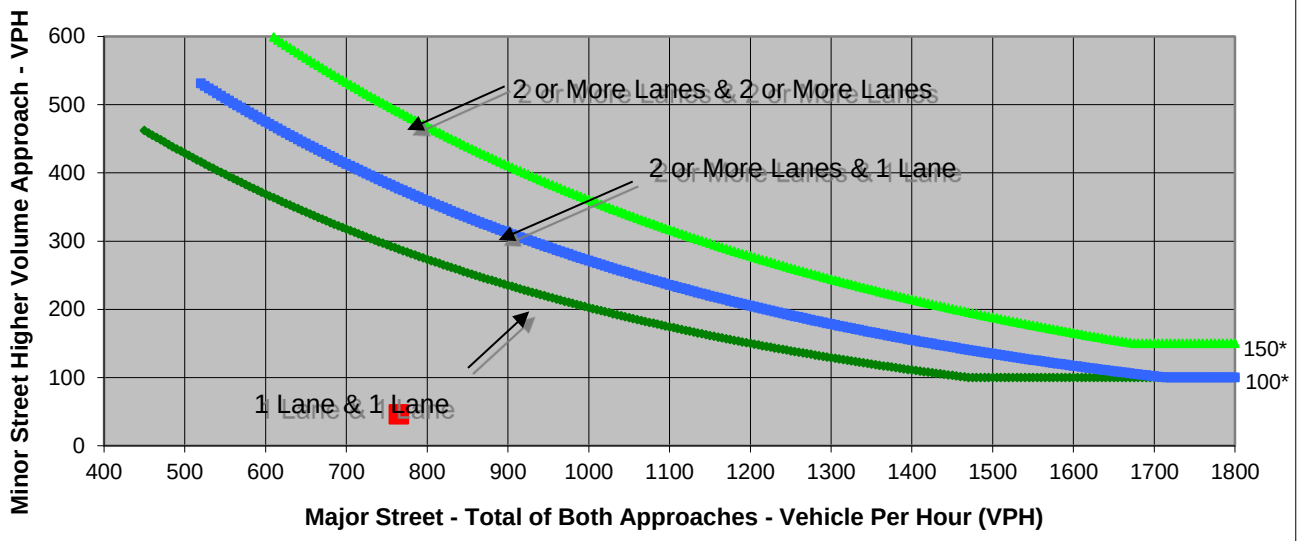
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	51	0	24
Through	348	350	0	0
Right	16	0	0	22
Total	364	401	0	46

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	53rd Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**765**	**46**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Horton Street
Minor Street 53rd Street

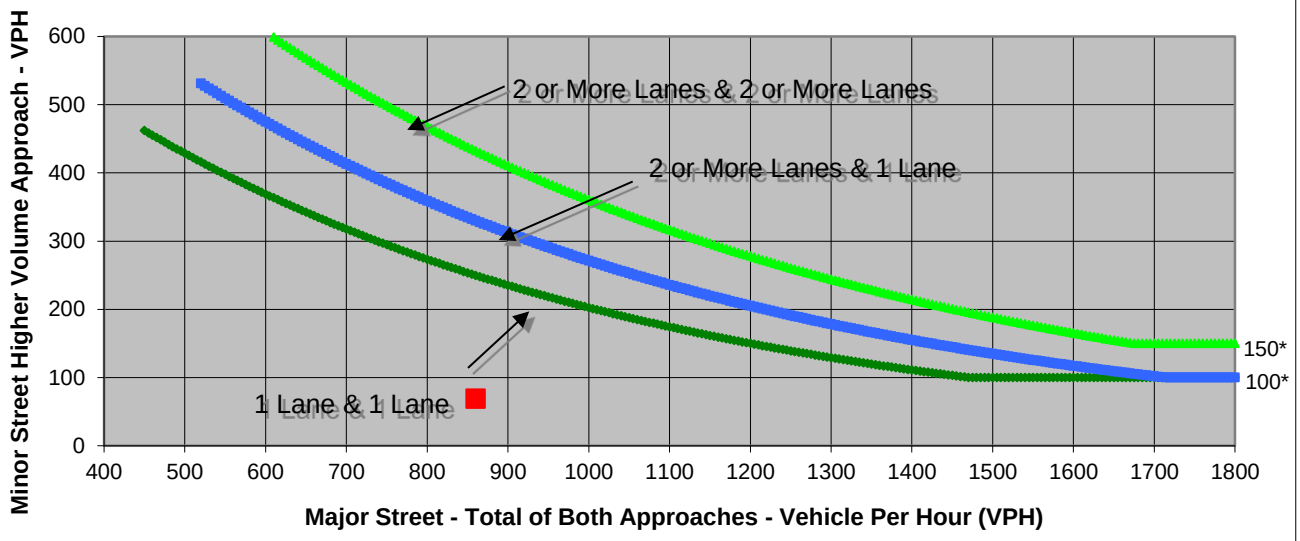
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	51	0	47
Through	402	382	0	0
Right	25	0	0	22
Total	427	433	0	69

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**860**	**69**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Horton Street
Minor Street 53rd Street

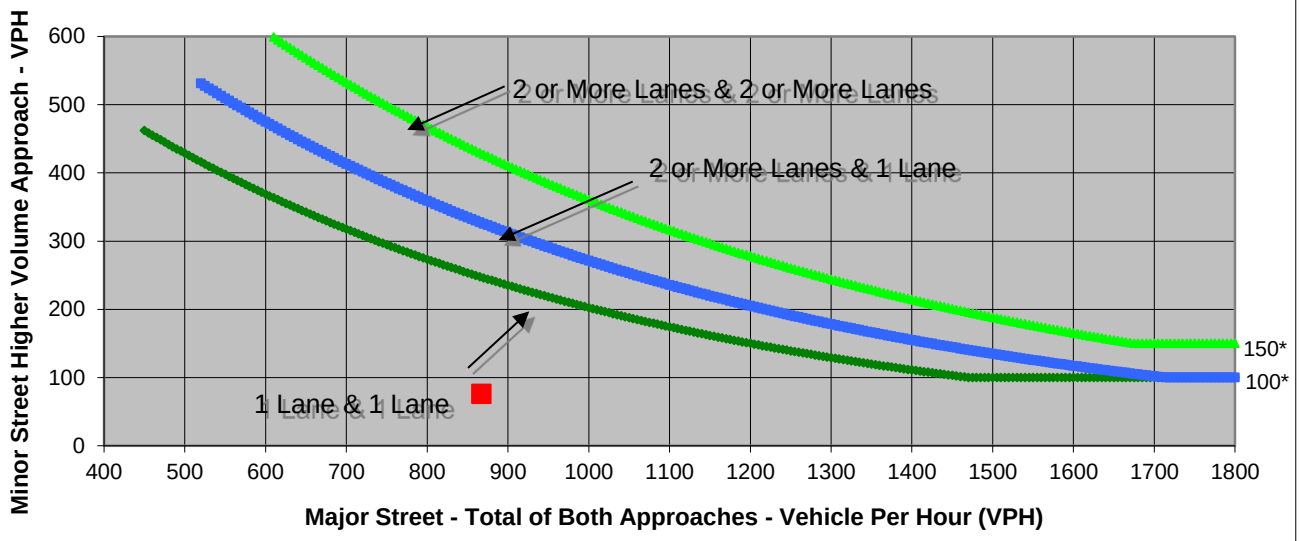
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	51	0	54
Through	403	385	0	0
Right	28	0	0	22
Total	431	436	0	76

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**867**	**76**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

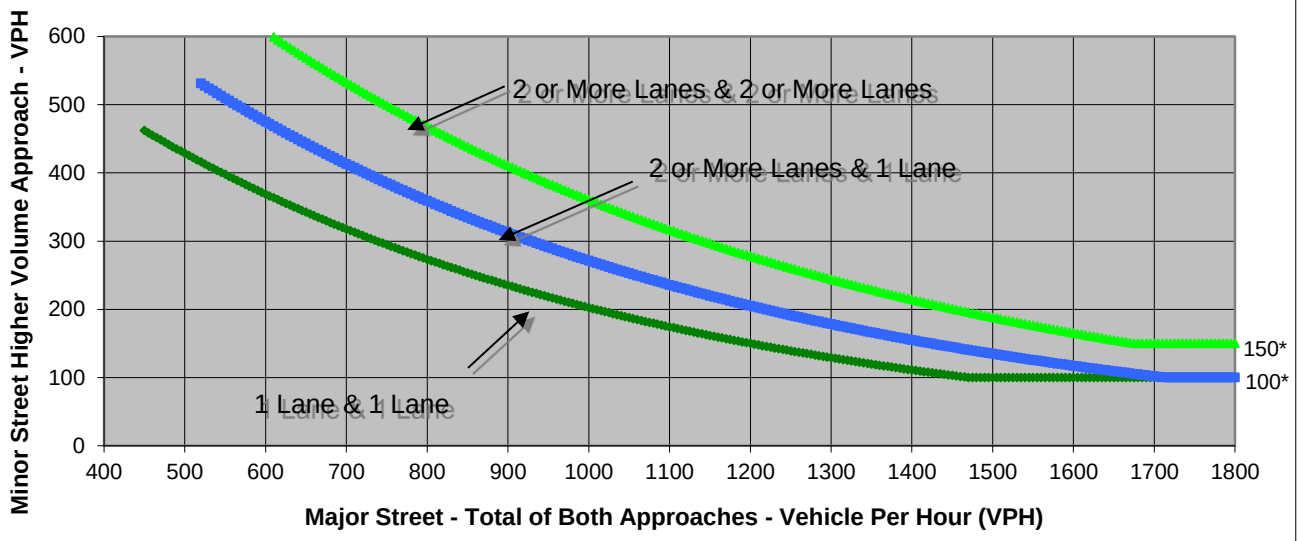
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	0	1
Through	74	59	0	0
Right	7	0	0	4
Total	81	63	0	5

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**144**	**5**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

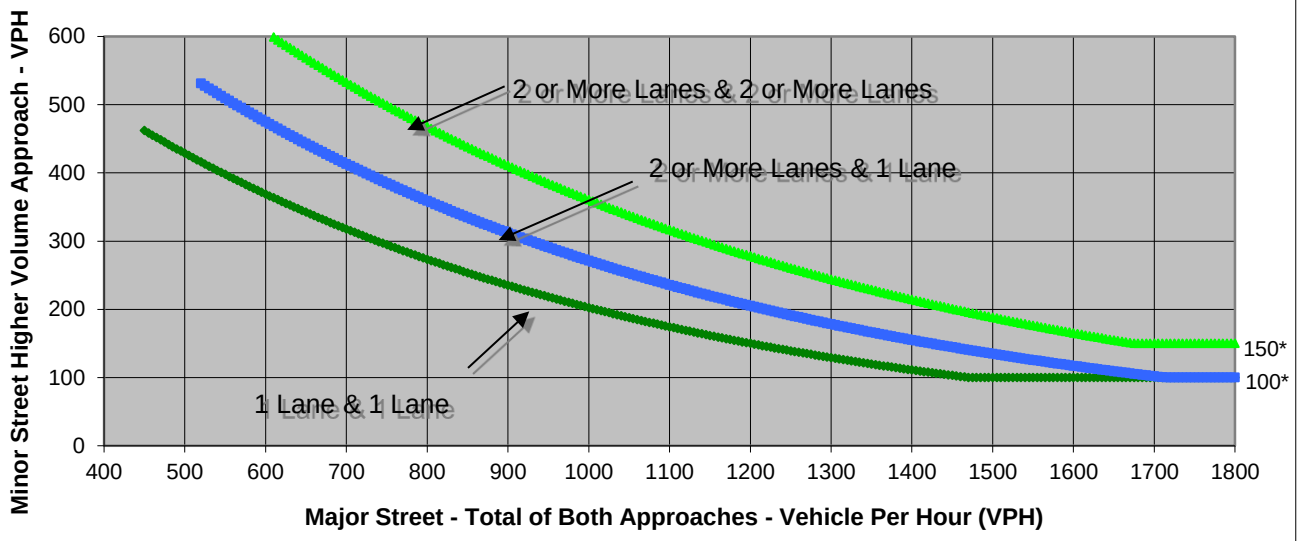
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	0	24
Through	117	98	0	0
Right	24	0	0	4
Total	141	102	0	28

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**243**	**28**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

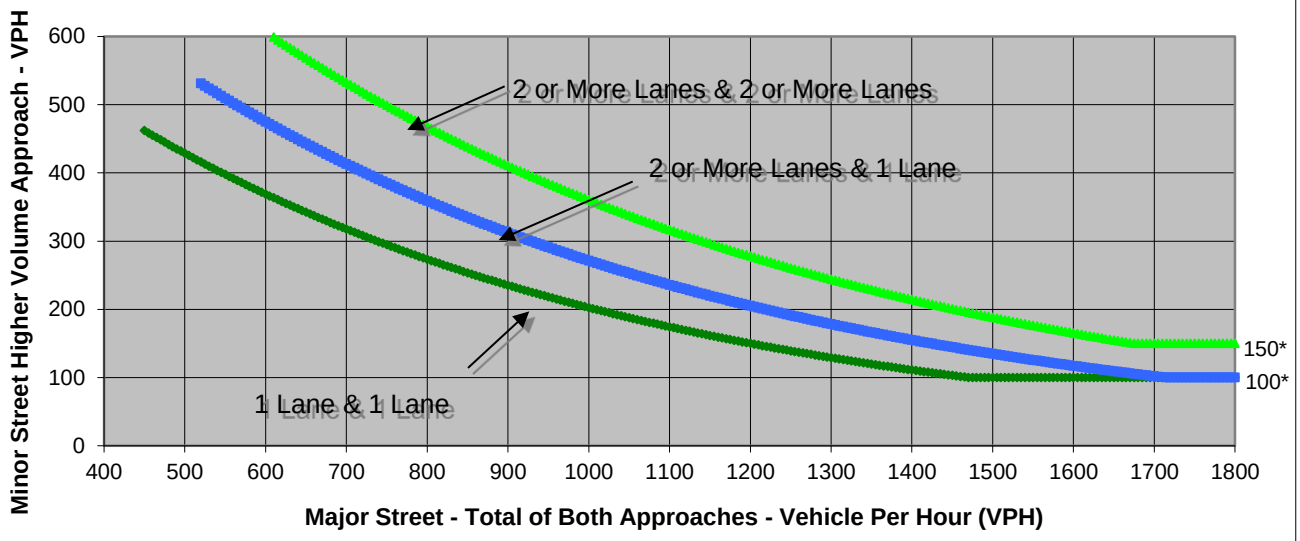
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	0	29
Through	119	100	0	0
Right	28	0	0	4
Total	147	104	0	33

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**251**	**33**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

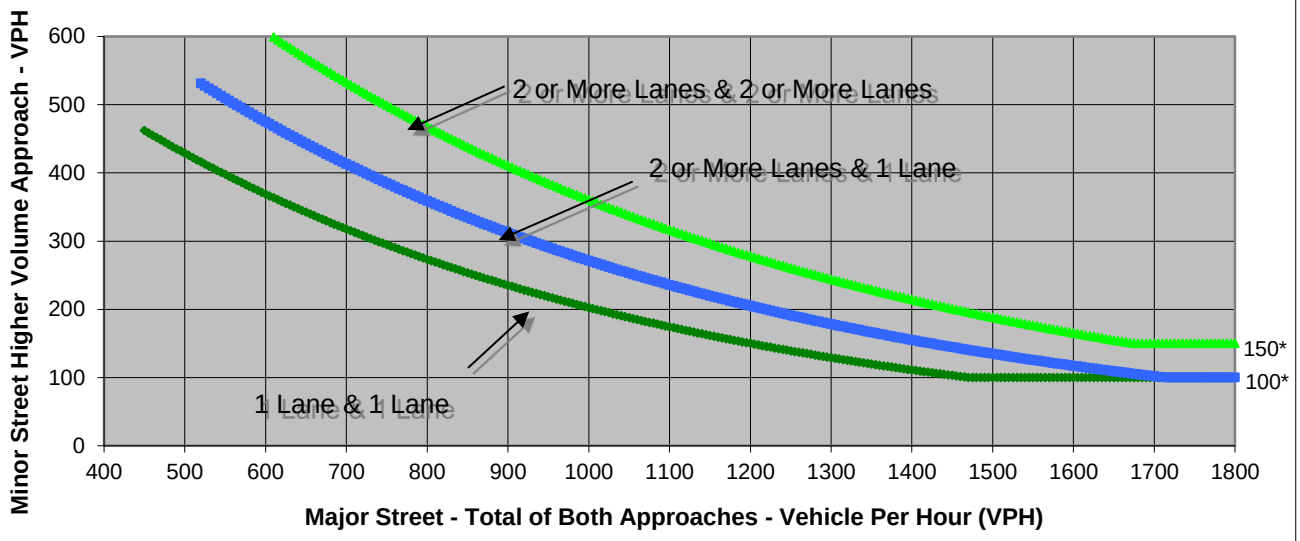
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	0	1
Through	78	63	0	0
Right	7	0	0	4
Total	85	67	0	5

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**152**	**5**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

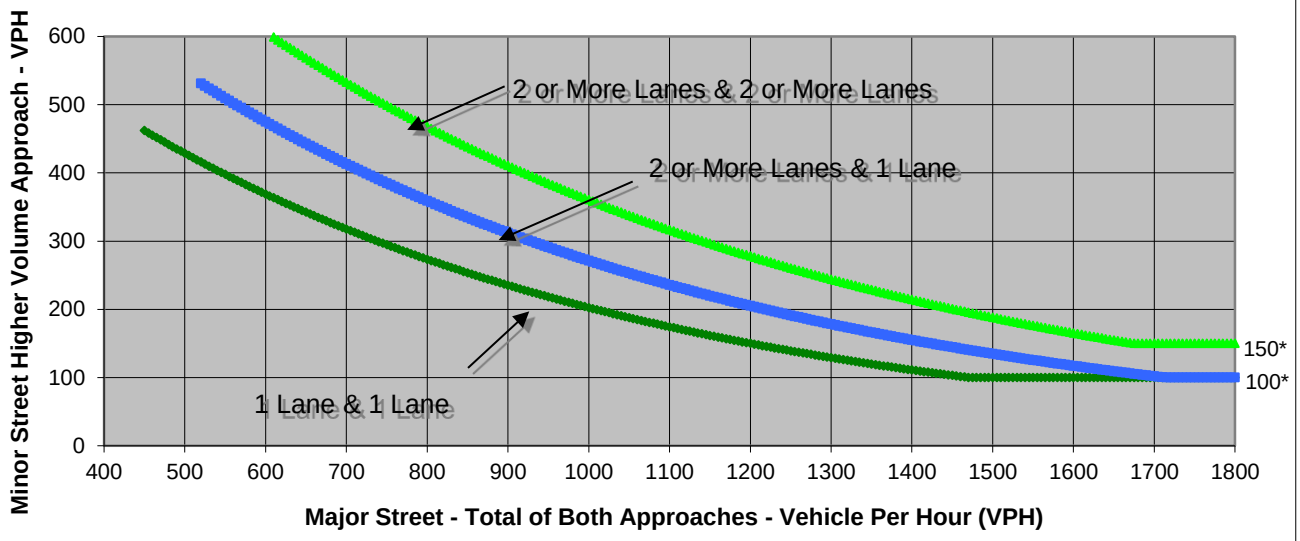
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	0	22
Through	124	102	0	0
Right	19	0	0	4
Total	143	106	0	26

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**249**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

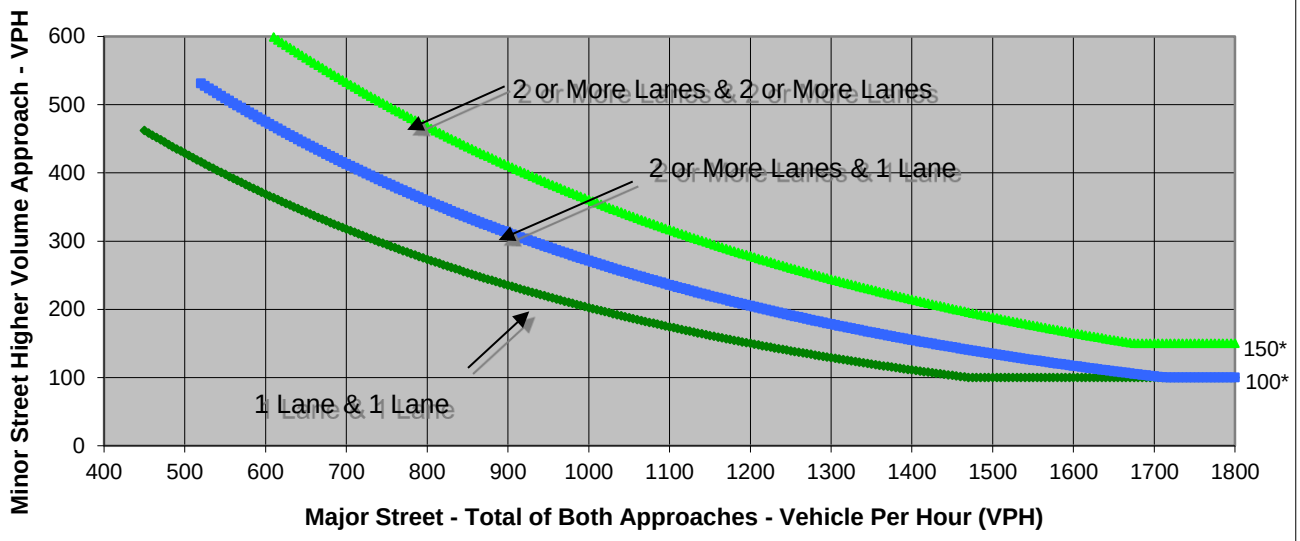
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	0	27
Through	125	104	0	0
Right	24	0	0	4
Total	149	108	0	31

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**257**	**31**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

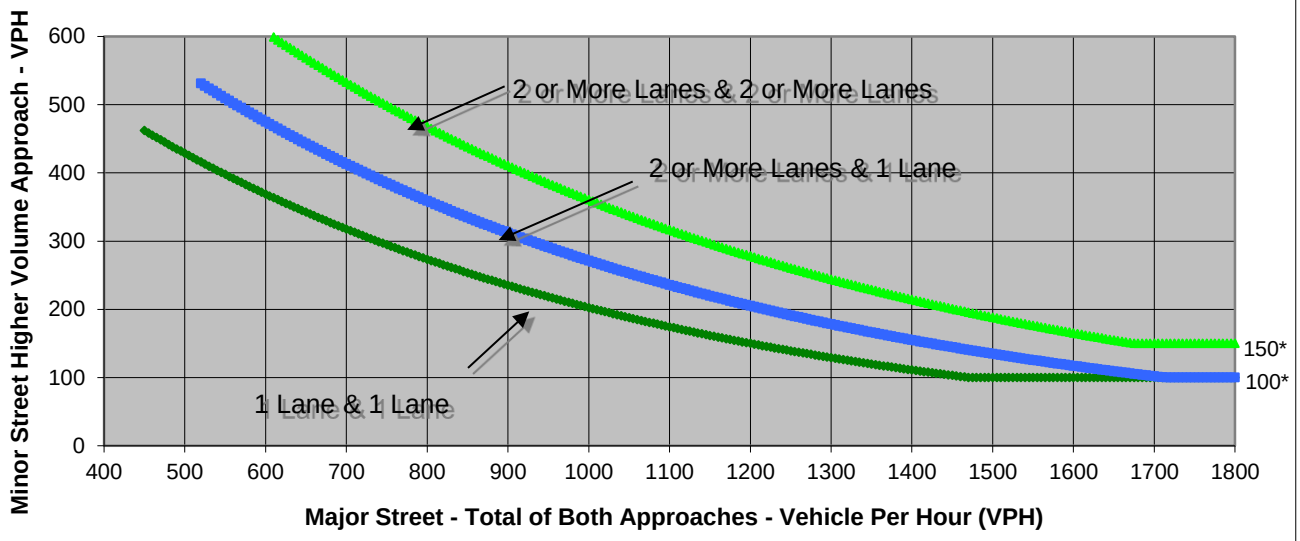
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	7	0	1
Through	93	78	0	0
Right	7	0	0	7
Total	100	85	0	8

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**185**	**8**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

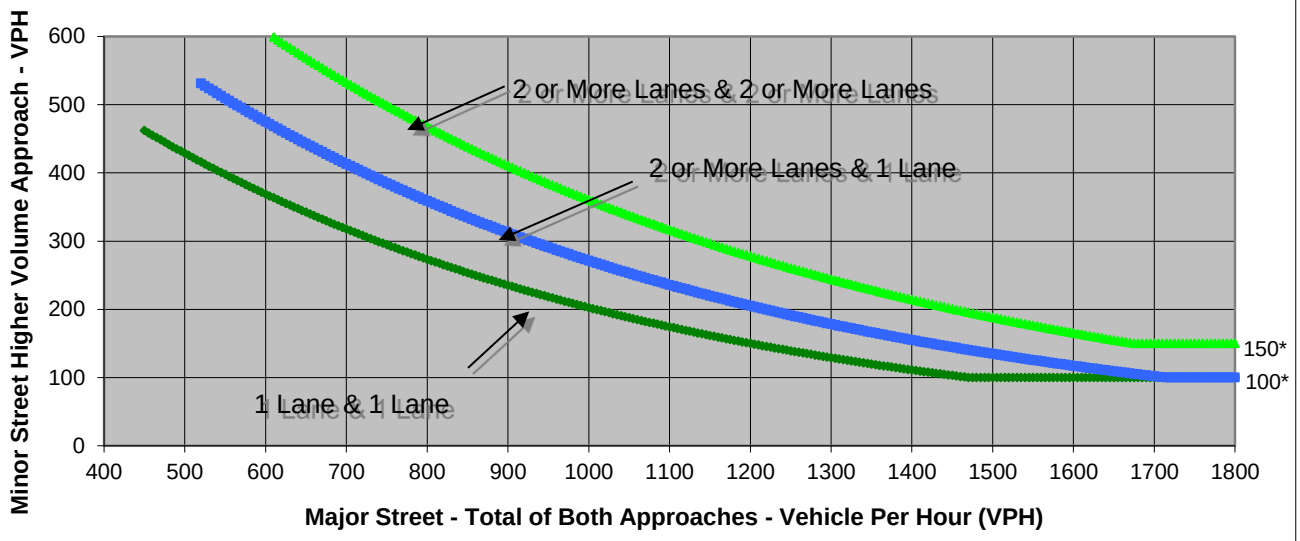
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	7	0	22
Through	139	117	0	0
Right	19	0	0	7
Total	158	124	0	29

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 53rd Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**282**	**29**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street 53rd Street

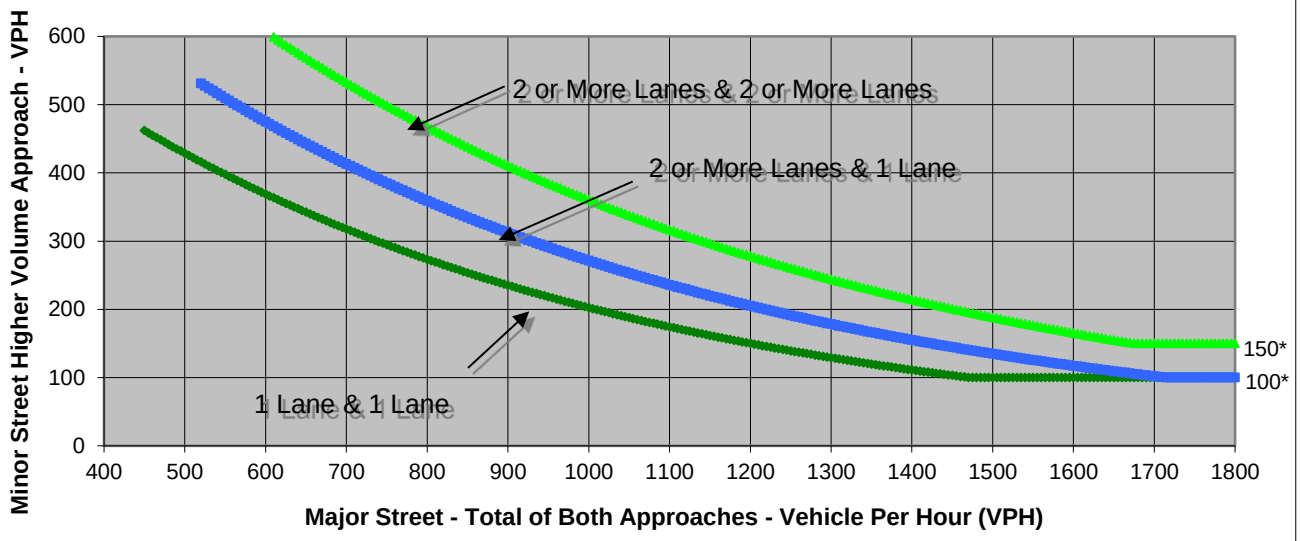
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	7	0	27
Through	140	119	0	0
Right	24	0	0	7
Total	164	126	0	34

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	53rd Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**290**	**34**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Major Street Horton Street
Minor Street Future Project Driveway Street

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

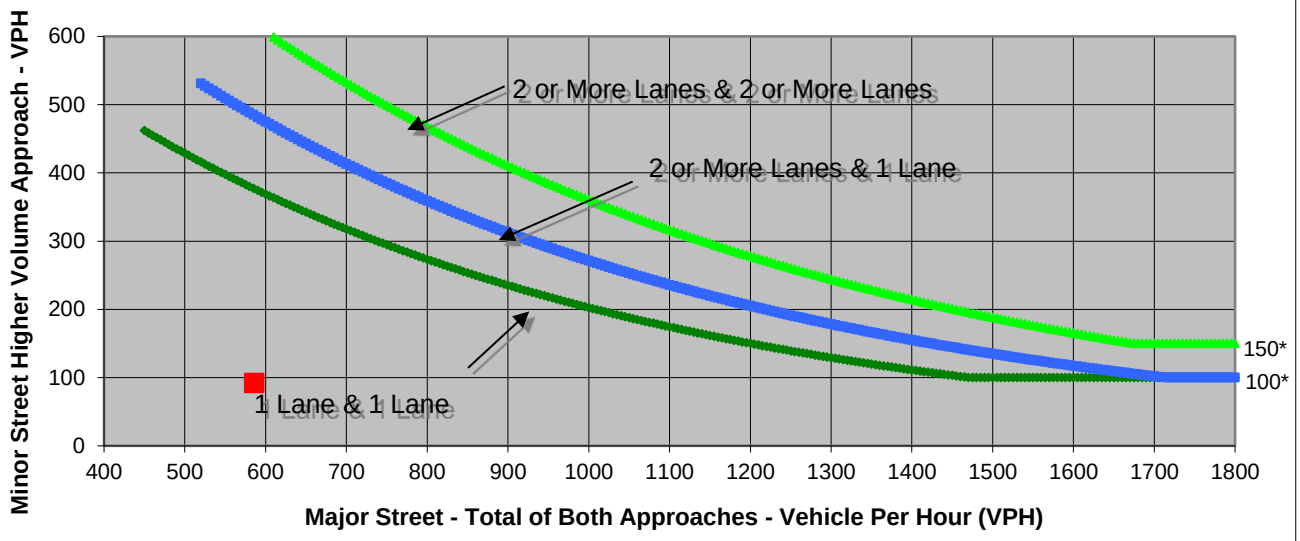
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	1	62	0
Through	303	197	0	0
Right	0	57	30	3
Total	331	255	92	3

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	Future Project Driveway Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**586**	**92**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

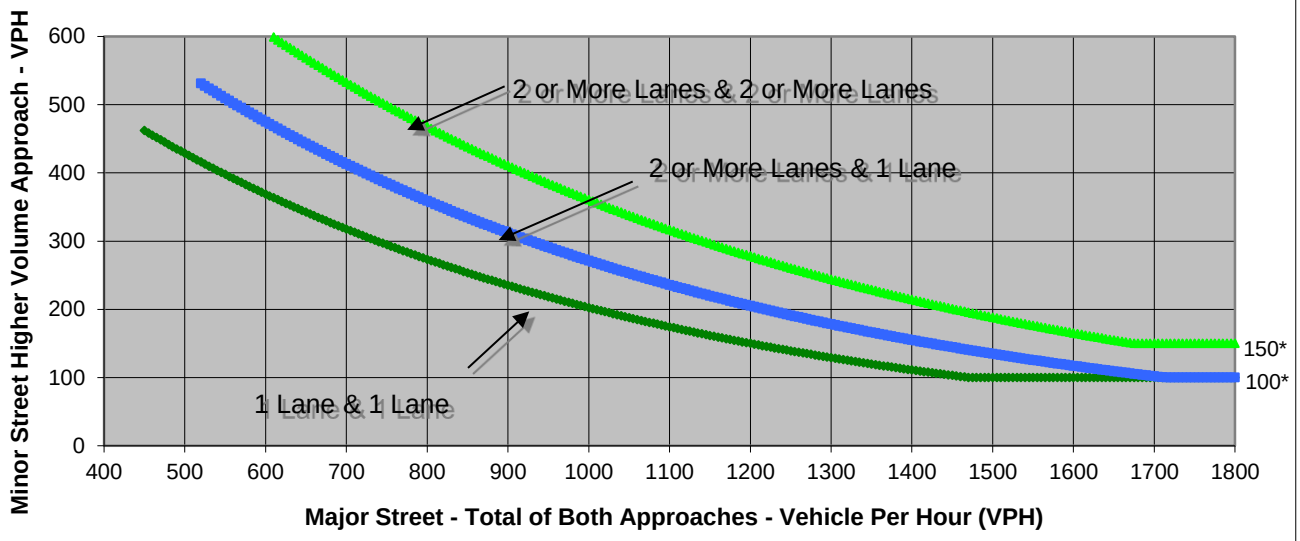
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	0	0
Through	82	62	0	0
Right	1	0	0	0
Total	83	63	0	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Future Project Driveway Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**146**	**0**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

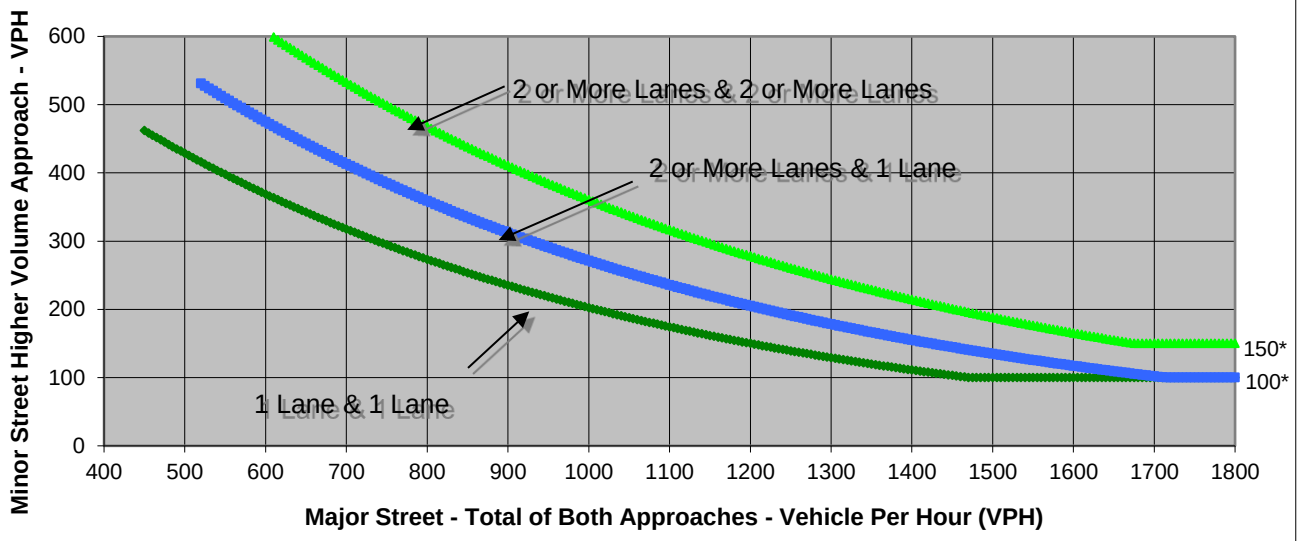
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	1	58	0
Through	84	63	0	0
Right	1	61	19	0
Total	107	125	77	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Future Project Driveway Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**232**	**77**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

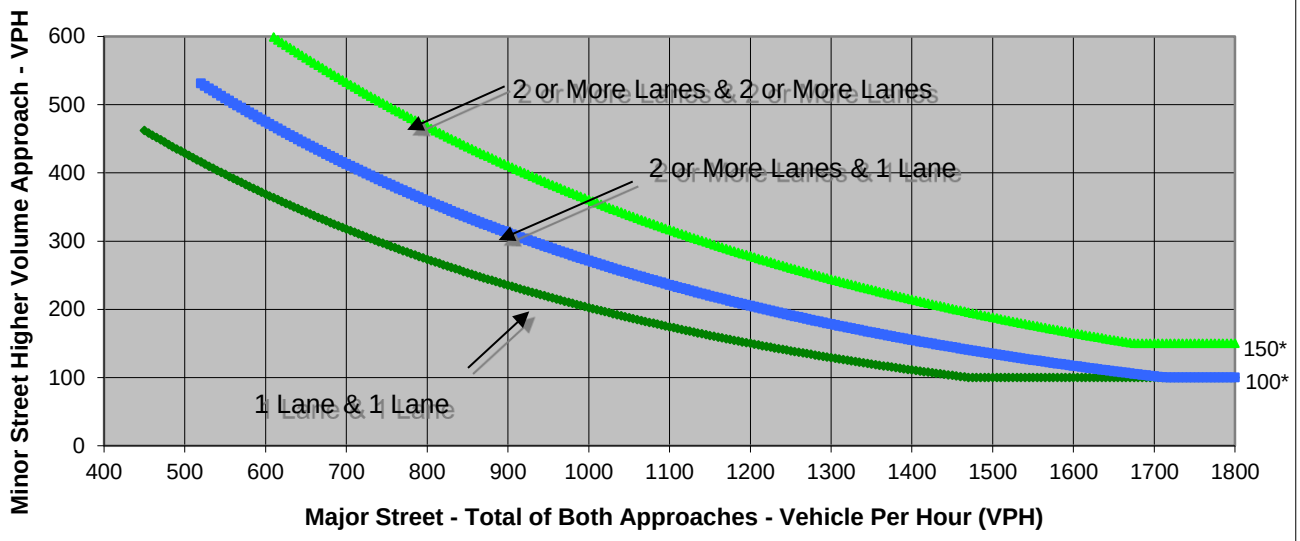
Turn Movement Volumes

	NB	SB	EB	WB
Left	27	1	66	0
Through	82	62	0	0
Right	1	69	23	0
Total	110	132	89	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	Future Project Driveway Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**242**	**89**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

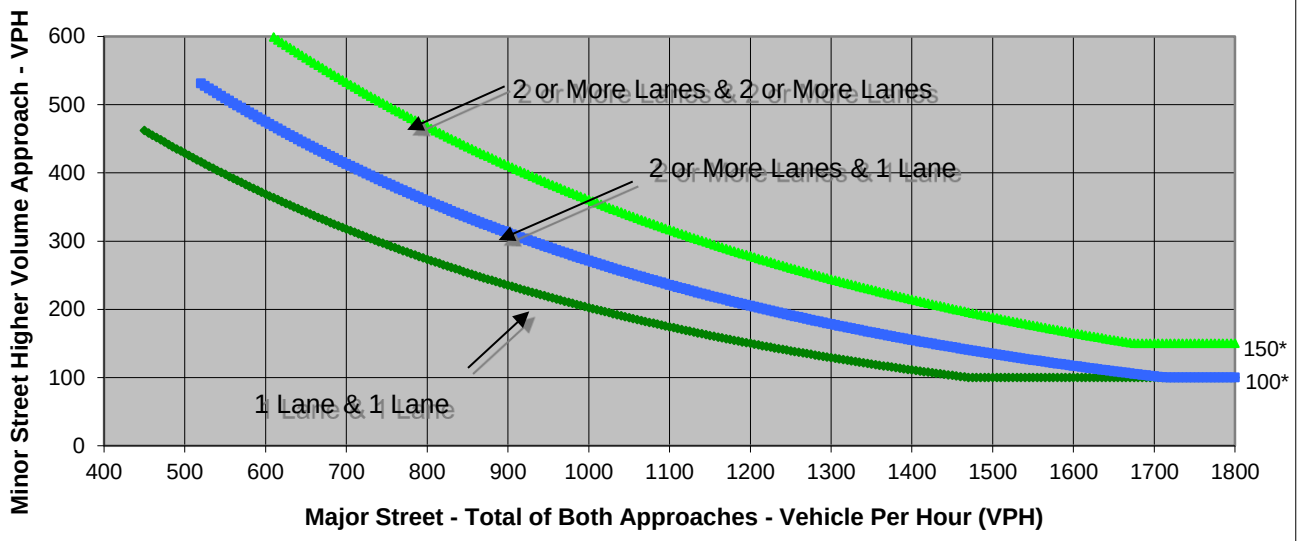
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	0	0
Through	86	66	0	0
Right	1	0	0	0
Total	87	67	0	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Future Project Driveway Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**154**	**0**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

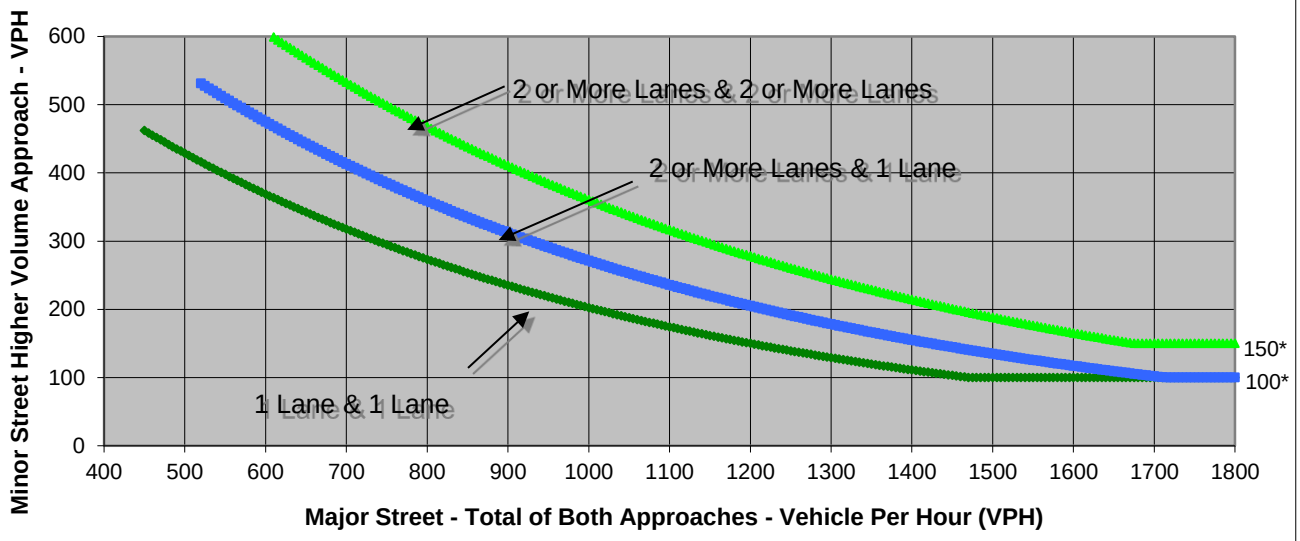
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	1	56	0
Through	88	66	0	0
Right	1	59	19	0
Total	111	126	75	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Future Project Driveway Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**237**	**75**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

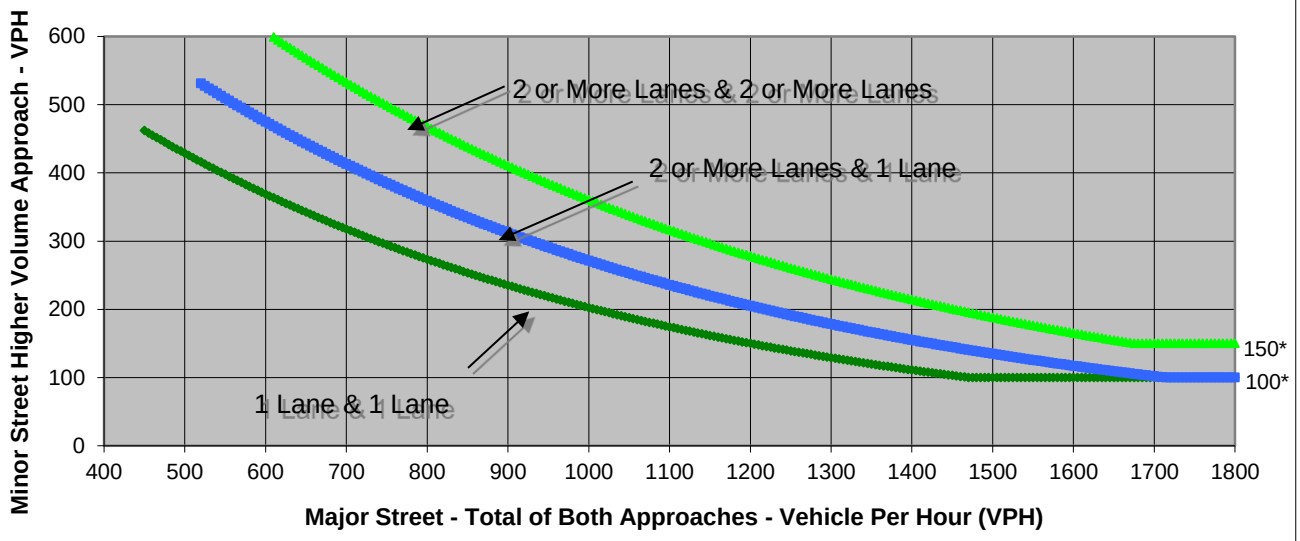
Turn Movement Volumes

	NB	SB	EB	WB
Left	27	1	64	0
Through	86	66	0	0
Right	1	68	23	0
Total	114	135	87	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Future Project Driveway Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**249**	**87**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

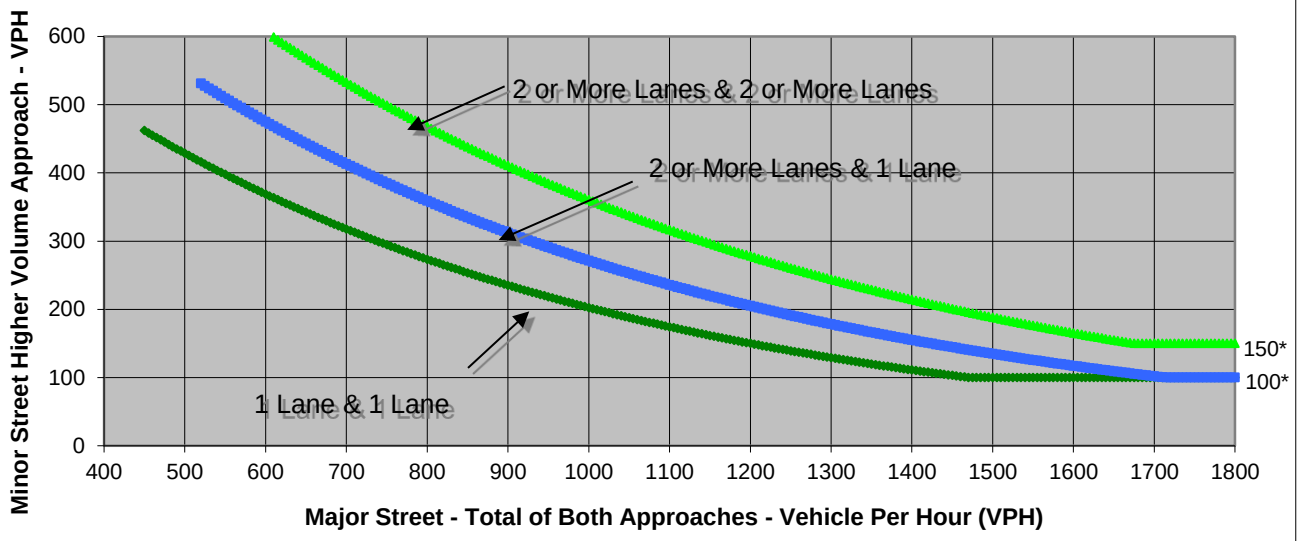
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	0	0
Through	101	81	0	0
Right	1	0	0	0
Total	102	82	0	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Future Project Driveway Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**184**	**0**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

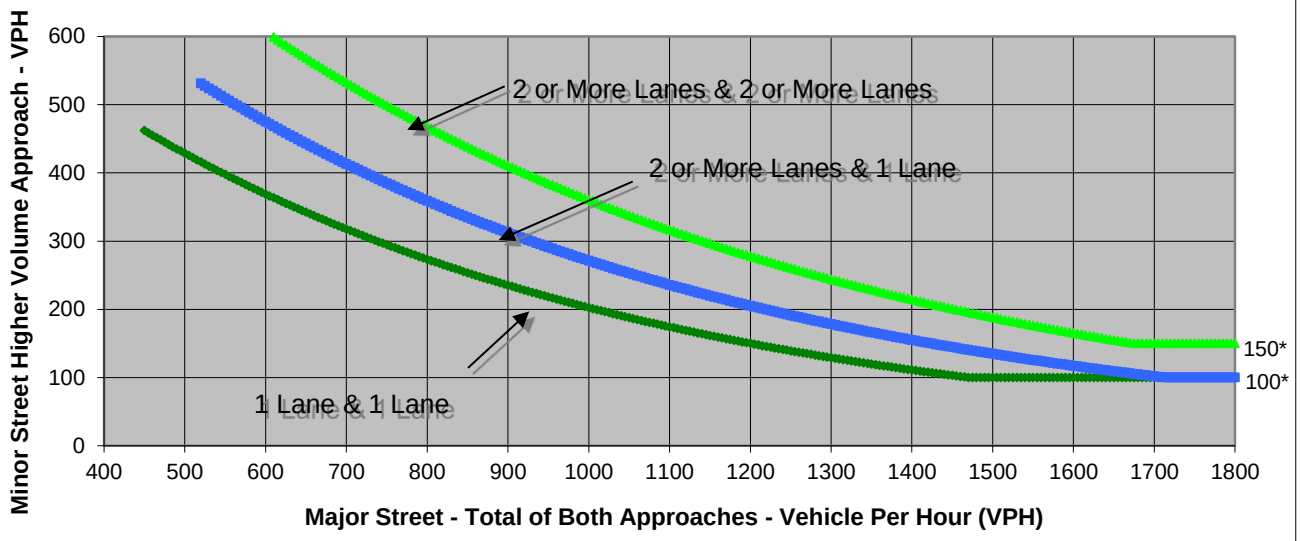
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	1	56	0
Through	103	81	0	0
Right	1	59	19	0
Total	126	141	75	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Future Project Driveway Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**267**	**75**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Future Project Driveway Street

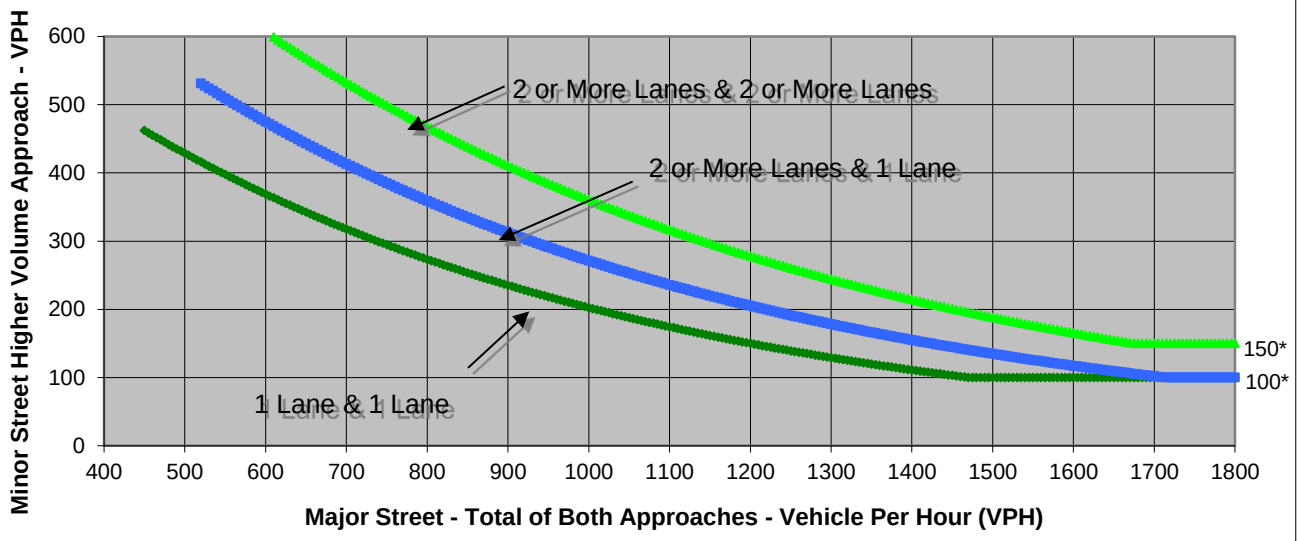
Turn Movement Volumes

	NB	SB	EB	WB
Left	27	1	64	0
Through	101	81	0	0
Right	1	68	23	0
Total	129	150	87	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	Future Project Driveway Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**279**	**87**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

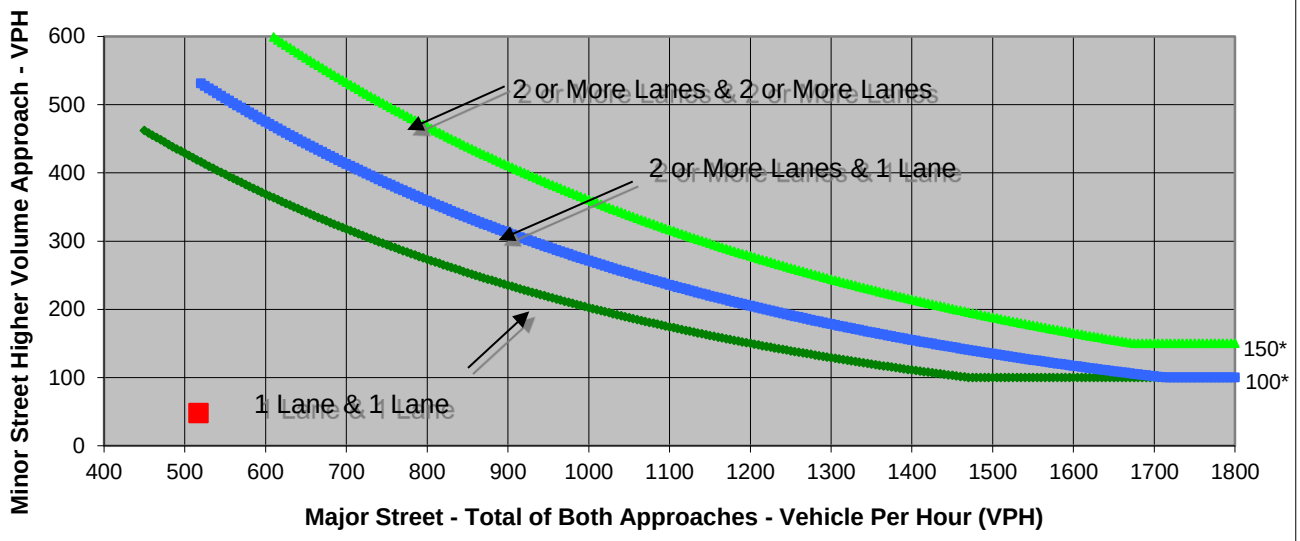
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	23	0	31
Through	285	175	0	0
Right	34	0	0	17
Total	319	198	0	48

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**517**	**48**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

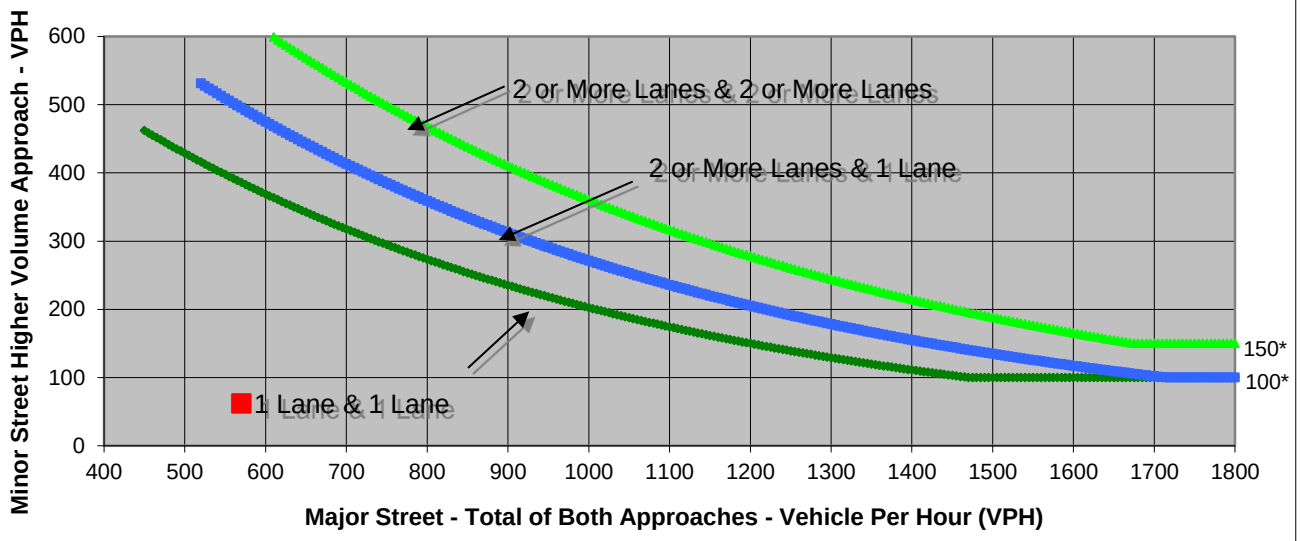
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	32	0	35
Through	305	197	0	0
Right	36	0	0	27
Total	341	229	0	62

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**570**	**62**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

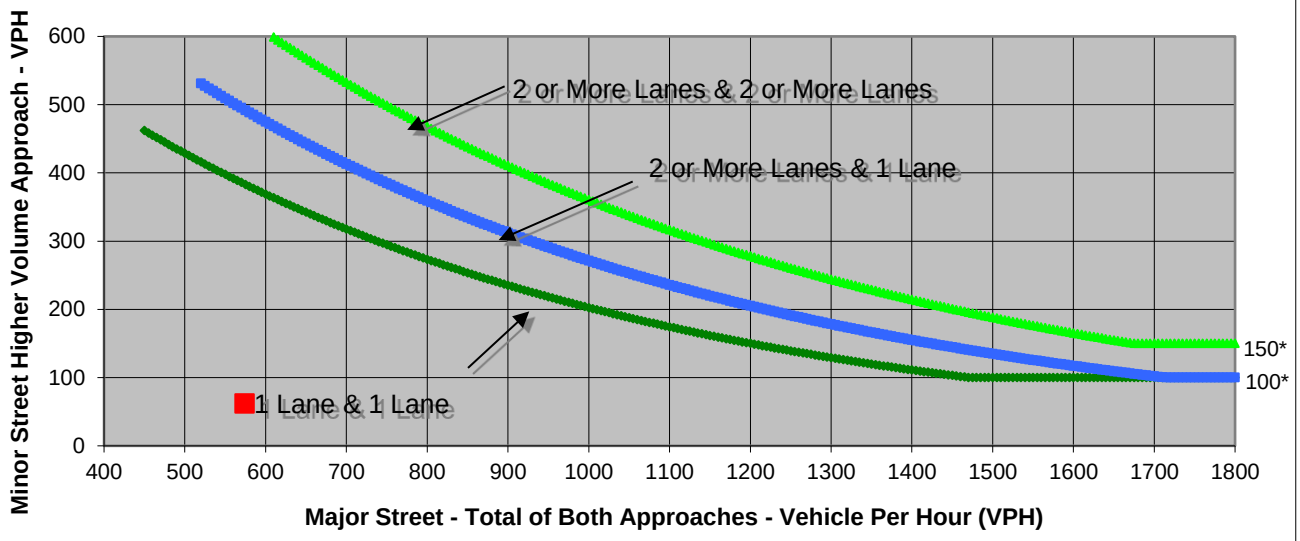
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	33	0	33
Through	308	198	0	0
Right	35	0	0	29
Total	343	231	0	62

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**574**	**62**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

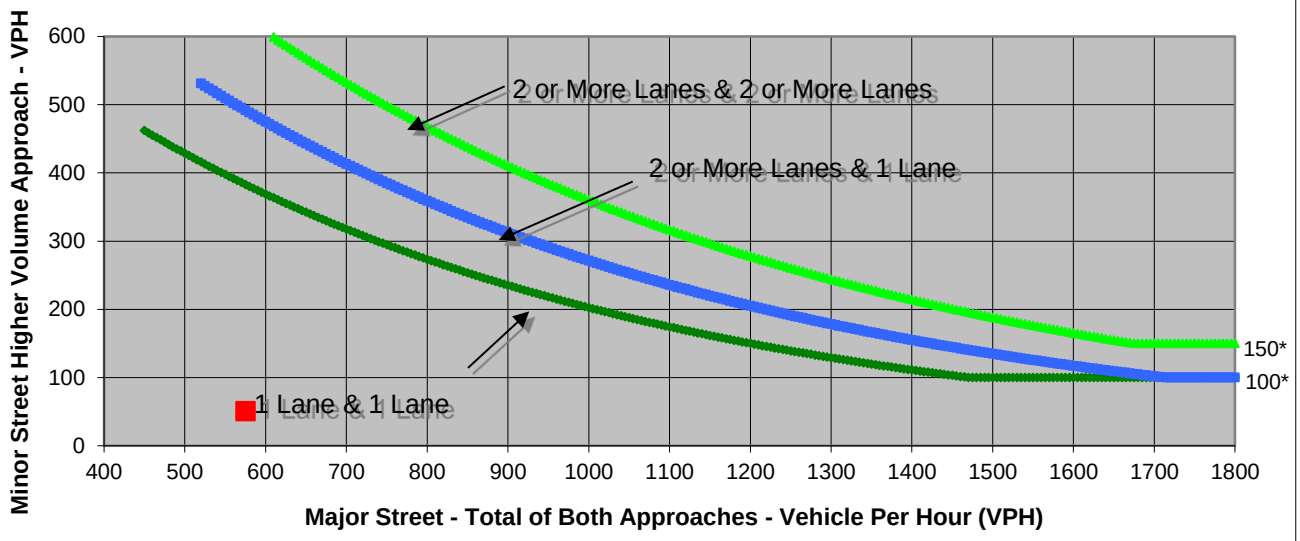
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	23	0	34
Through	297	219	0	0
Right	36	0	0	17
Total	333	242	0	51

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**575**	**51**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

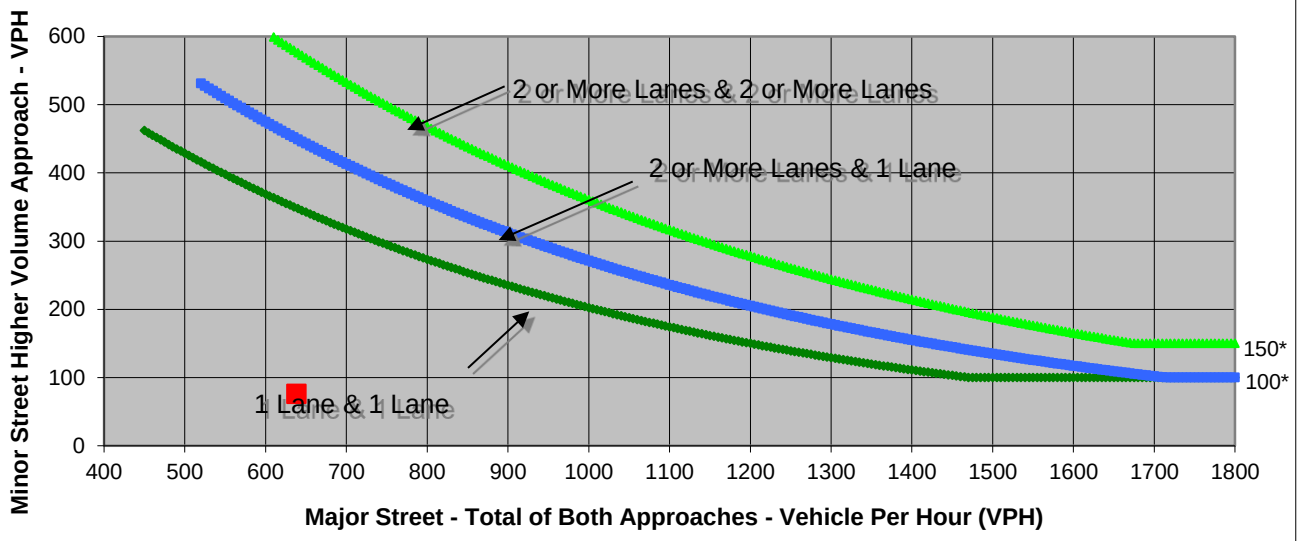
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	32	0	49
Through	317	240	0	0
Right	49	0	0	27
Total	366	272	0	76

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	45th Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**638**	**76**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 6 of 9

Major Street	Horton Street
Minor Street	45th Street
Project	Sherwin Williams
Scenario	Near Term PPB Conditions
Peak Hour	PM

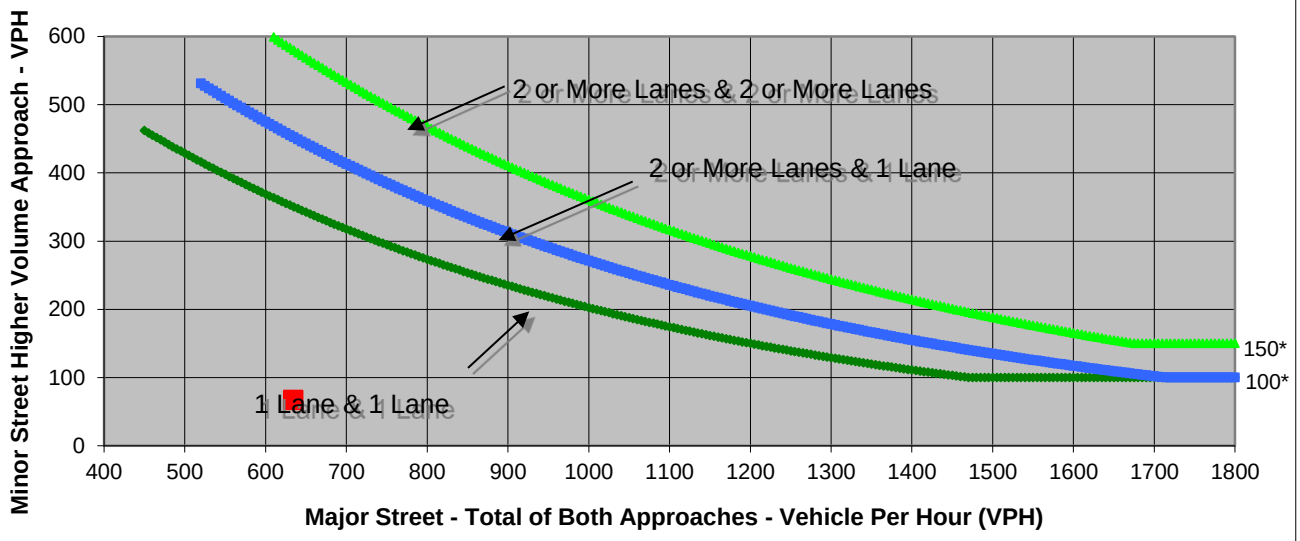
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	33	0	38
Through	321	242	0	0
Right	38	0	0	29
Total	359	275	0	67

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	45th Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**634**	**67**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

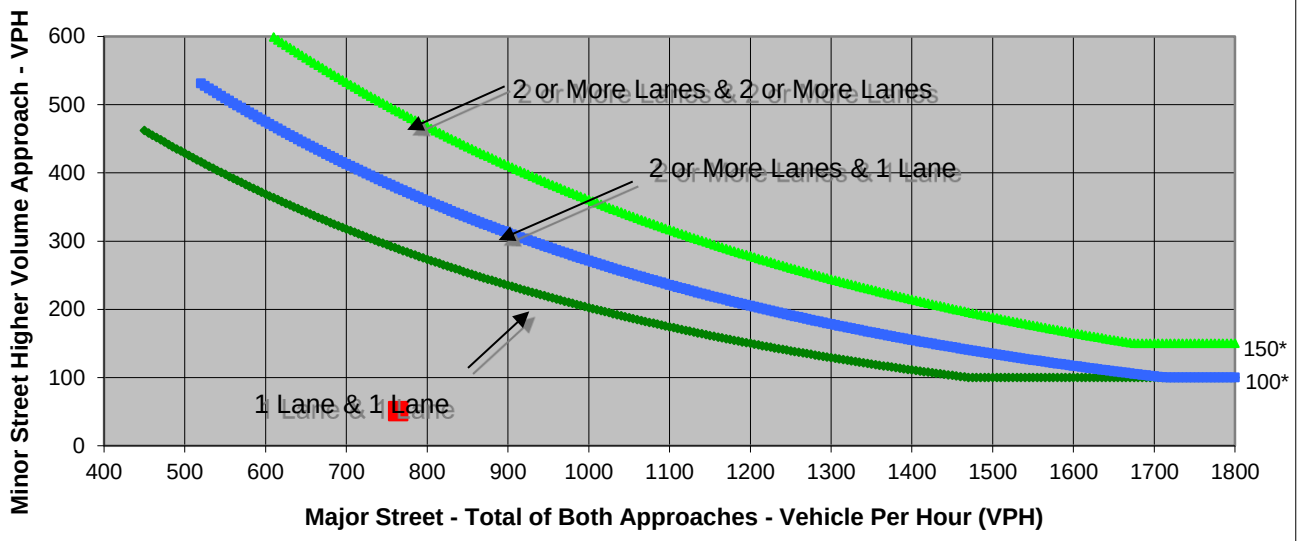
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	23	0	34
Through	325	380	0	0
Right	36	0	0	17
Total	361	403	0	51

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**764**	**51**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

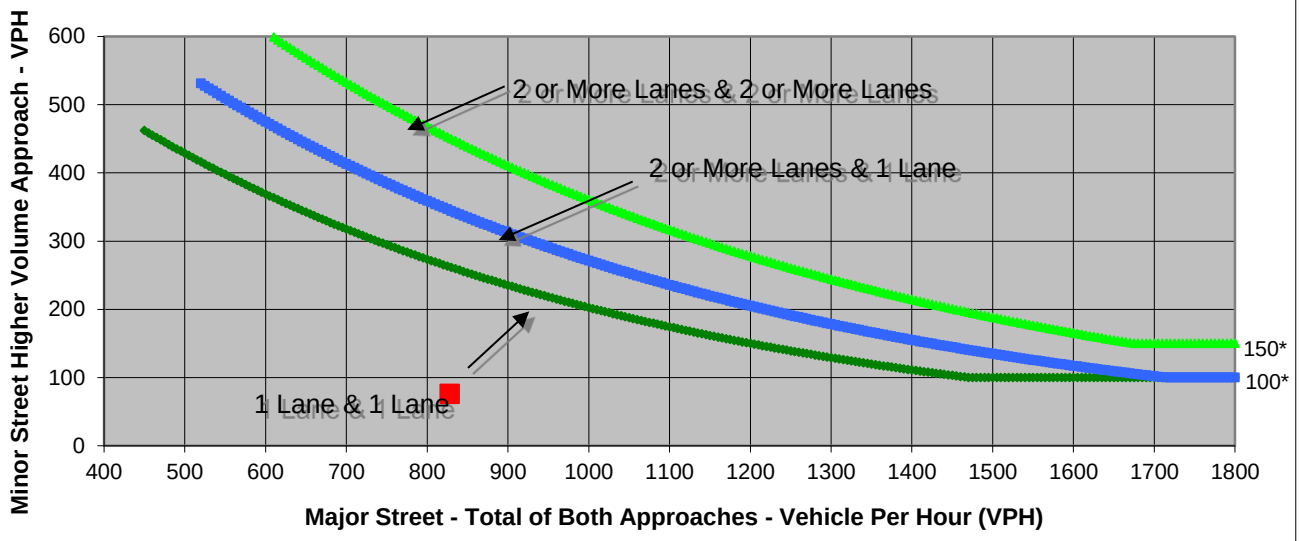
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	32	0	49
Through	345	402	0	0
Right	49	0	0	27
Total	394	434	0	76

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**828**	**76**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Horton Street
Minor Street 45th Street

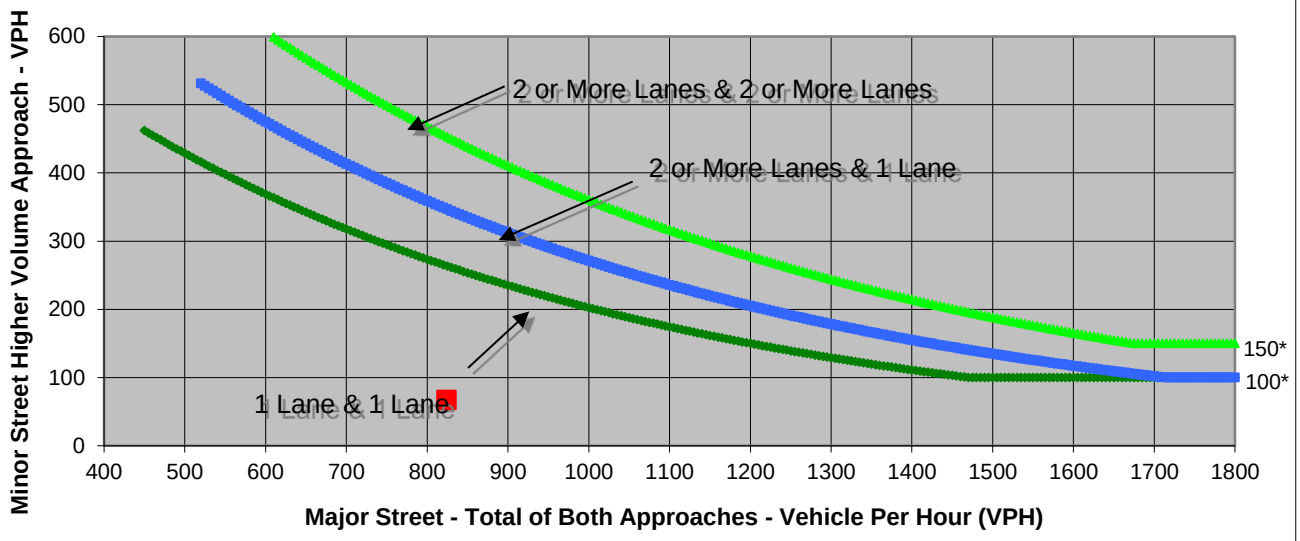
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	33	0	38
Through	349	404	0	0
Right	38	0	0	29
Total	387	437	0	67

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**824**	**67**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Major Street Horton Street
Minor Street 45th Street

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

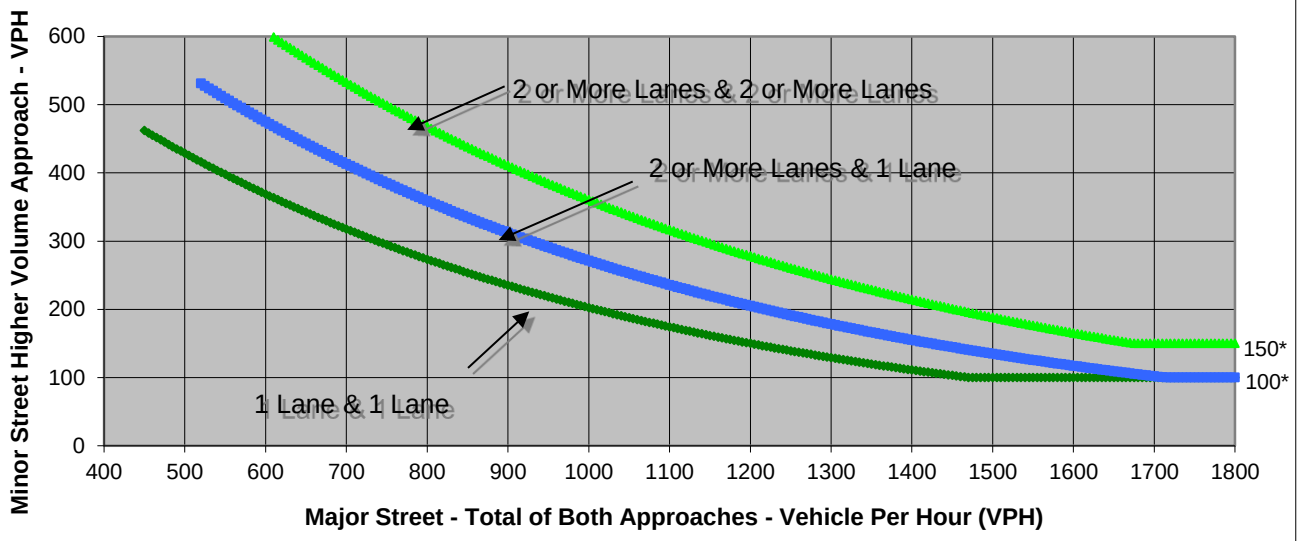
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	0	11
Through	81	61	0	0
Right	26	0	0	2
Total	107	64	0	13

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**171**	**13**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

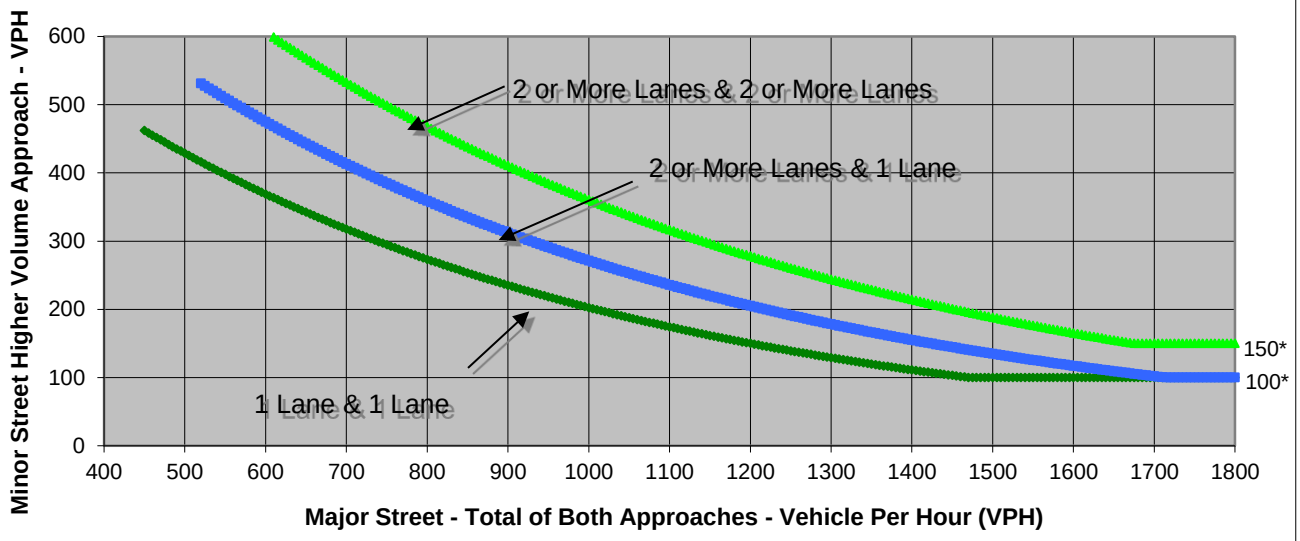
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	9	0	14
Through	97	74	0	0
Right	29	0	0	10
Total	126	83	0	24

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	45th Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**209**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

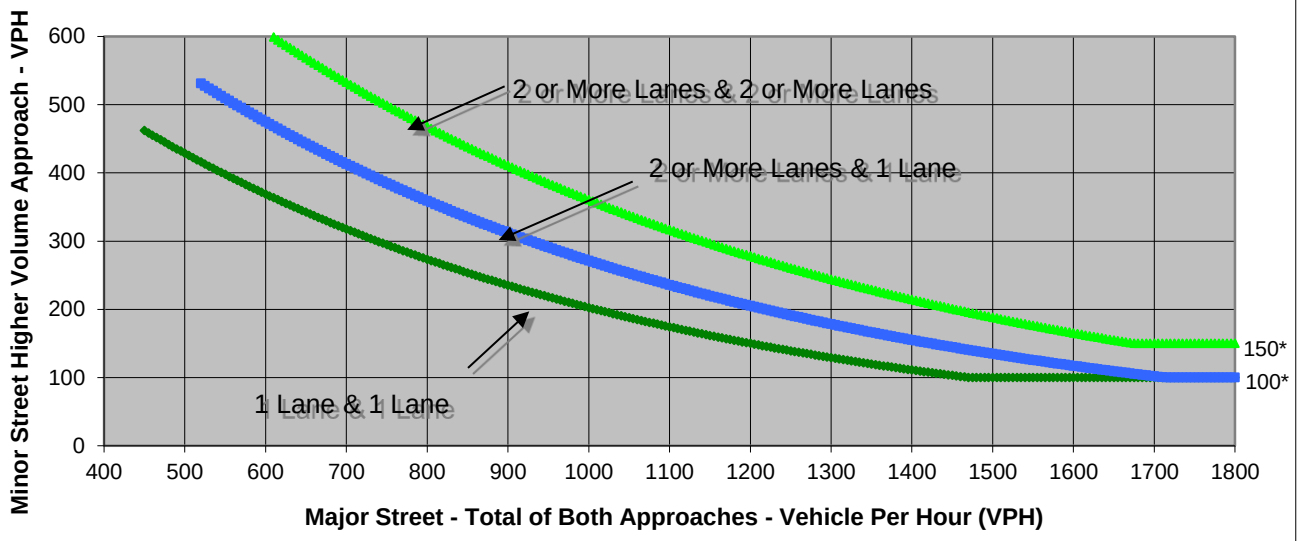
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	12
Through	98	77	0	0
Right	27	0	0	12
Total	125	87	0	24

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**212**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

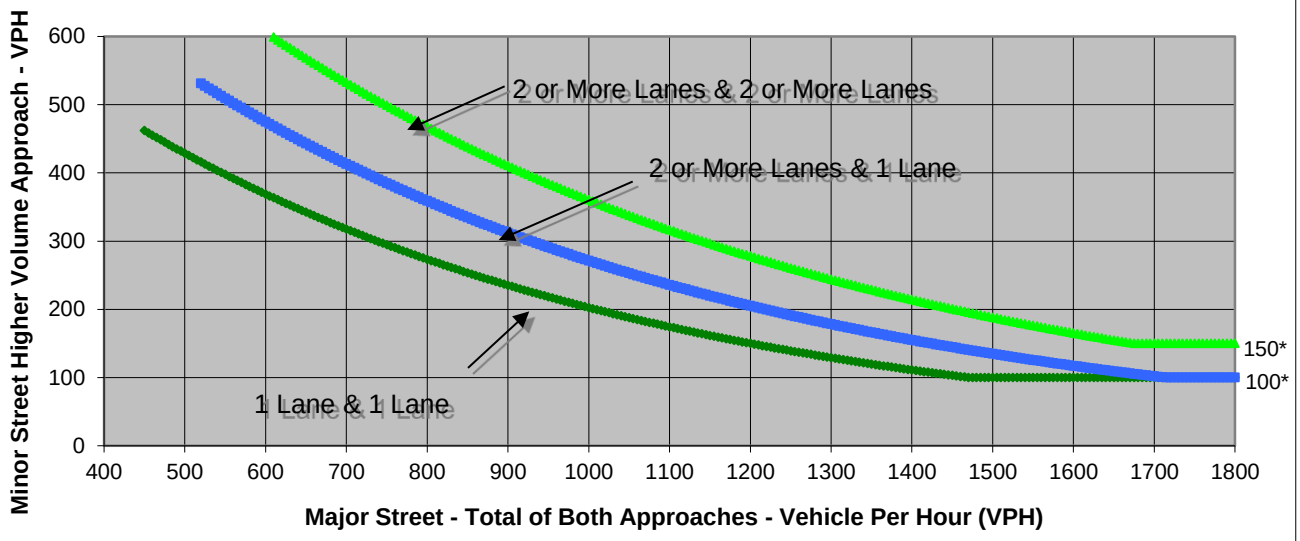
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	0	11
Through	85	65	0	0
Right	26	0	0	2
Total	111	68	0	13

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**179**	**13**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

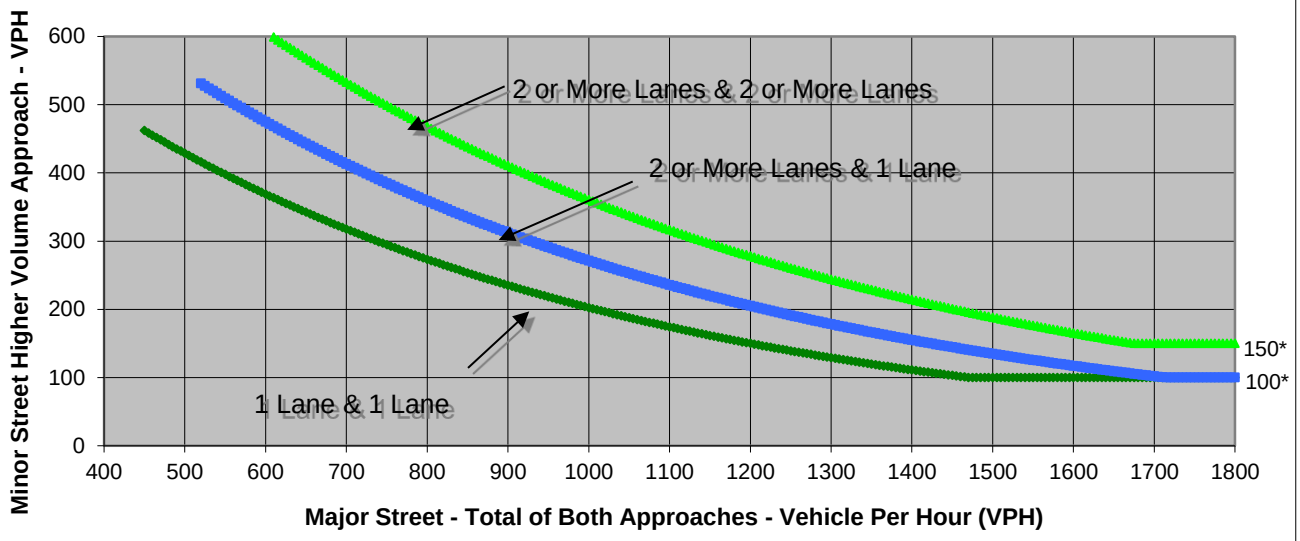
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	9	0	16
Through	101	78	0	0
Right	31	0	0	10
Total	132	87	0	26

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**219**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

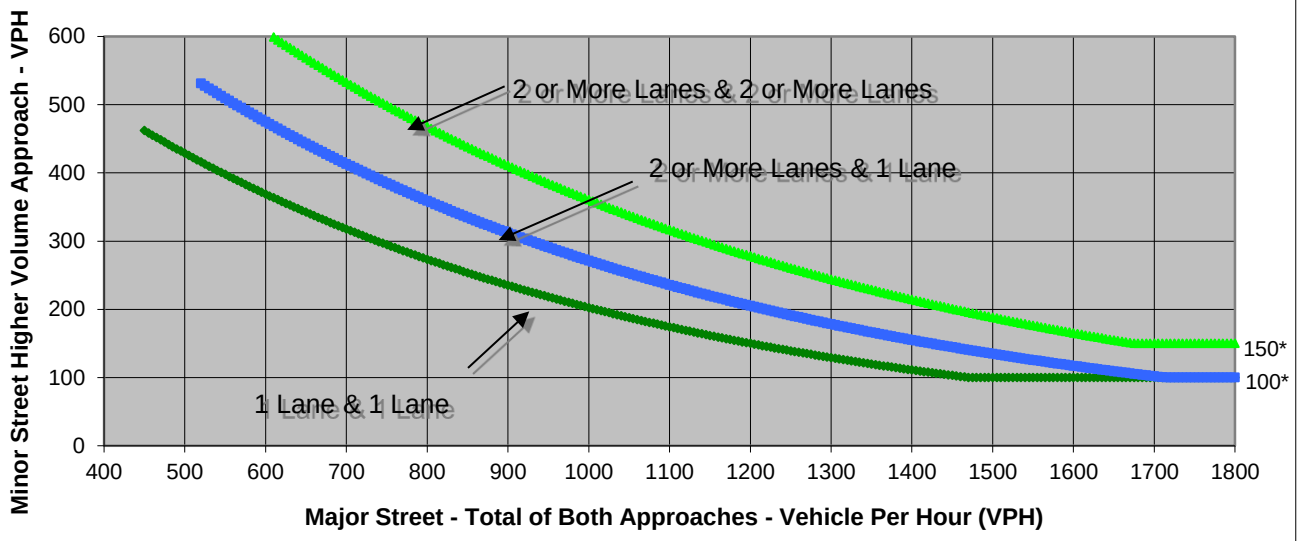
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	14
Through	102	80	0	0
Right	29	0	0	12
Total	131	90	0	26

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**221**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

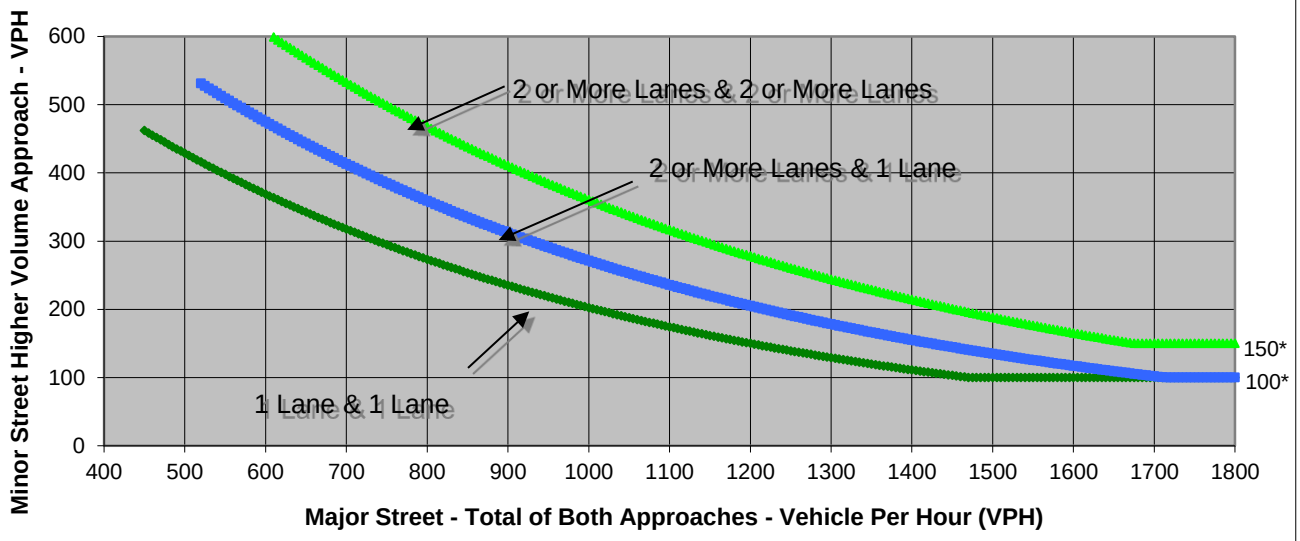
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	0	11
Through	100	80	0	0
Right	26	0	0	2
Total	126	83	0	13

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**209**	**13**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

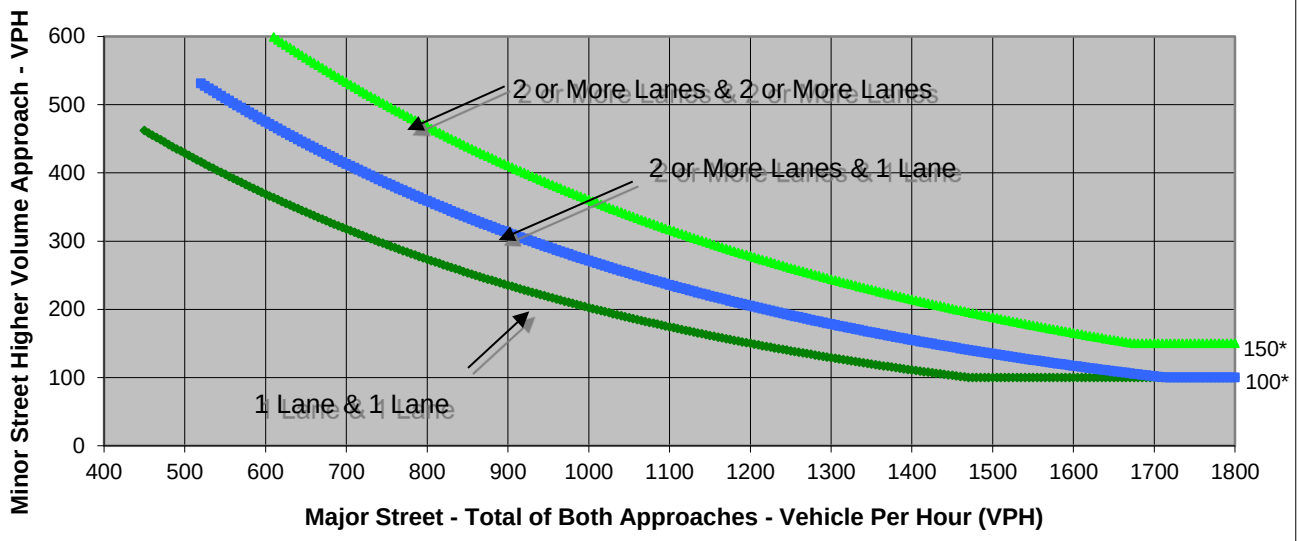
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	9	0	16
Through	116	93	0	0
Right	31	0	0	10
Total	147	102	0	26

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**249**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street 45th Street

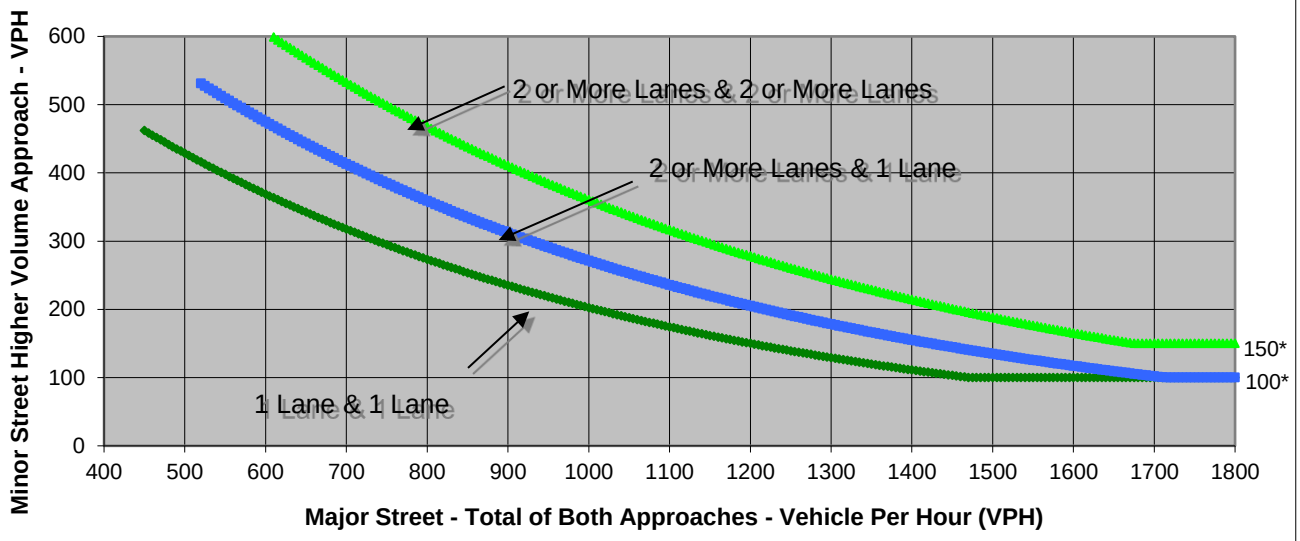
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	14
Through	117	95	0	0
Right	29	0	0	12
Total	146	105	0	26

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**251**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Hollis Street
Minor Street 45th Street

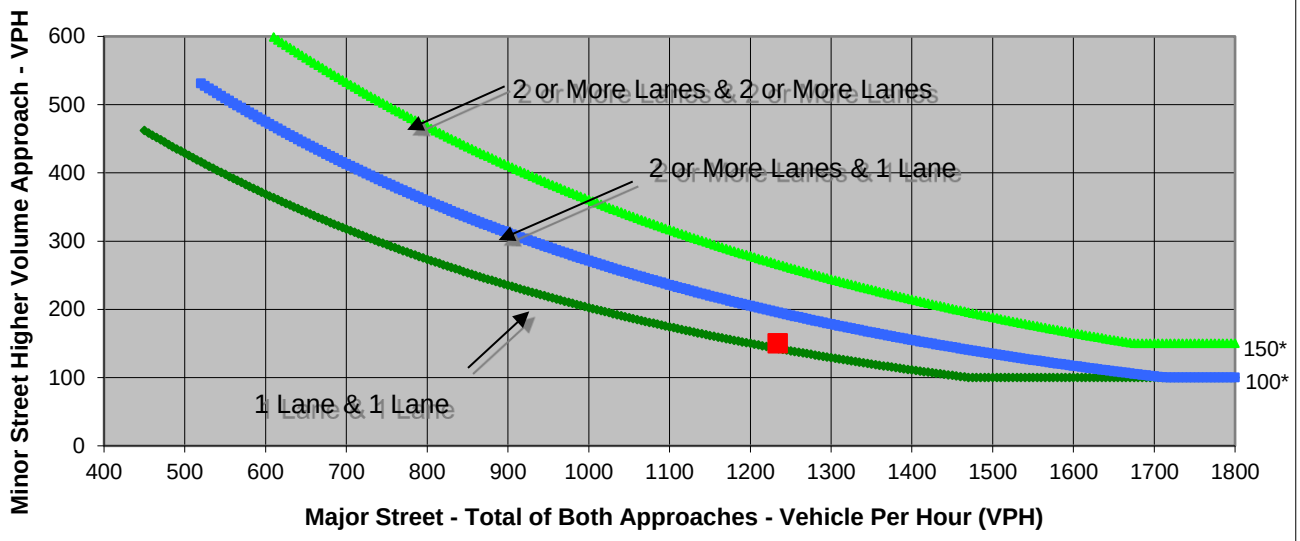
Turn Movement Volumes

	NB	SB	EB	WB
Left	11	94	34	35
Through	573	517	45	39
Right	30	9	14	76
Total	614	620	93	150

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hollis Street	Minor Street 45th Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,234**	**150**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Hollis Street
Minor Street 45th Street

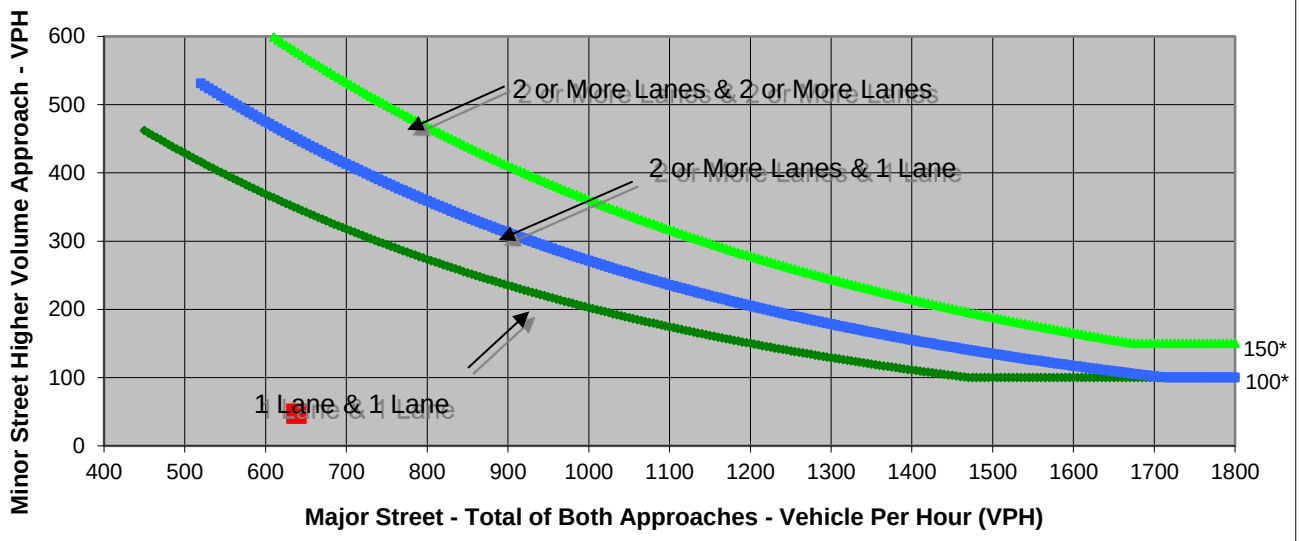
Turn Movement Volumes

	NB	SB	EB	WB
Left	4	27	19	15
Through	286	299	10	6
Right	15	7	1	26
Total	305	333	30	47

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Hollis Street	45th Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**638**	**47**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

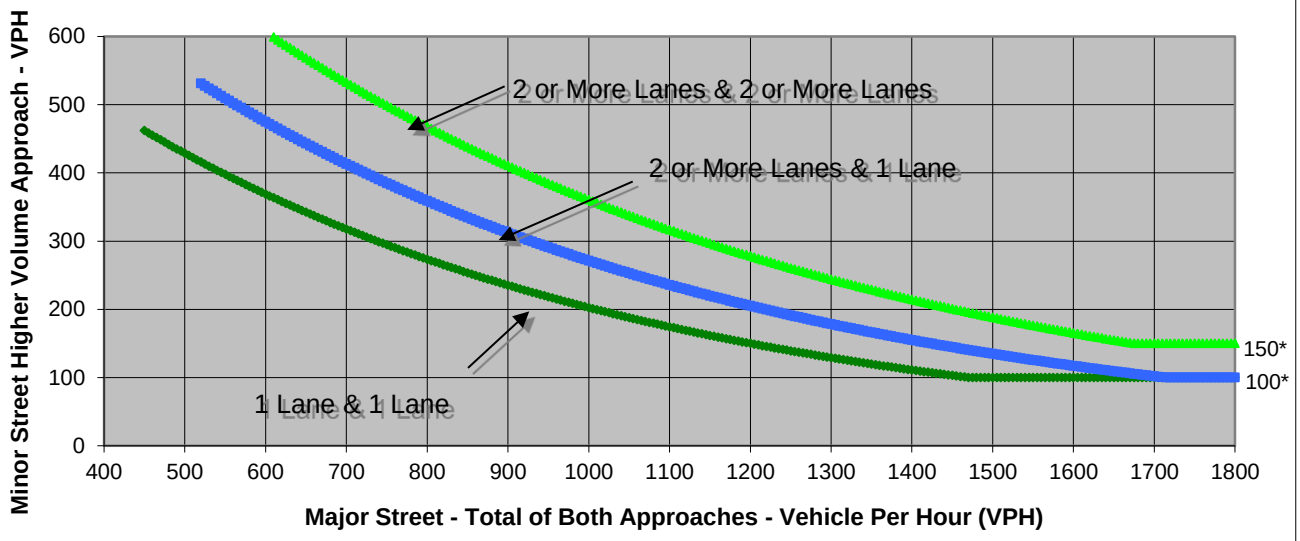
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	27
Through	0	0	0	0
Right	18	0	0	0
Total	18	0	0	27

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**18**	**27**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

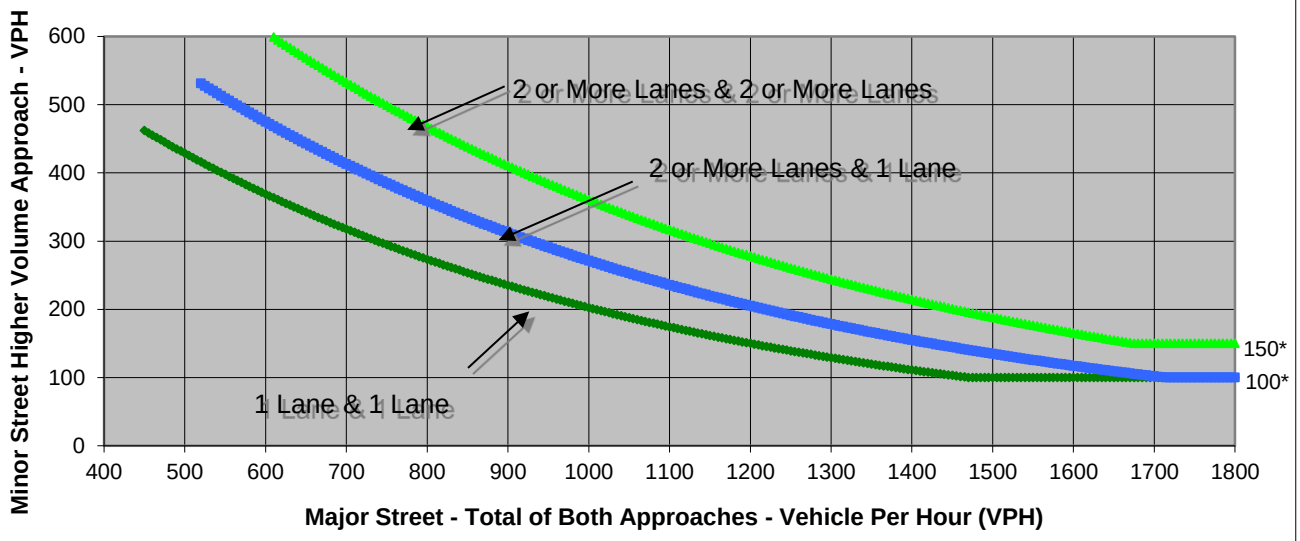
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	6	0	30
Through	22	9	0	0
Right	22	0	0	7
Total	44	15	0	37

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**59**	**37**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

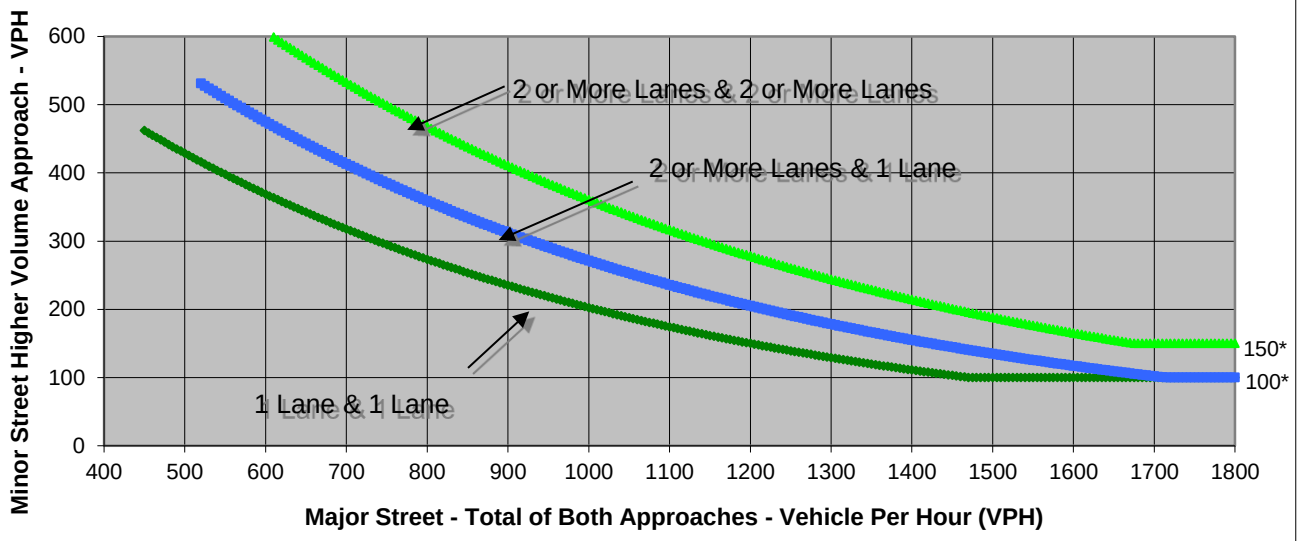
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	31
Through	0	0	0	0
Right	22	0	0	0
Total	22	0	0	31

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**22**	**31**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

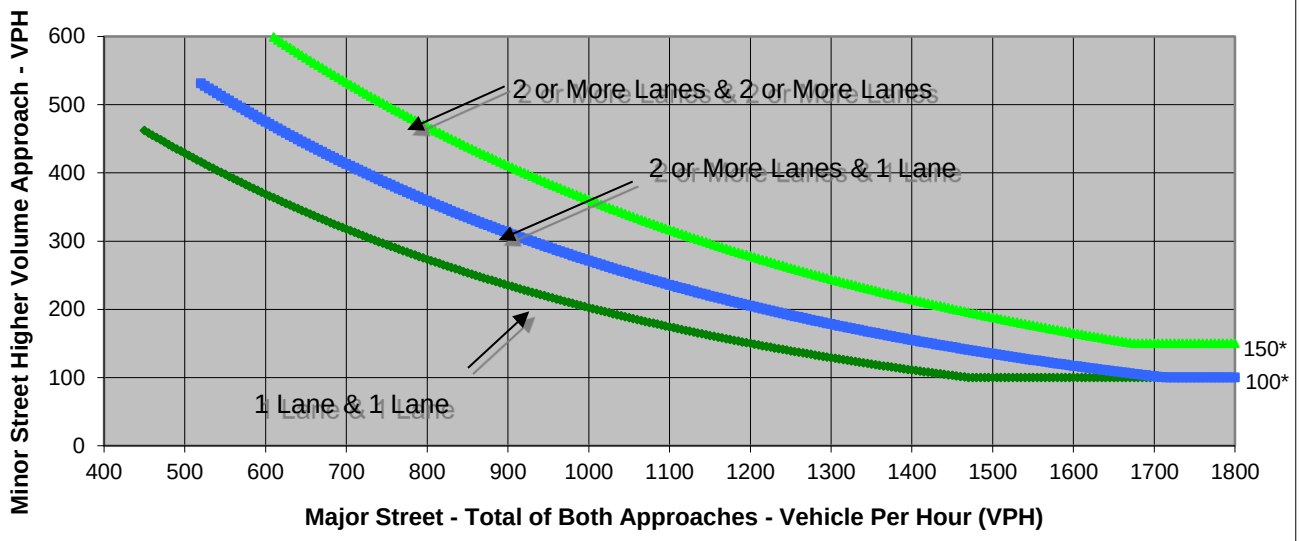
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	27
Through	0	0	0	0
Right	18	0	0	0
Total	18	0	0	27

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**18**	**27**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

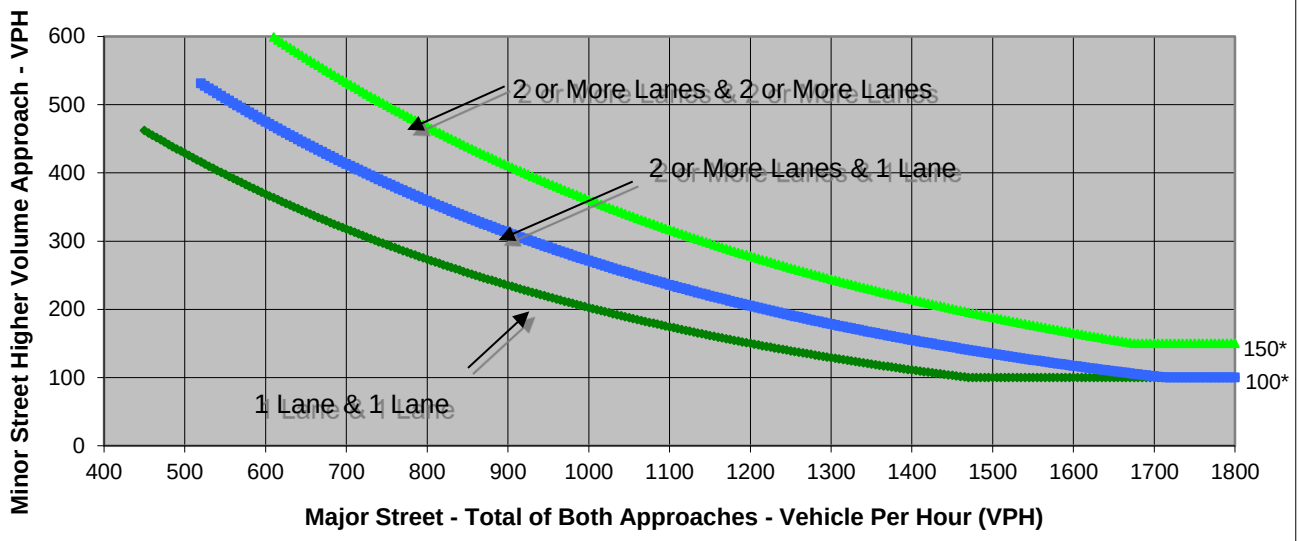
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	6	0	30
Through	22	9	0	0
Right	22	0	0	7
Total	44	15	0	37

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**59**	**37**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

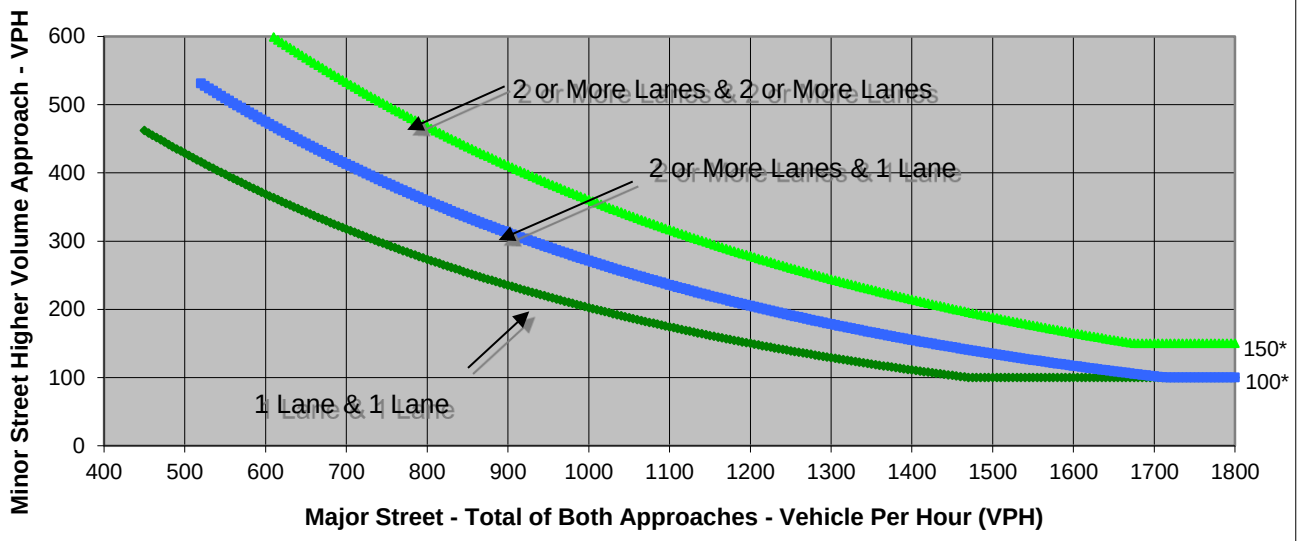
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	31
Through	0	0	0	0
Right	22	0	0	0
Total	22	0	0	31

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**22**	**31**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

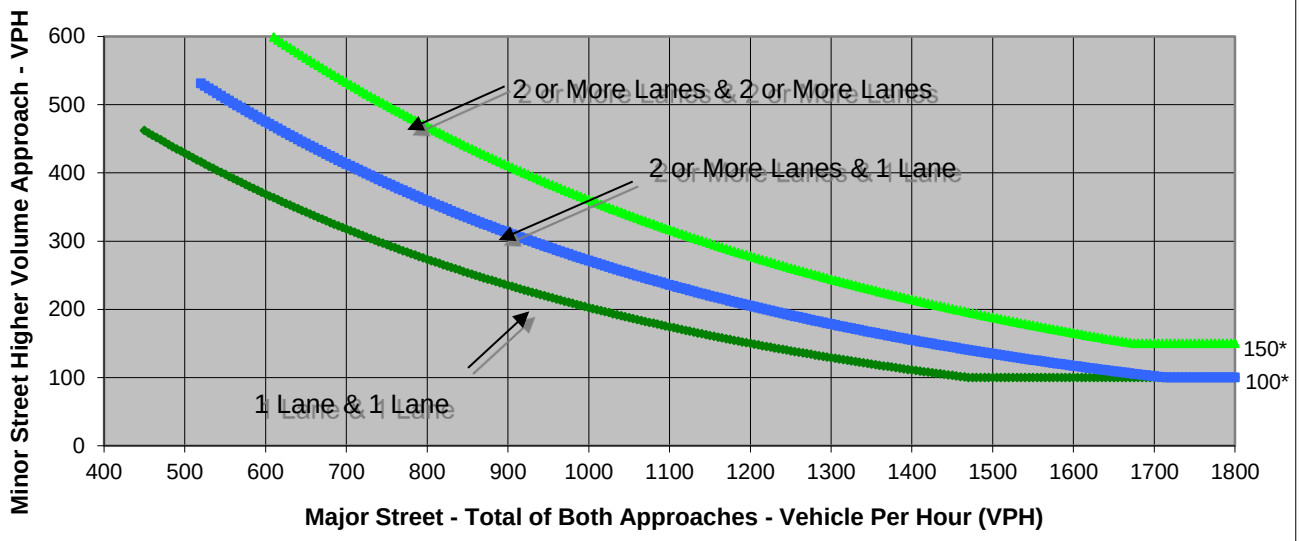
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	27
Through	0	0	0	0
Right	18	0	0	0
Total	18	0	0	27

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**18**	**27**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

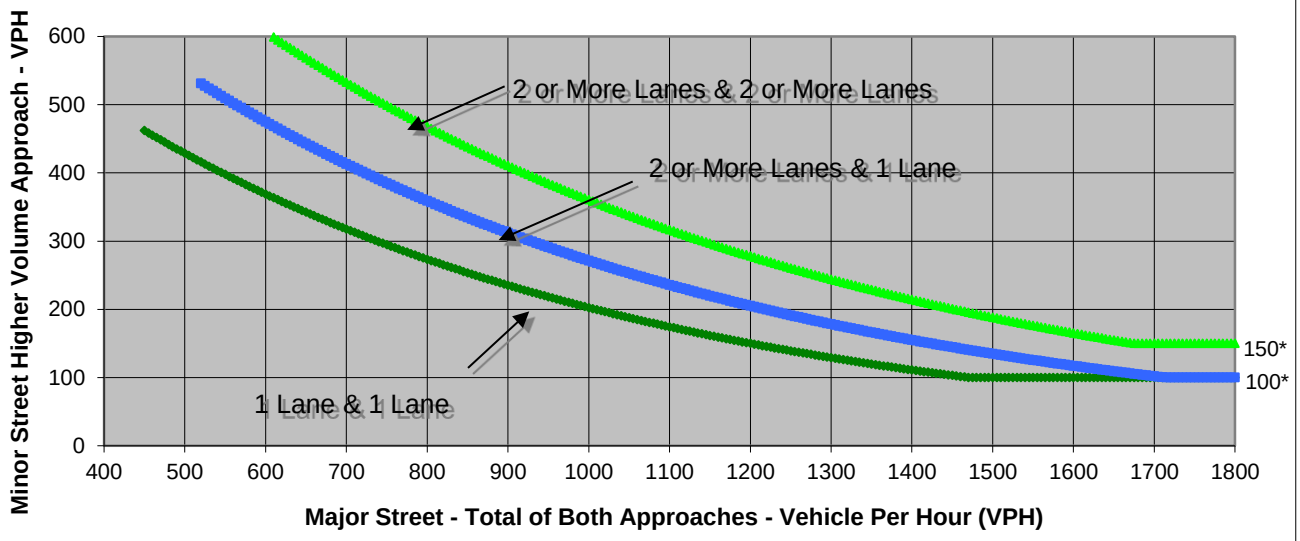
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	6	0	30
Through	22	9	0	0
Right	22	0	0	7
Total	44	15	0	37

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**59**	**37**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Halleck Street
Minor Street Sherwin Avenue

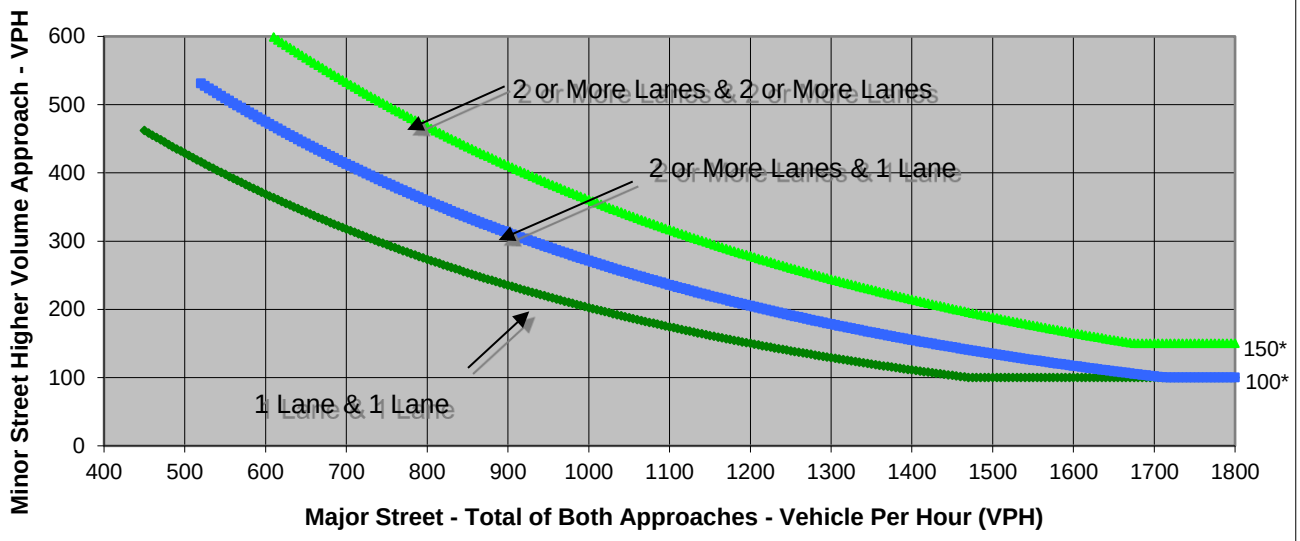
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	31
Through	0	0	0	0
Right	22	0	0	0
Total	22	0	0	31

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**22**	**31**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

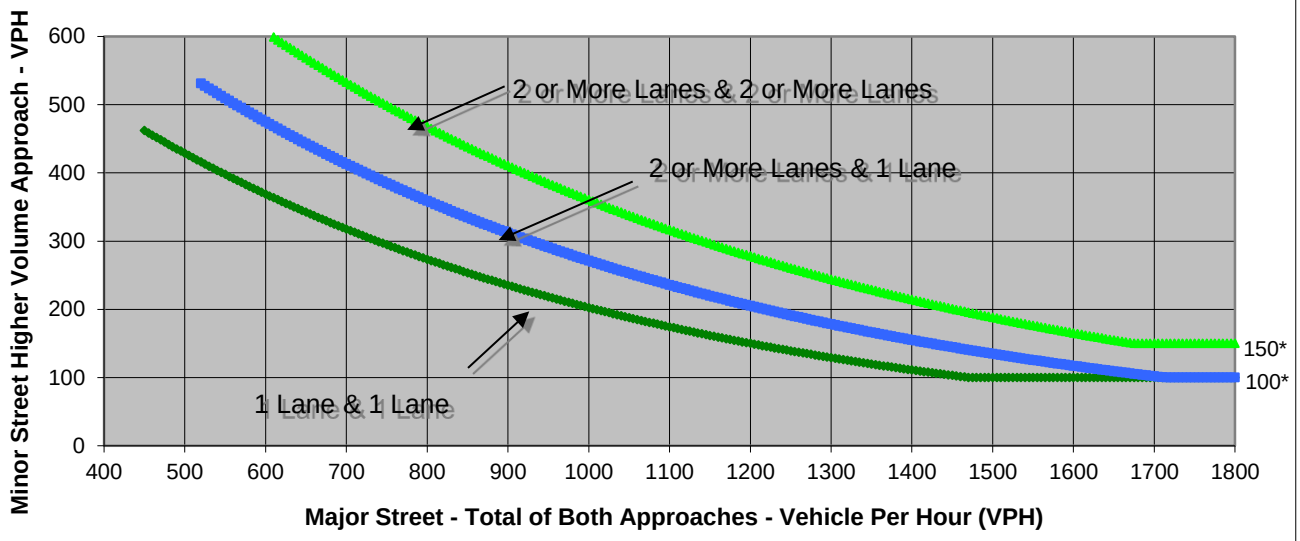
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	0	0
Right	16	0	0	0
Total	16	0	0	14

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**16**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

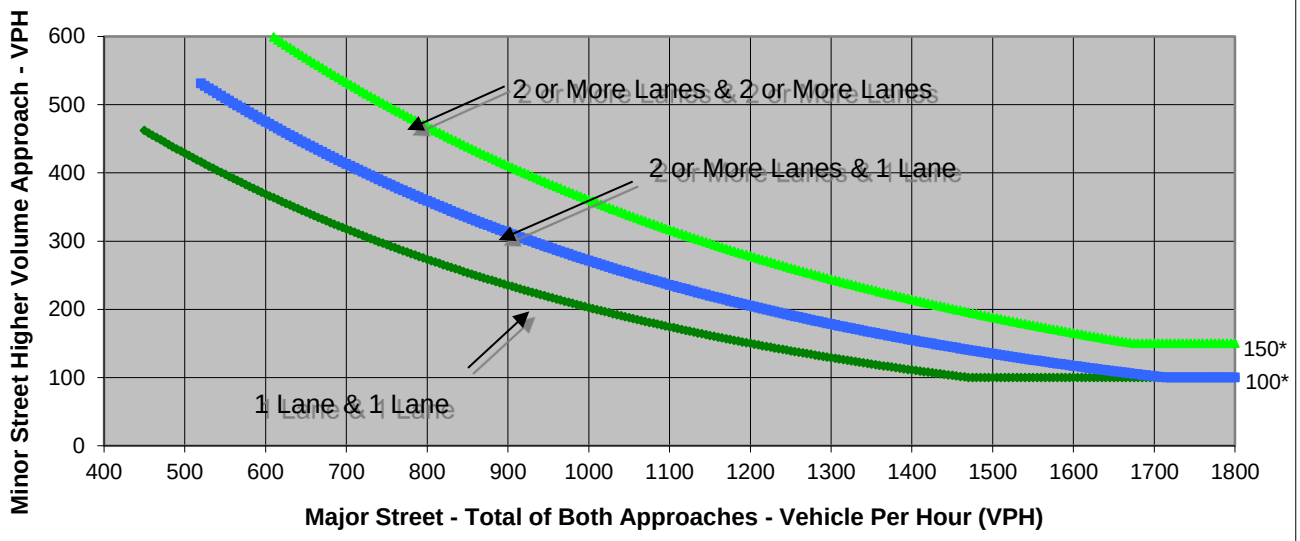
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	8	0	14
Through	14	13	0	0
Right	16	0	0	6
Total	30	21	0	20

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**51**	**20**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

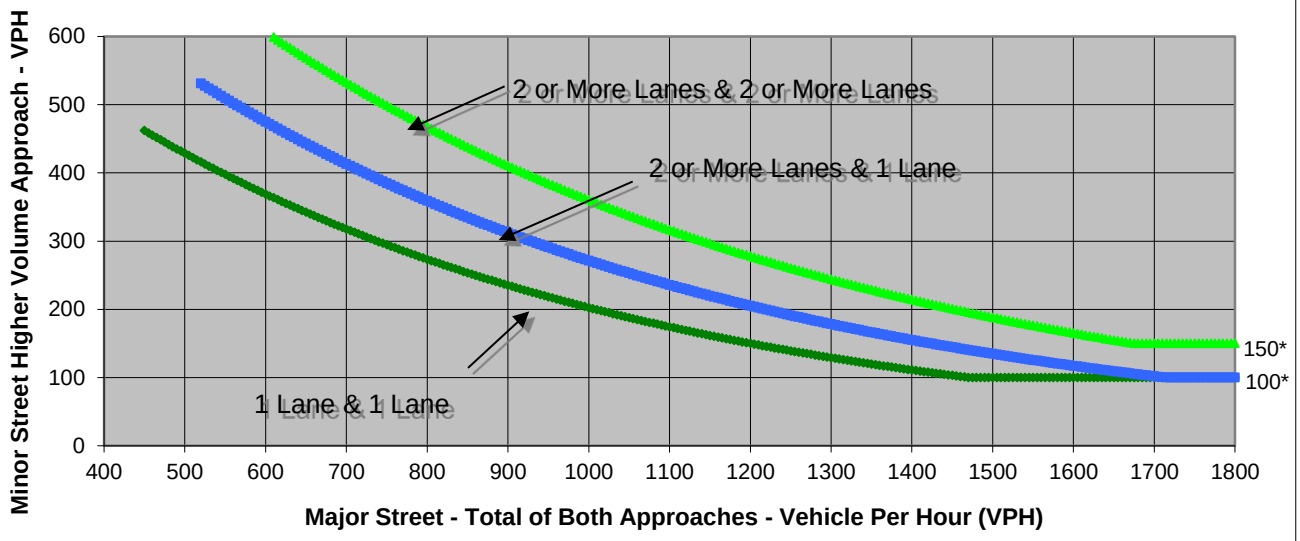
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	0	0
Right	16	0	0	0
Total	16	0	0	14

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**16**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

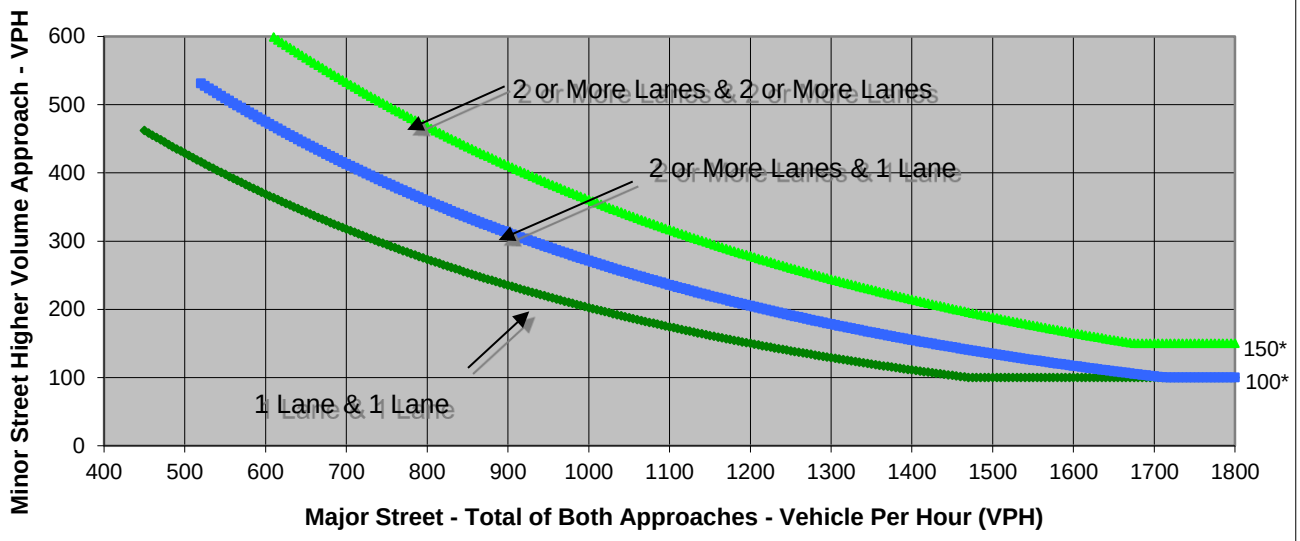
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	0	0
Right	16	0	0	0
Total	16	0	0	14

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**16**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

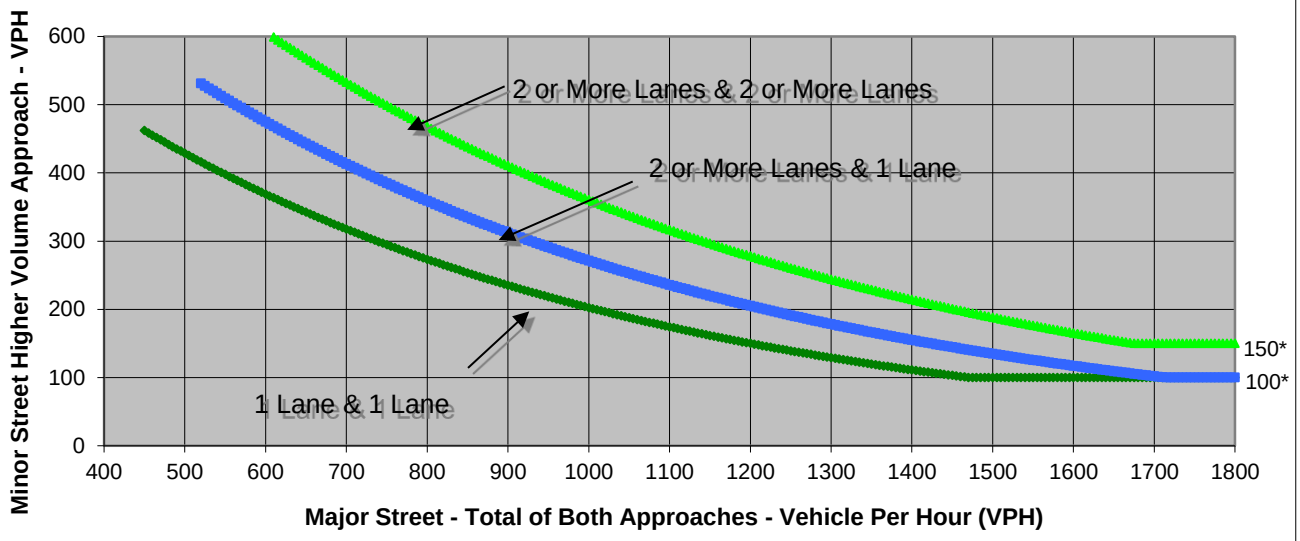
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	8	0	14
Through	14	13	0	0
Right	16	0	0	6
Total	30	21	0	20

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**51**	**20**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

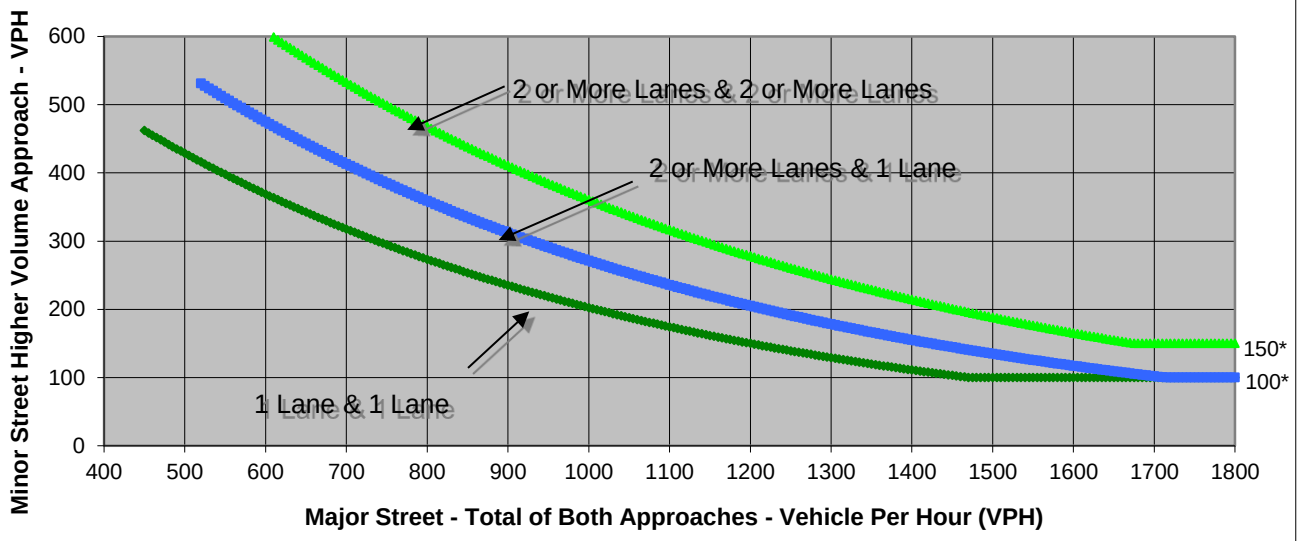
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	0	0
Right	16	0	0	0
Total	16	0	0	14

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**16**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

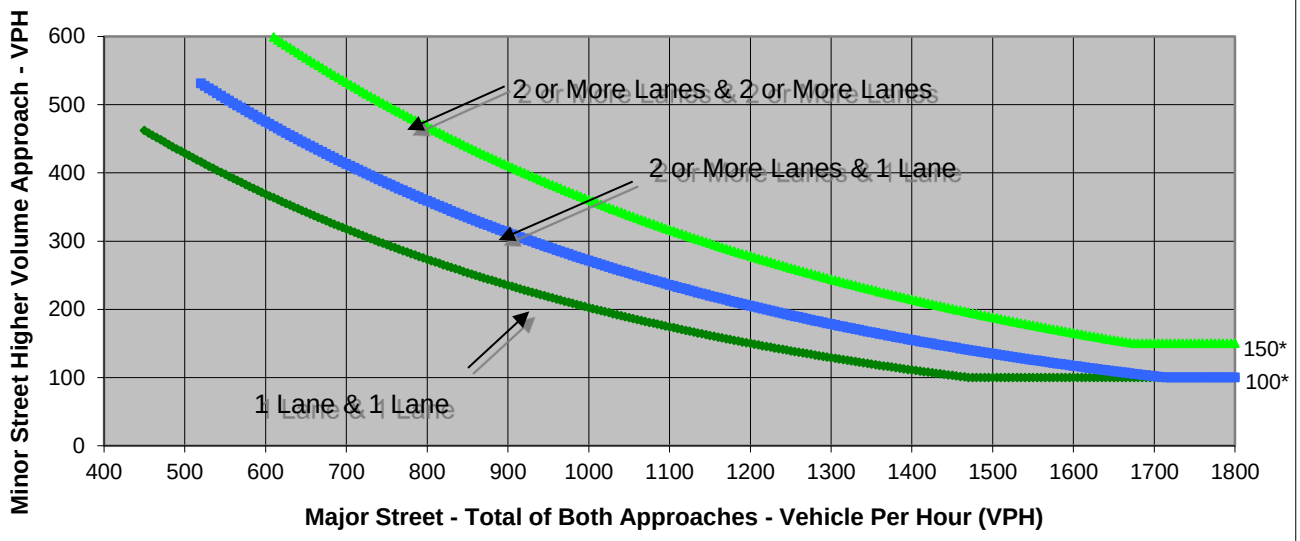
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	0	0
Right	16	0	0	0
Total	16	0	0	14

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**16**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

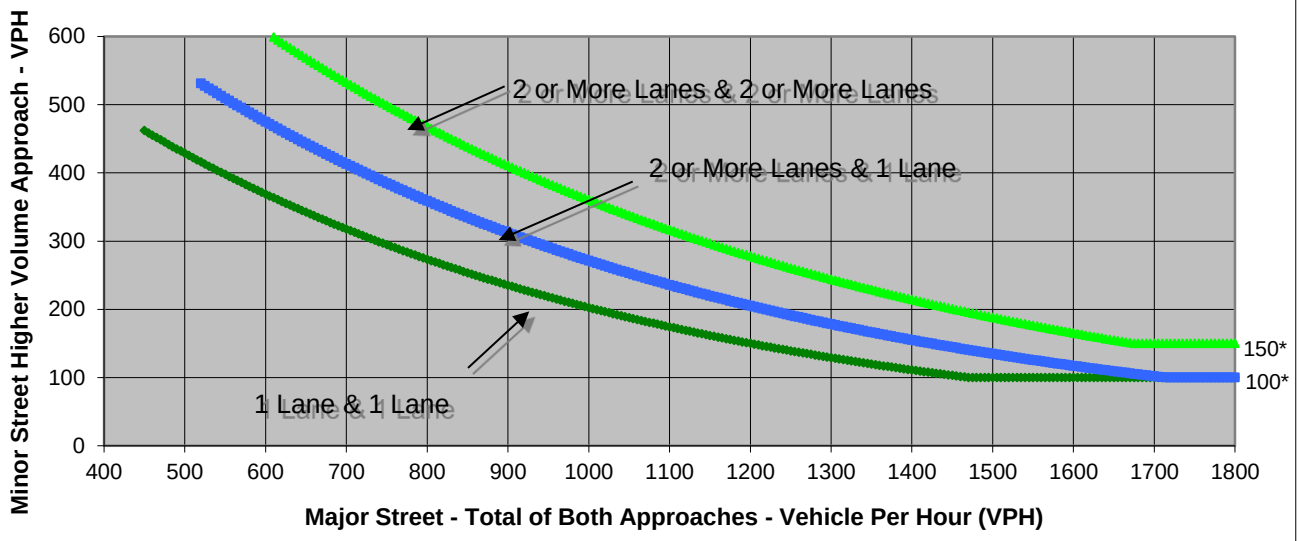
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	8	0	14
Through	14	13	0	0
Right	16	0	0	6
Total	30	21	0	20

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**51**	**20**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Halleck Street
Minor Street Sherwin Avenue

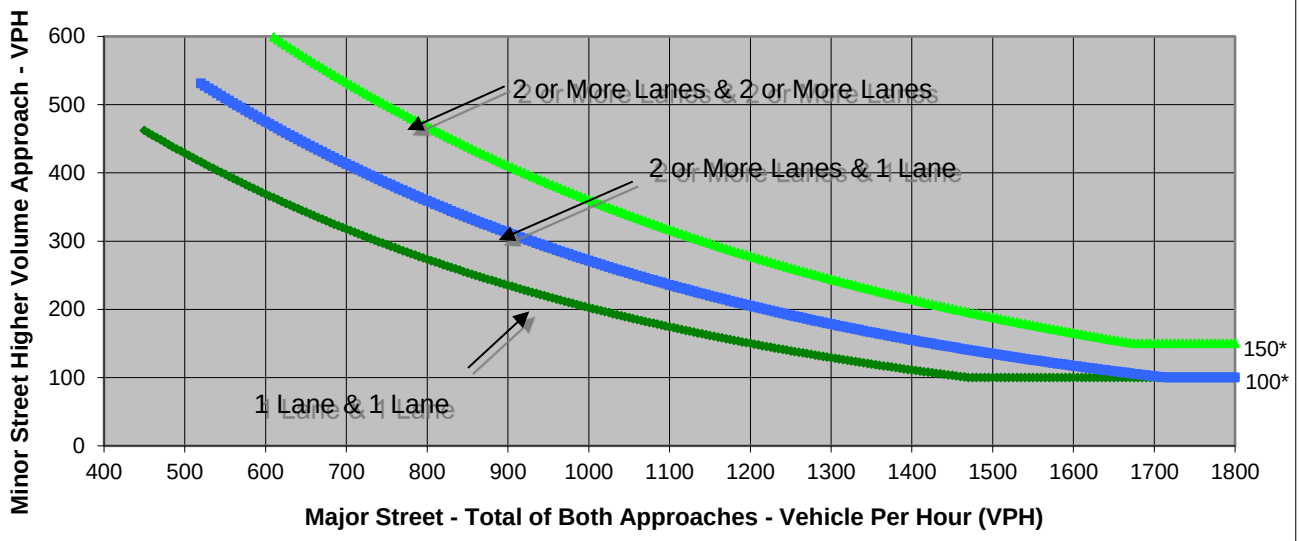
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	0	0
Right	16	0	0	0
Total	16	0	0	14

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**16**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

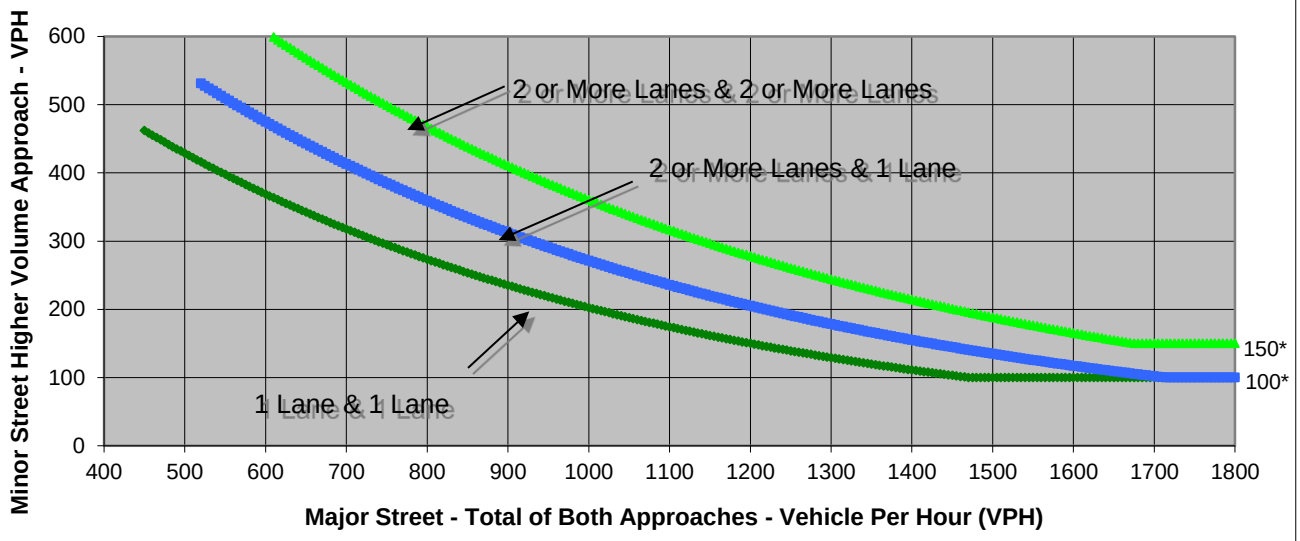
Turn Movement Volumes

	NB	SB	EB	WB
Left	7	0	0	2
Through	0	0	24	23
Right	6	0	2	0
Total	13	0	26	25

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**13**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

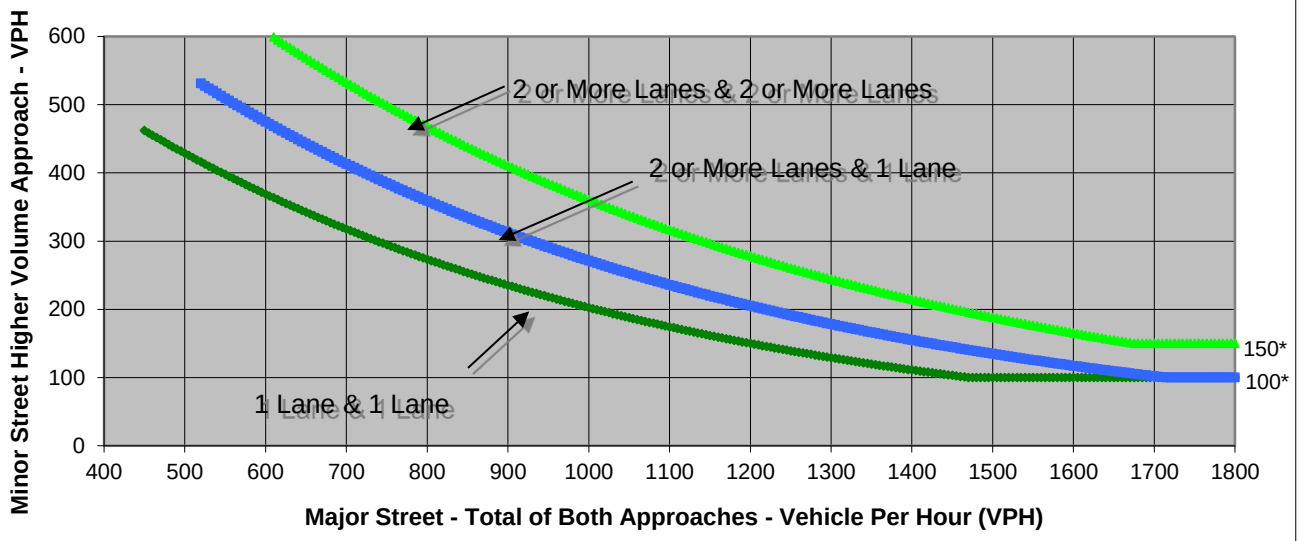
Turn Movement Volumes

	NB	SB	EB	WB
Left	9	8	2	7
Through	24	22	30	28
Right	8	3	2	7
Total	41	33	34	42

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**74**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

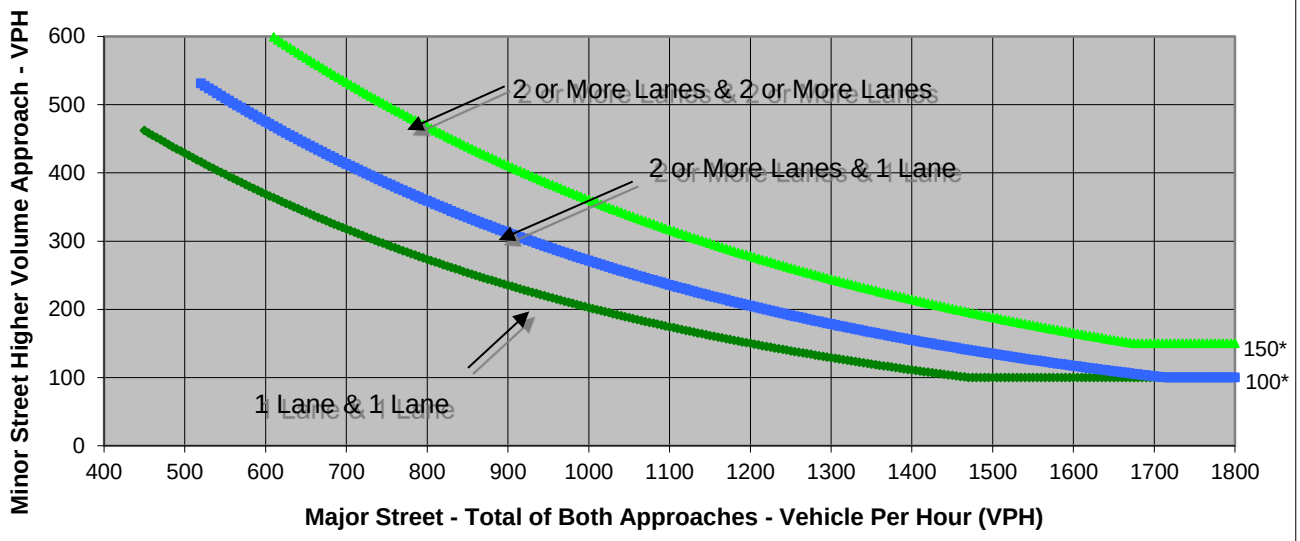
Turn Movement Volumes

	NB	SB	EB	WB
Left	7	9	3	7
Through	33	26	25	24
Right	8	3	2	8
Total	48	38	30	39

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**86**	**39**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 4 of 9

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

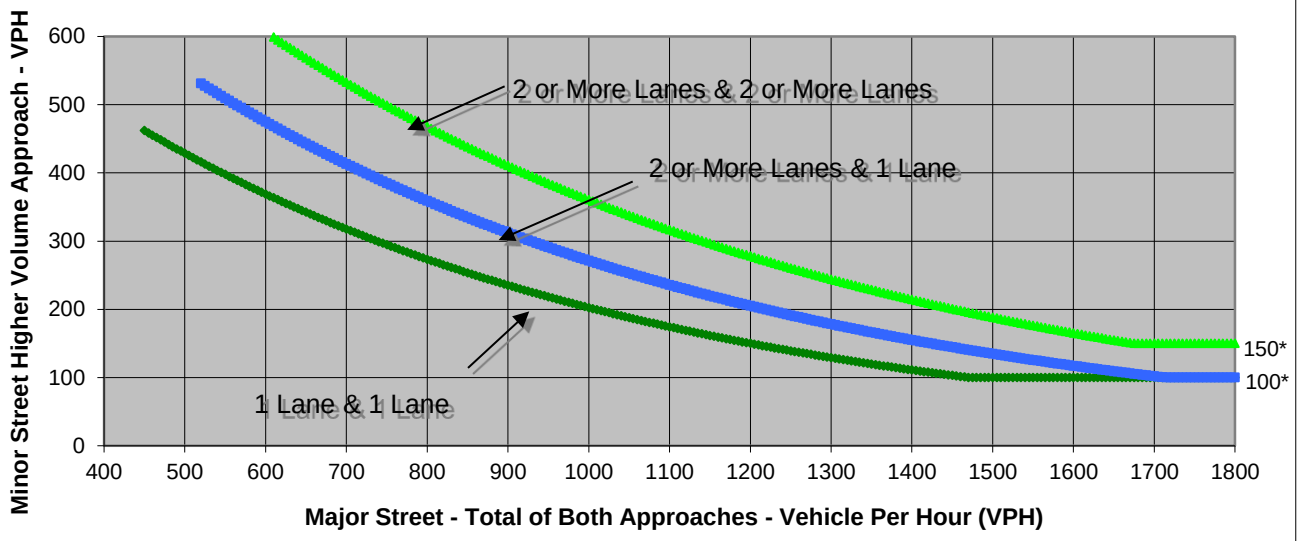
Turn Movement Volumes

	NB	SB	EB	WB
Left	7	0	0	2
Through	0	0	24	23
Right	6	0	2	0
Total	13	0	26	25

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**13**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

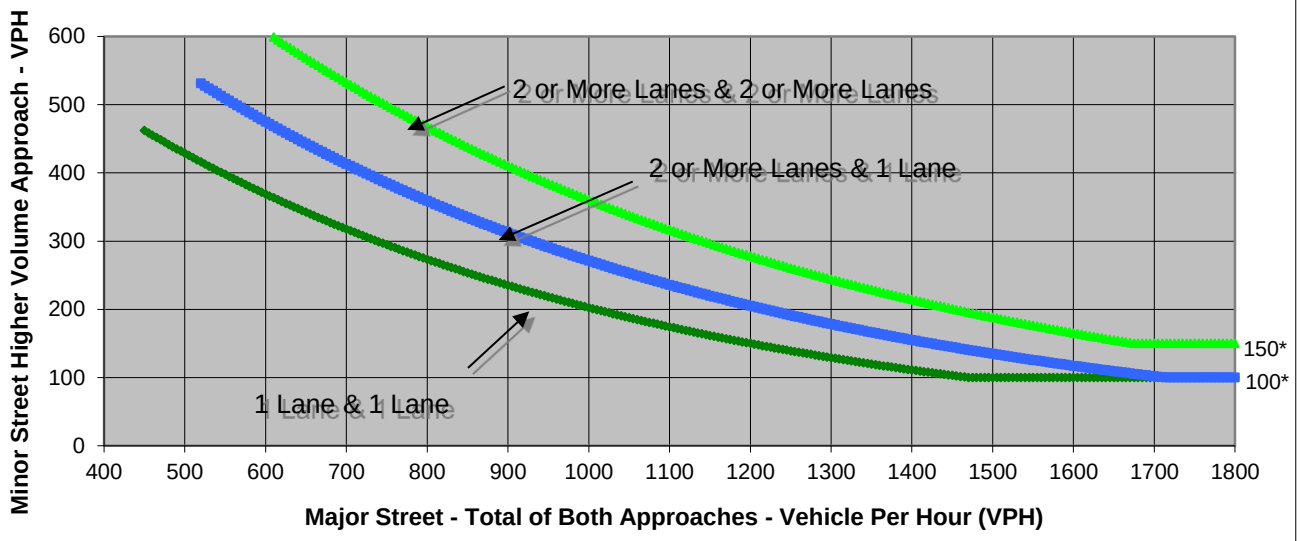
Turn Movement Volumes

	NB	SB	EB	WB
Left	9	8	2	7
Through	24	22	30	28
Right	8	3	2	7
Total	41	33	34	42

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**74**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

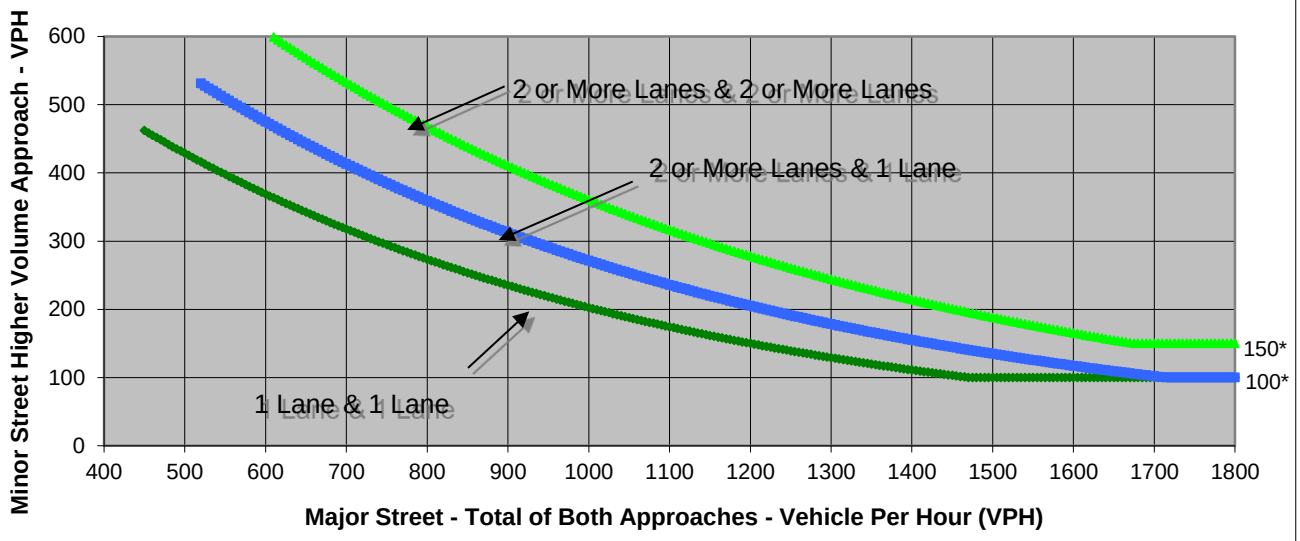
Turn Movement Volumes

	NB	SB	EB	WB
Left	7	9	3	7
Through	33	26	25	24
Right	8	3	2	8
Total	48	38	30	39

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**86**	**39**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

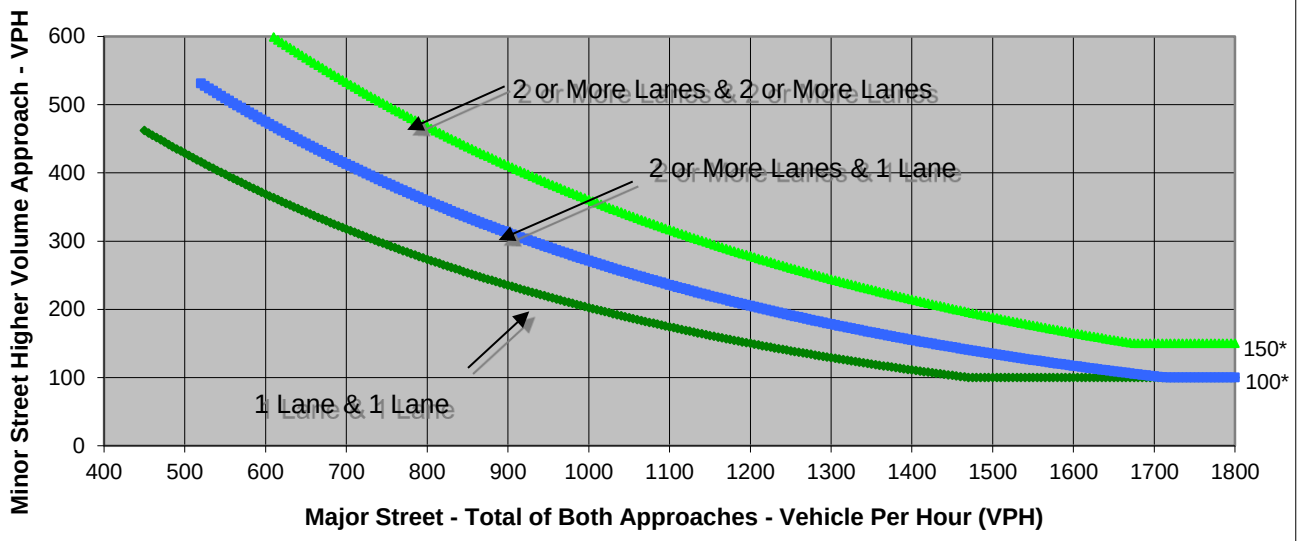
Turn Movement Volumes

	NB	SB	EB	WB
Left	7	0	0	2
Through	0	0	24	23
Right	6	0	2	0
Total	13	0	26	25

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**13**	**26**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

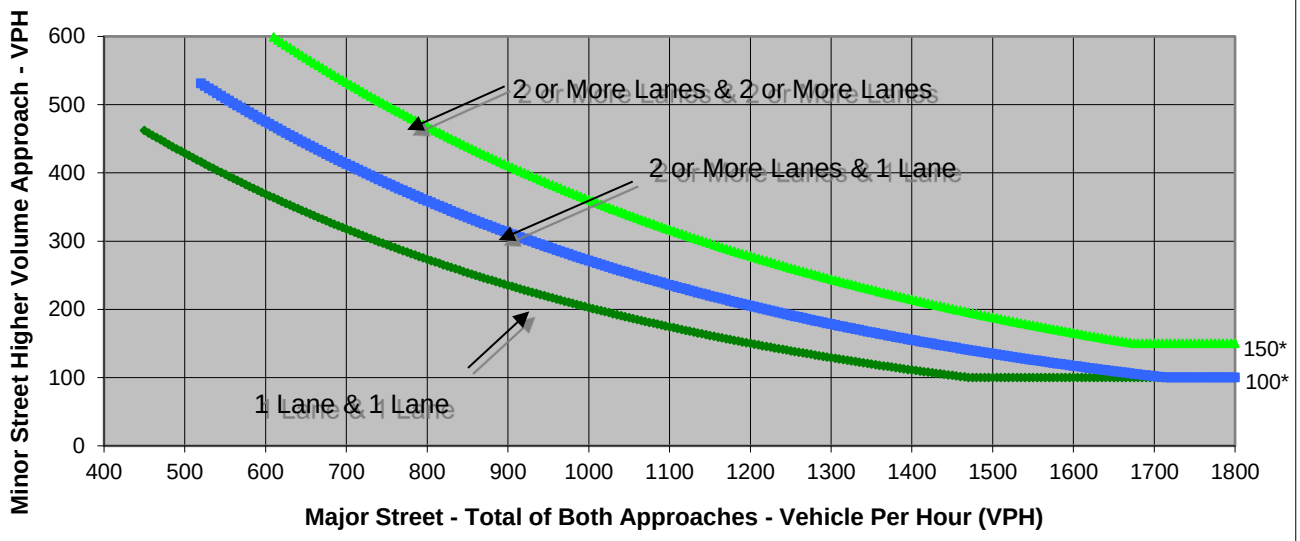
Turn Movement Volumes

	NB	SB	EB	WB
Left	9	8	2	7
Through	24	22	30	28
Right	8	3	2	7
Total	41	33	34	42

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**74**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

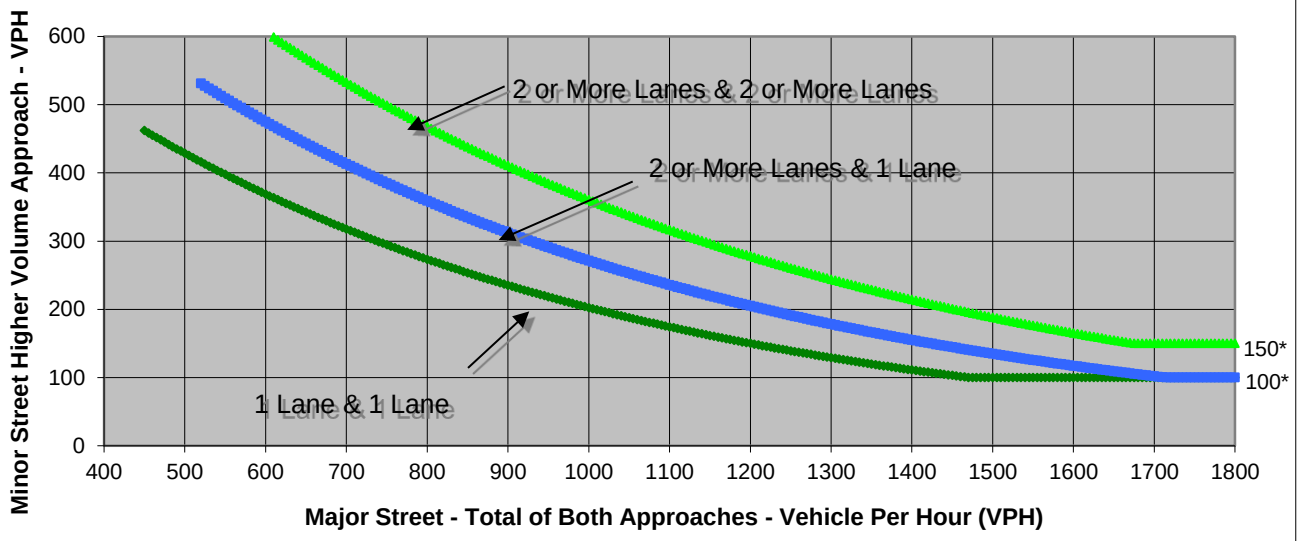
Turn Movement Volumes

	NB	SB	EB	WB
Left	7	9	3	7
Through	33	26	25	24
Right	8	3	2	8
Total	48	38	30	39

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**86**	**39**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

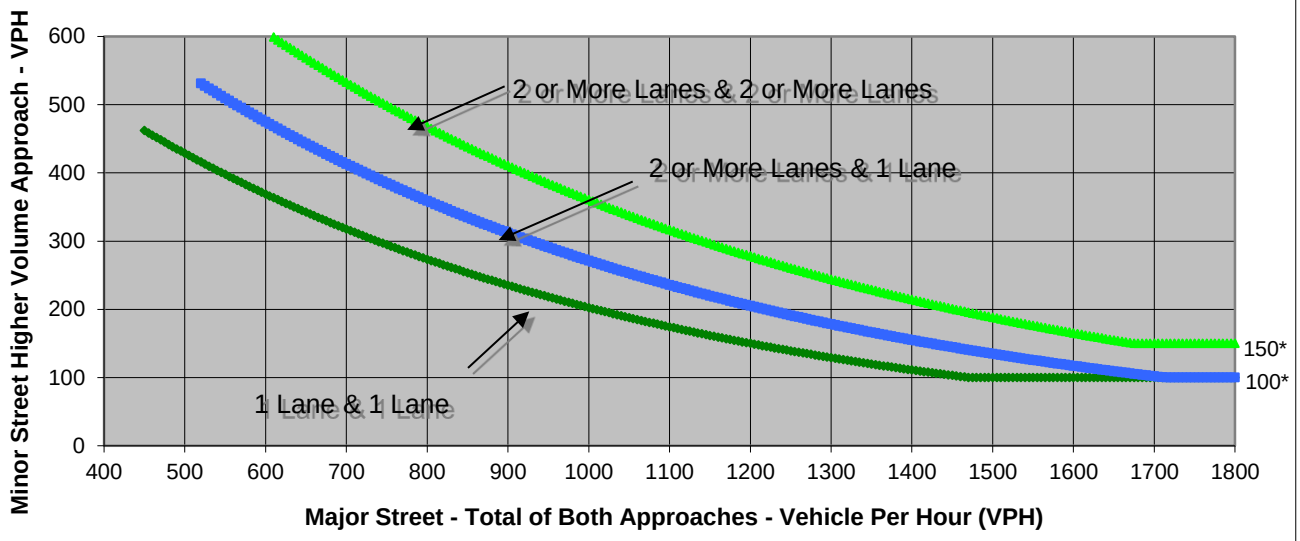
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	0	0	4
Through	0	0	16	11
Right	5	0	1	0
Total	8	0	17	15

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Hubbard Street	Sherwin Avenue/Future Project Roadway	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**8**	**17**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

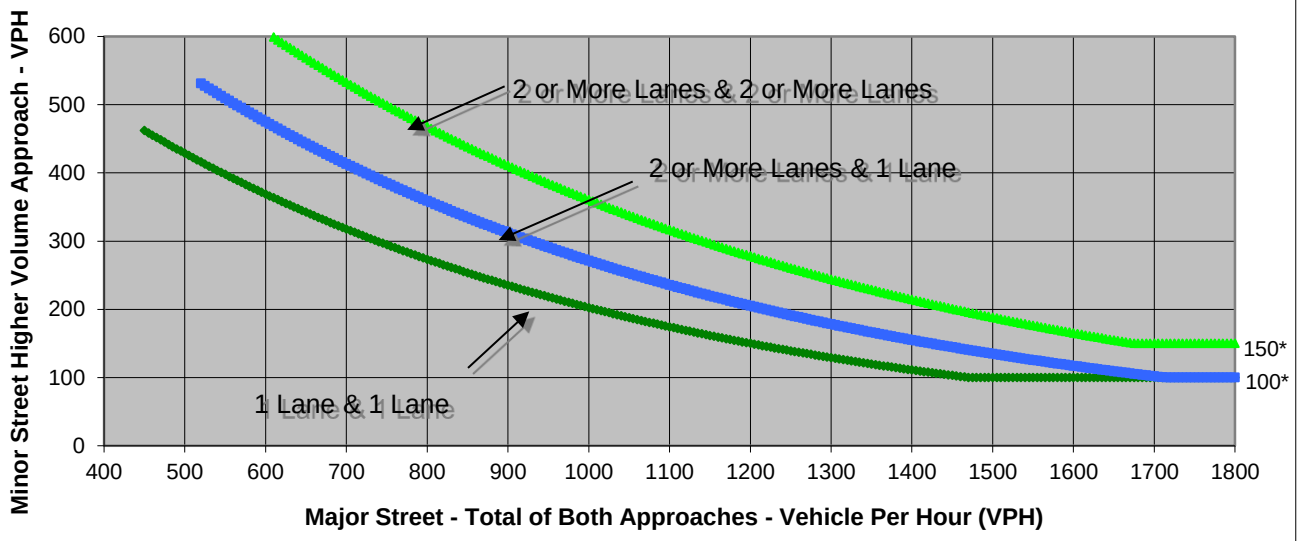
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	6	0	11
Through	20	20	23	14
Right	5	0	2	5
Total	31	26	25	30

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**57**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

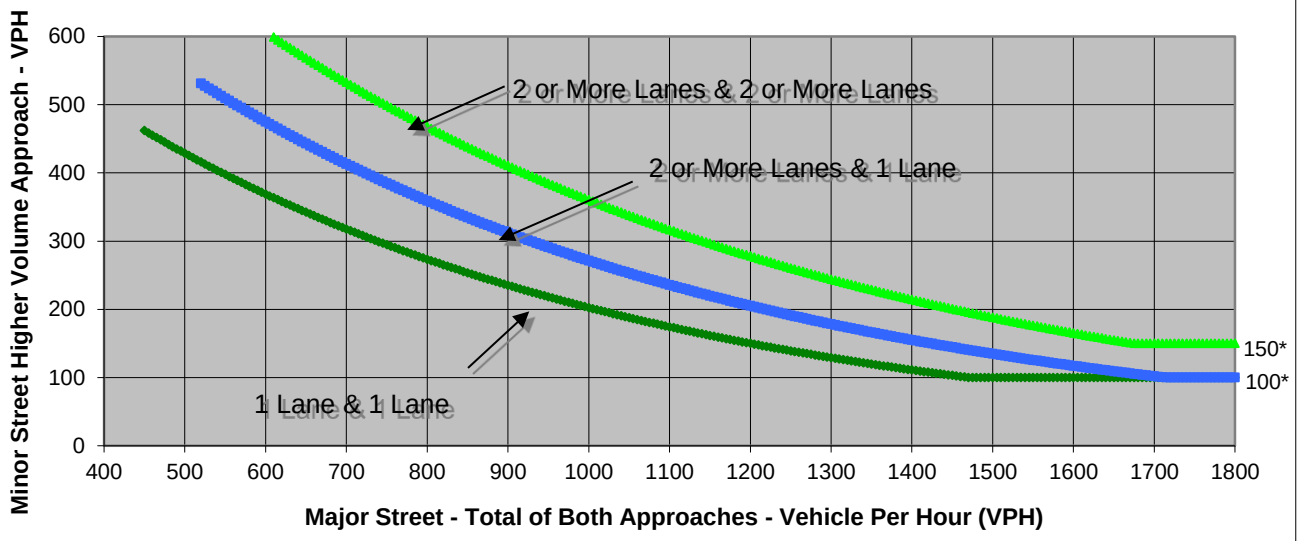
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	8	0	11
Through	26	26	16	11
Right	5	0	1	6
Total	34	34	17	28

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**68**	**28**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 4 of 9

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

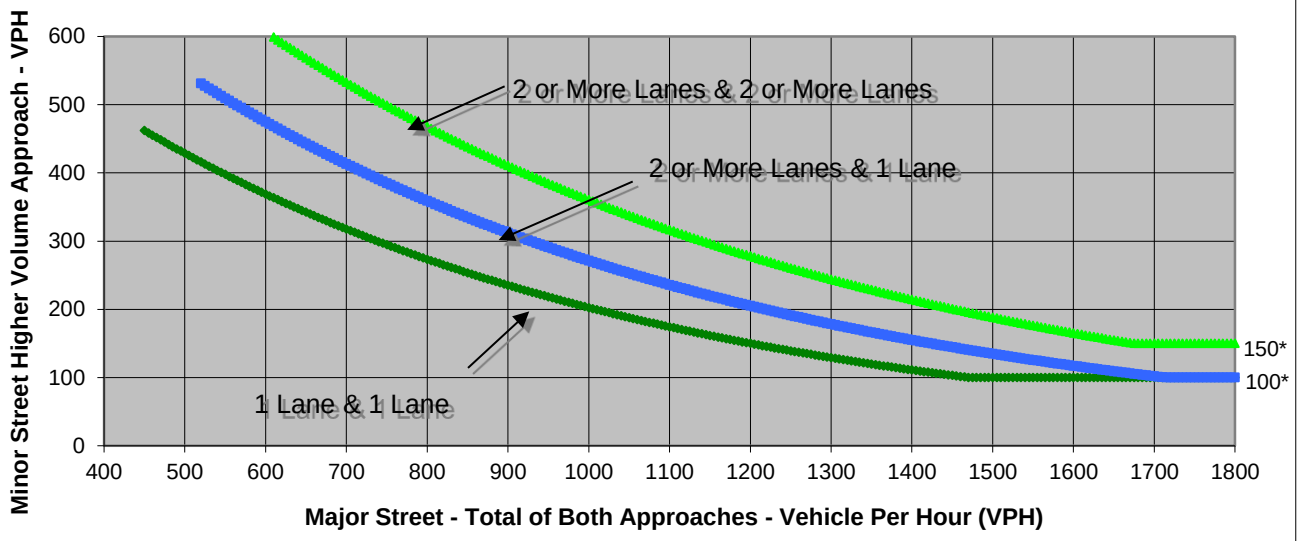
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	0	0	4
Through	0	0	16	11
Right	5	0	1	0
Total	8	0	17	15

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**8**	**17**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

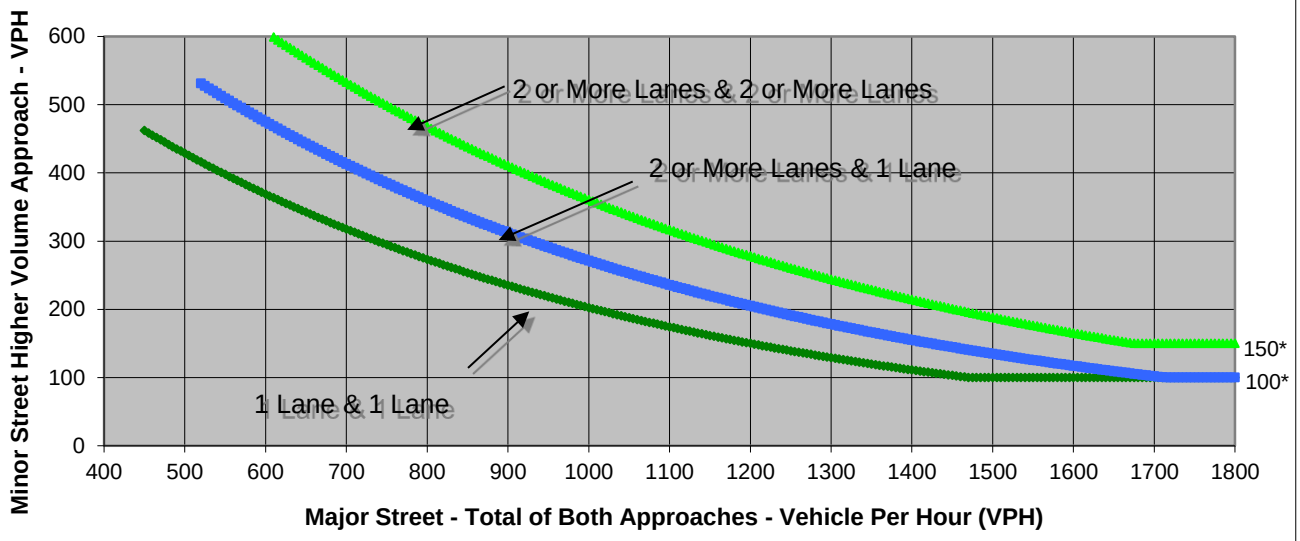
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	6	0	11
Through	20	20	23	14
Right	5	0	2	5
Total	31	26	25	30

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**57**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

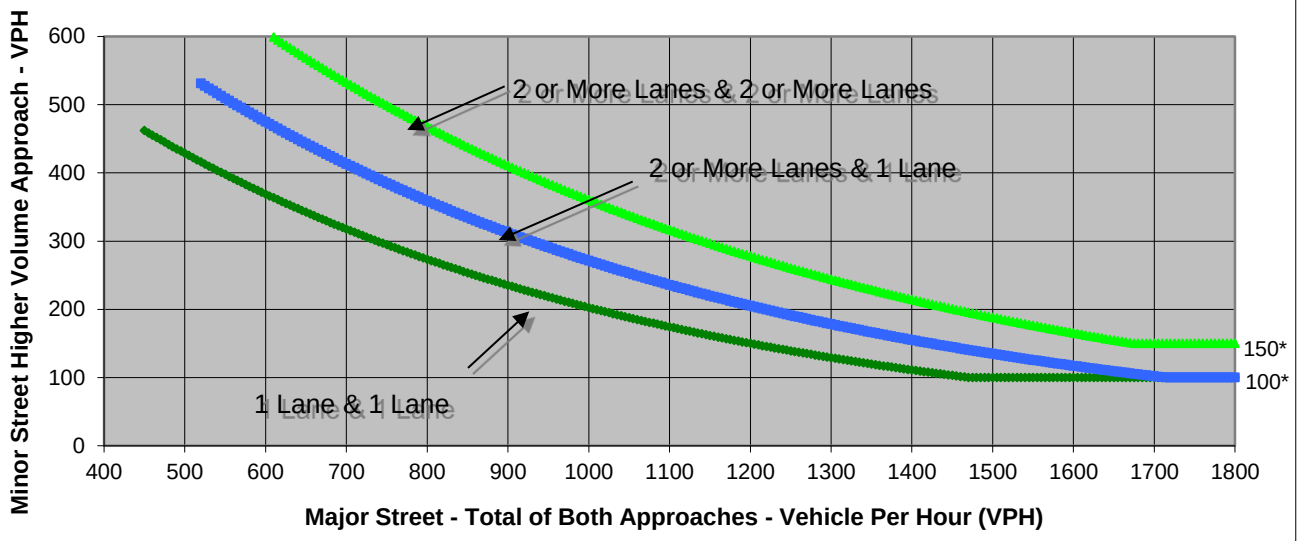
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	8	0	11
Through	26	26	16	11
Right	5	0	1	6
Total	34	34	17	28

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**68**	**28**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

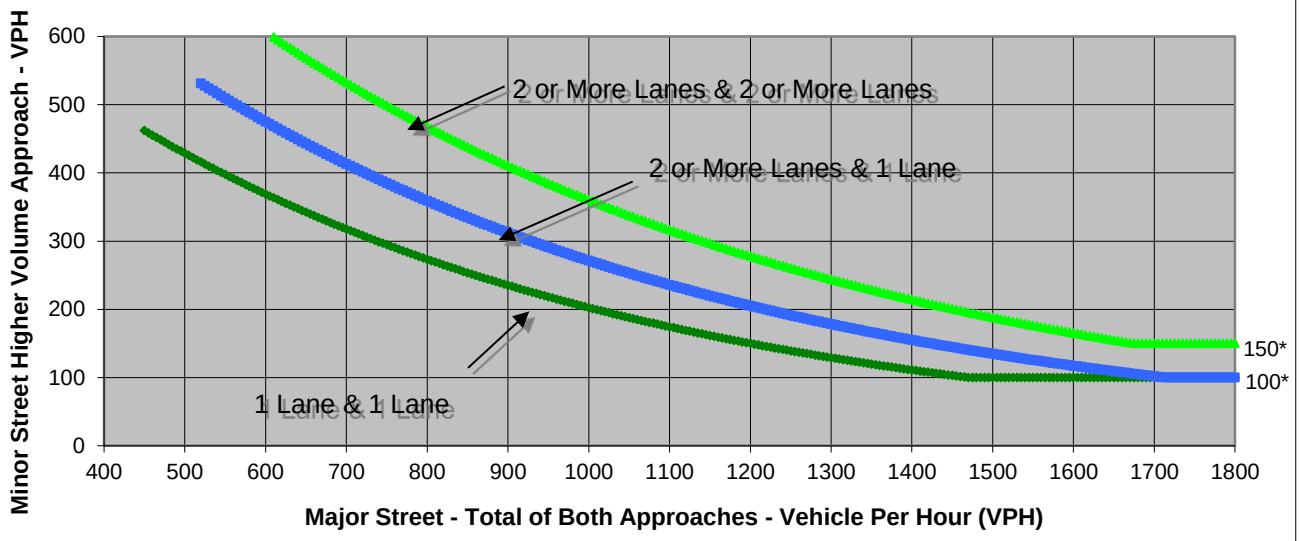
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	0	0	4
Through	0	0	16	11
Right	5	0	1	0
Total	8	0	17	15

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**8**	**17**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

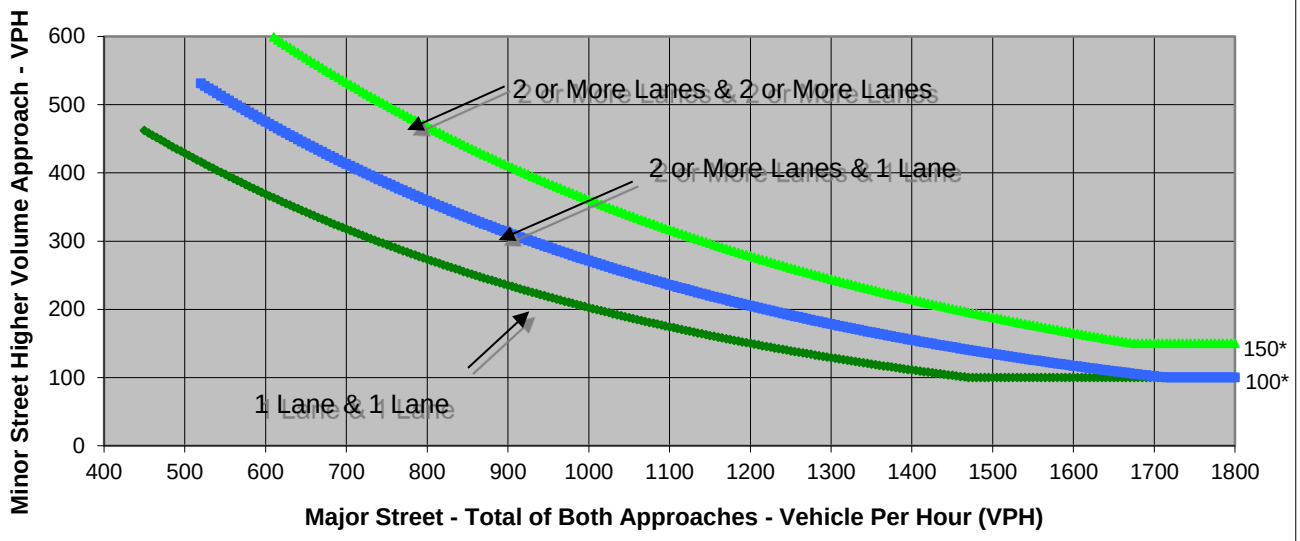
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	6	0	11
Through	20	20	23	14
Right	5	0	2	5
Total	31	26	25	30

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**57**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Hubbard Street
Minor Street Sherwin Avenue/Future Project Roadway

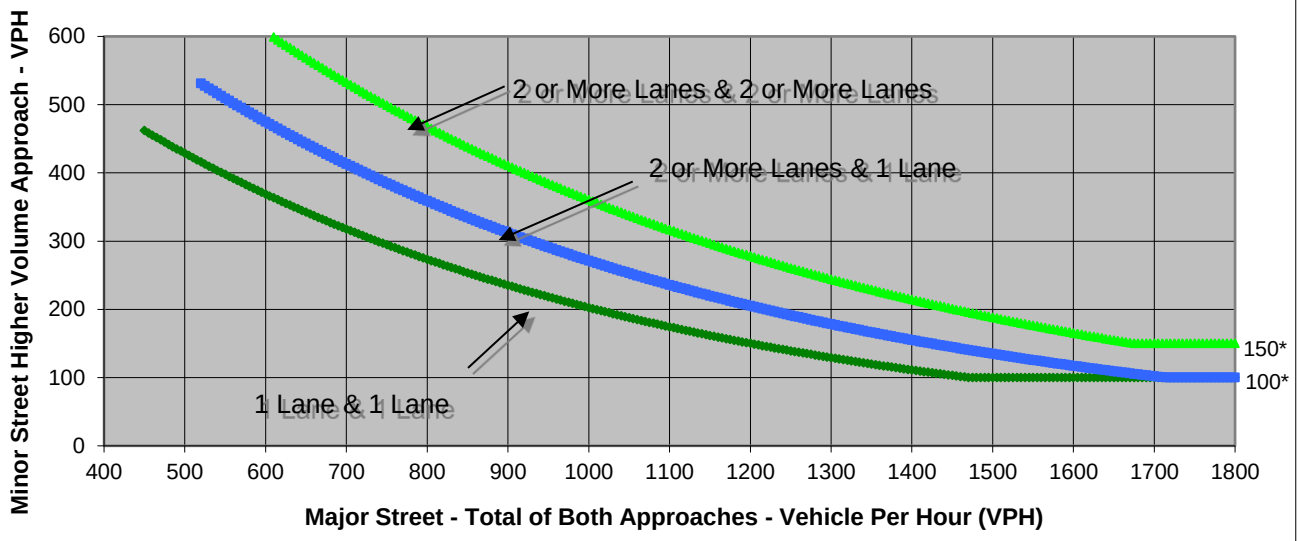
Turn Movement Volumes

	NB	SB	EB	WB
Left	3	8	0	11
Through	26	26	16	11
Right	5	0	1	6
Total	34	34	17	28

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Hubbard Street	Minor Street Sherwin Avenue/Future Project Roadway	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**68**	**28**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Sherwin Avenue

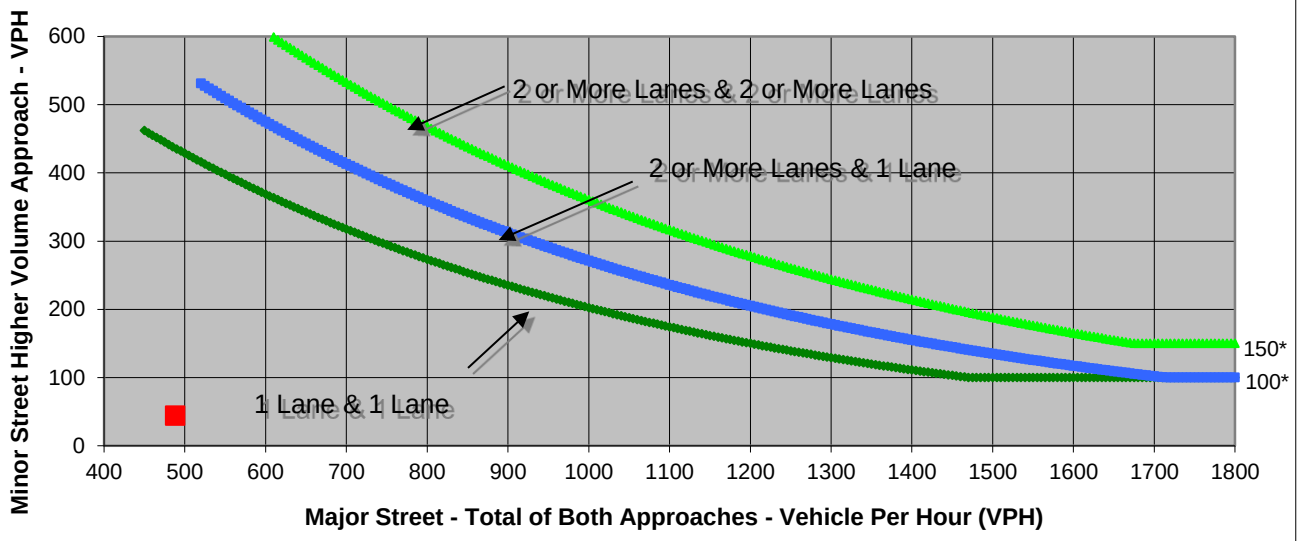
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	39	0
Through	286	177	0	0
Right	0	23	5	0
Total	288	200	44	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**488**	**44**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Sherwin Avenue

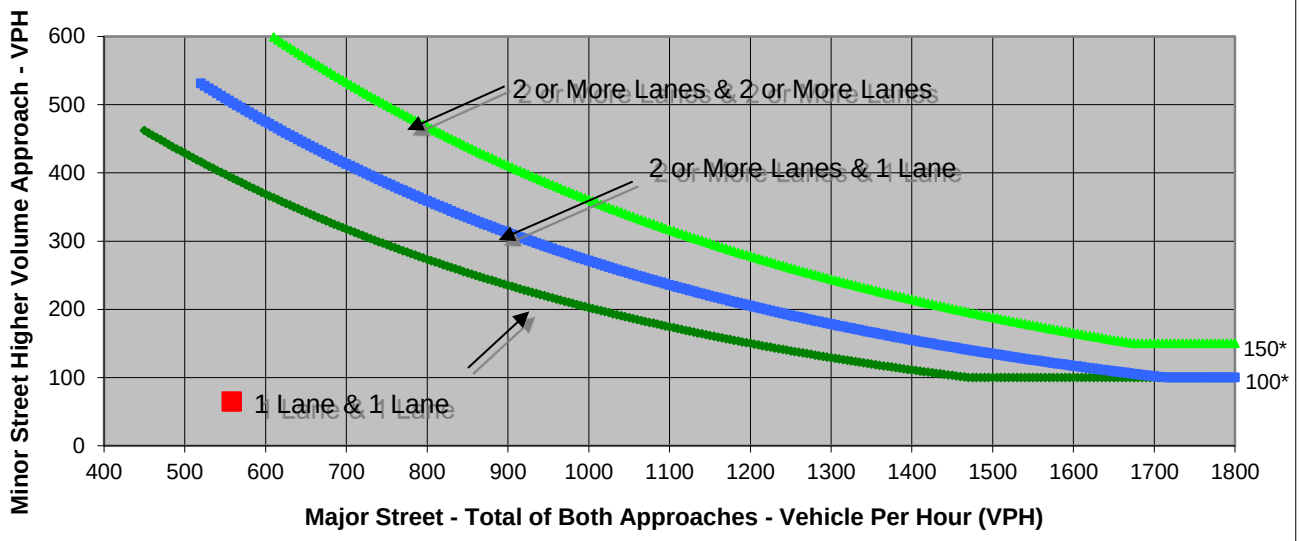
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	0	43	0
Through	304	198	0	0
Right	0	28	22	0
Total	332	226	65	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**558**	**65**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Sherwin Avenue

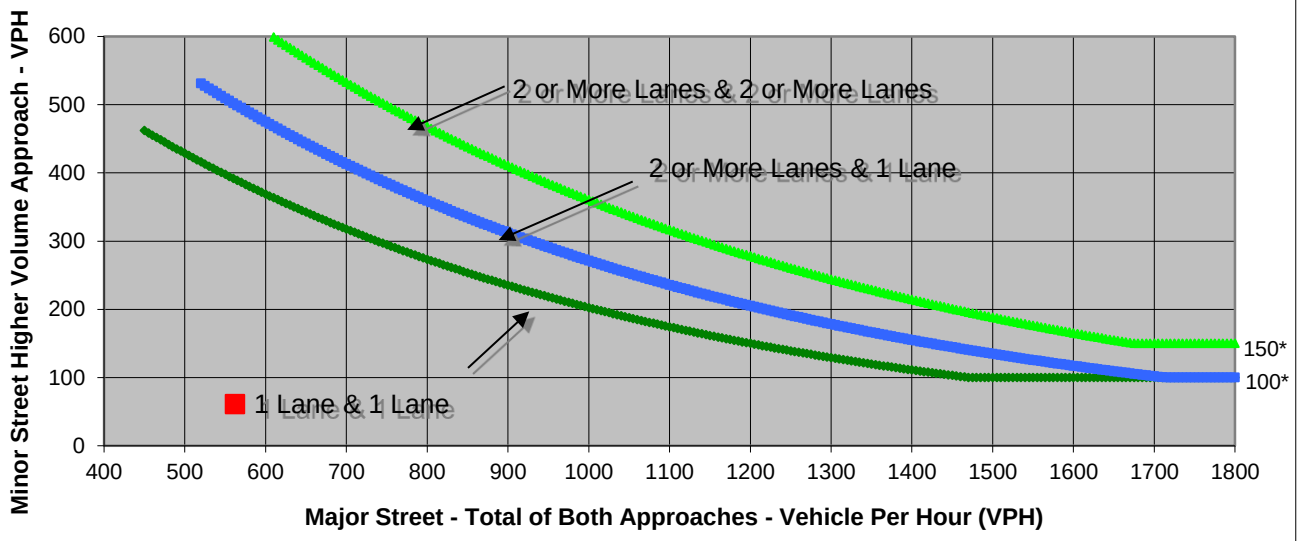
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	0	40	0
Through	309	200	0	0
Right	0	25	21	0
Total	337	225	61	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**562**	**61**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 4 of 9

Major Street Horton Street
Minor Street Sherwin Avenue

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

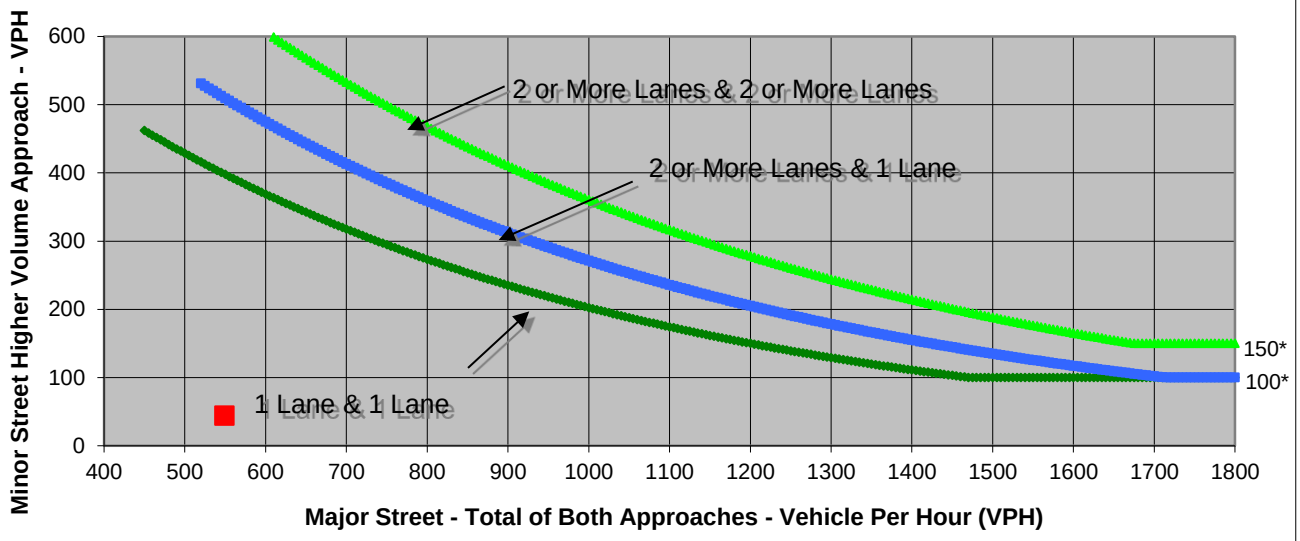
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	39	0
Through	300	224	0	0
Right	0	23	5	0
Total	302	247	44	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**549**	**44**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Sherwin Avenue

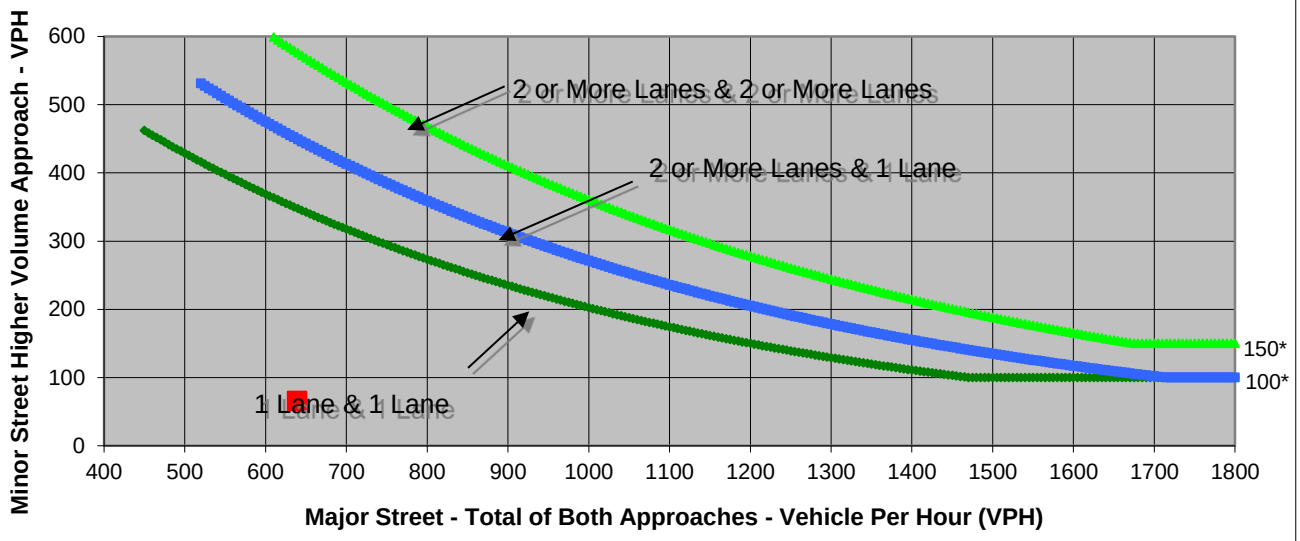
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	0	44	0
Through	328	253	0	0
Right	0	30	22	0
Total	356	283	66	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**639**	**66**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Major Street	Horton Street
Minor Street	Sherwin Avenue

Project	Sherwin Williams
Scenario	Near Term PPB Conditions
Peak Hour	PM

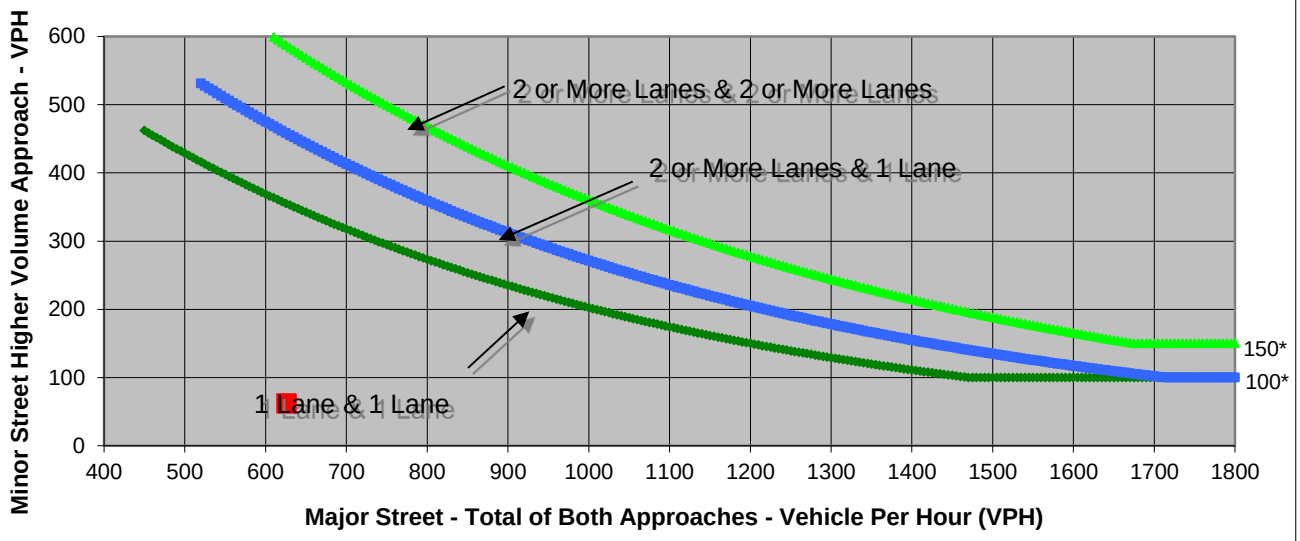
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	0	41	0
Through	324	247	0	0
Right	0	27	21	0
Total	352	274	62	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**626**	**62**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Sherwin Avenue

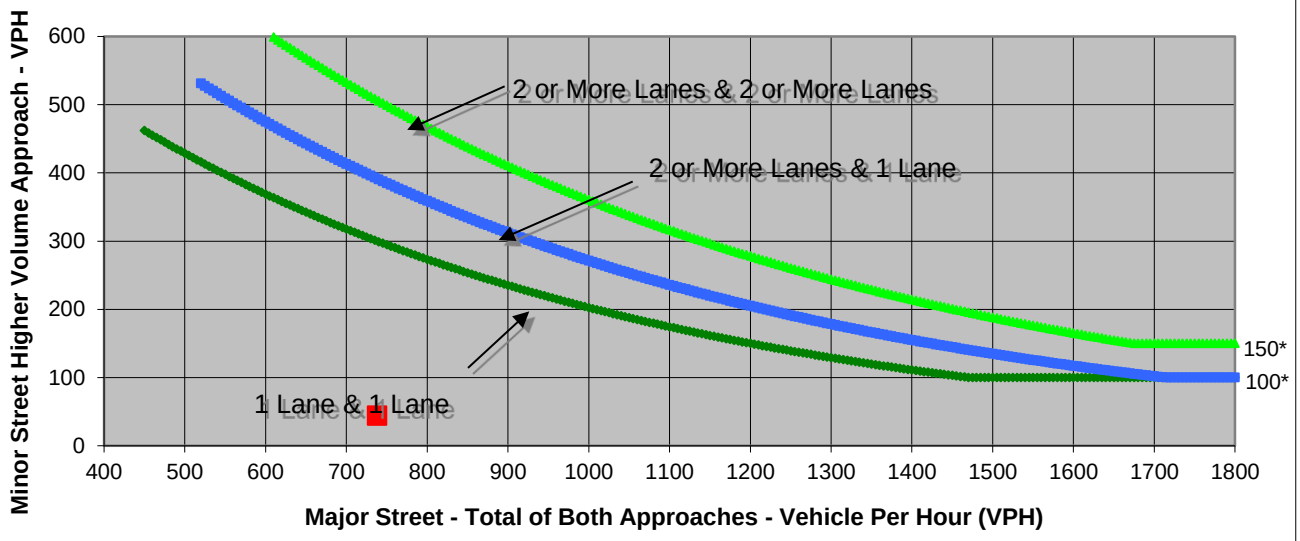
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	39	0
Through	328	385	0	0
Right	0	23	5	0
Total	330	408	44	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**738**	**44**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Horton Street
Minor Street Sherwin Avenue

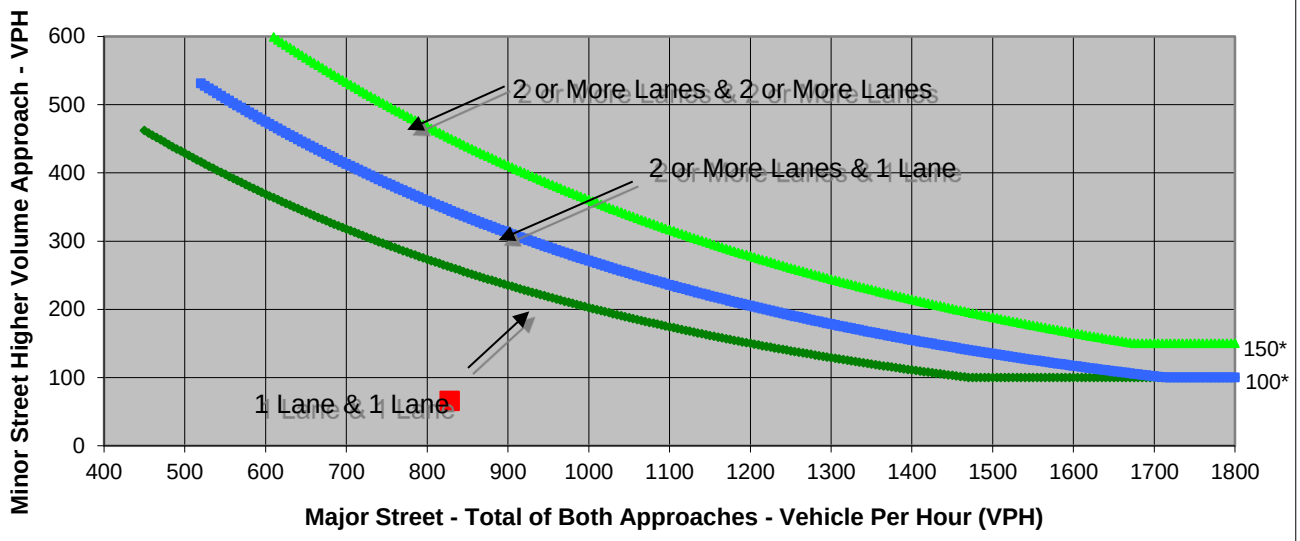
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	0	44	0
Through	356	414	0	0
Right	0	30	22	0
Total	384	444	66	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**828**	**66**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Horton Street
Minor Street Sherwin Avenue

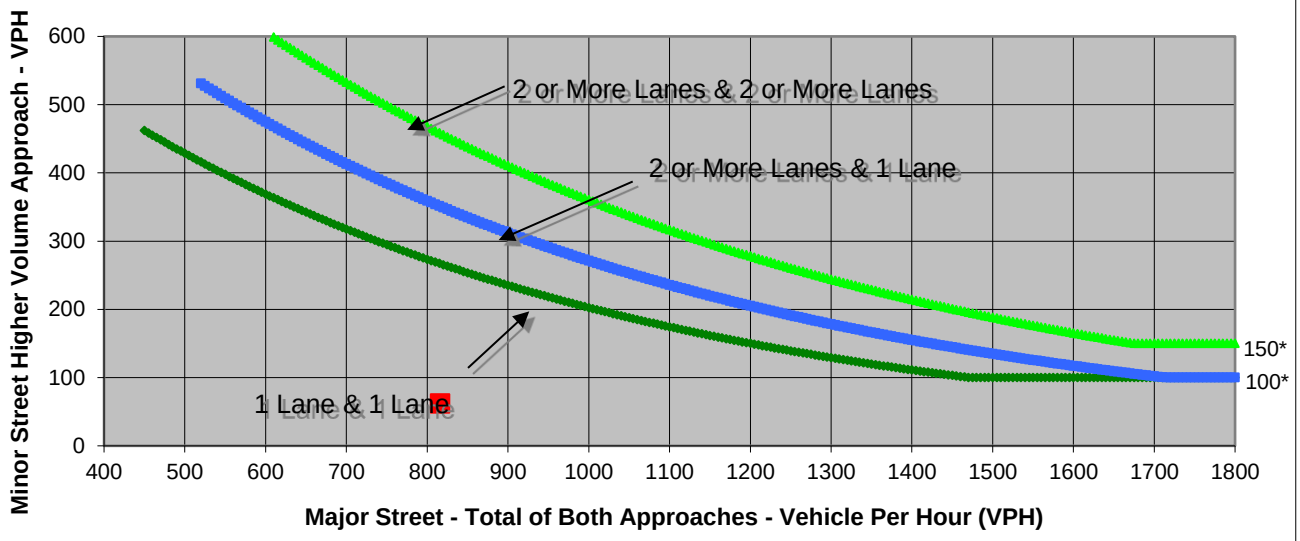
Turn Movement Volumes

	NB	SB	EB	WB
Left	28	0	41	0
Through	352	409	0	0
Right	0	27	21	0
Total	380	436	62	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**816**	**62**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

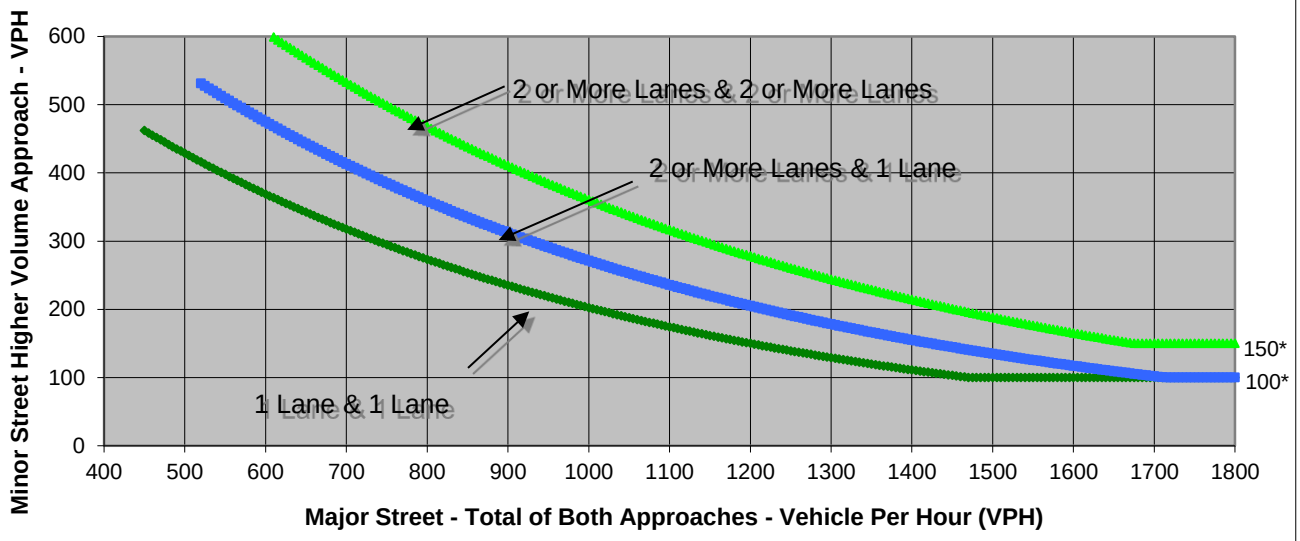
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	18	0
Through	85	55	0	0
Right	0	16	7	0
Total	87	71	25	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**158**	**25**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

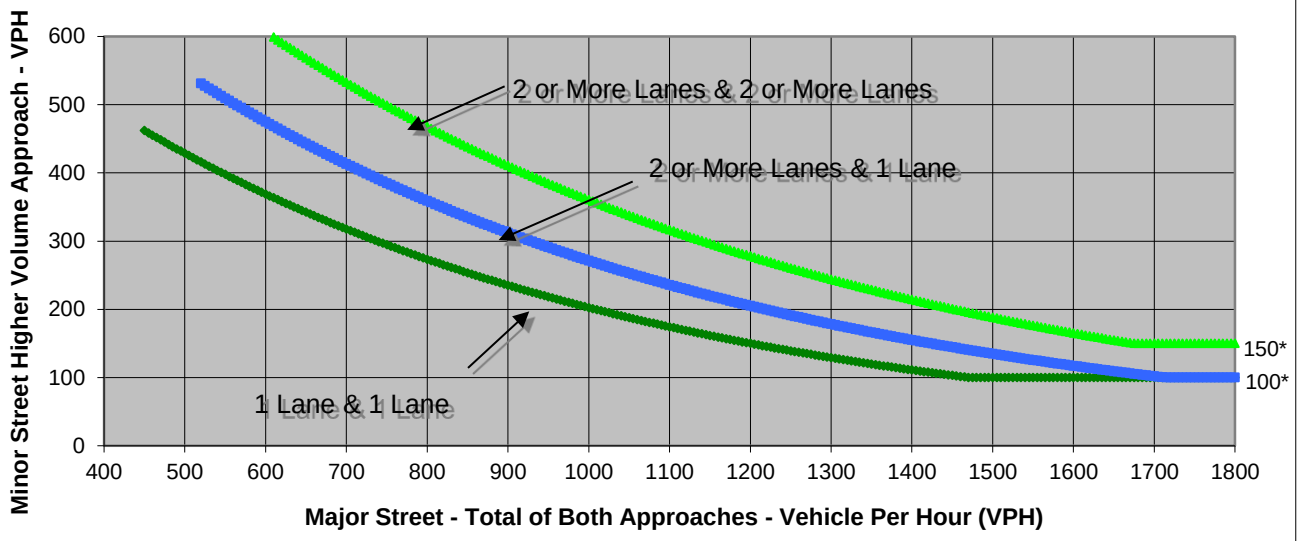
Turn Movement Volumes

	NB	SB	EB	WB
Left	23	0	23	0
Through	99	68	0	0
Right	0	19	24	0
Total	122	87	47	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**209**	**47**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

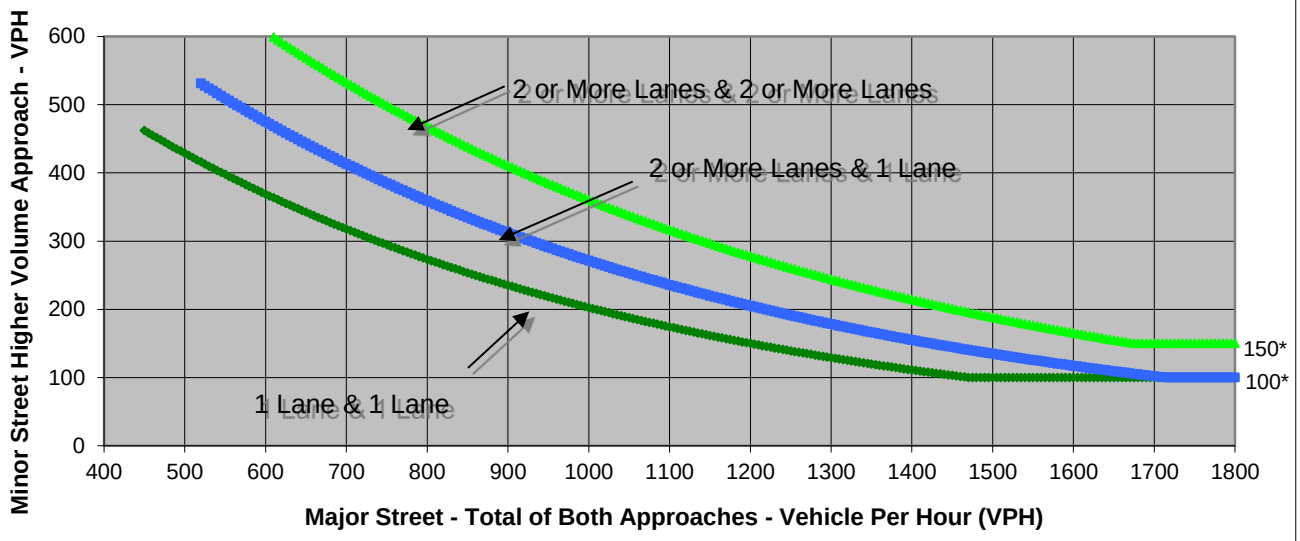
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	0	19	0
Through	102	71	0	0
Right	0	17	22	0
Total	124	88	41	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**212**	**41**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

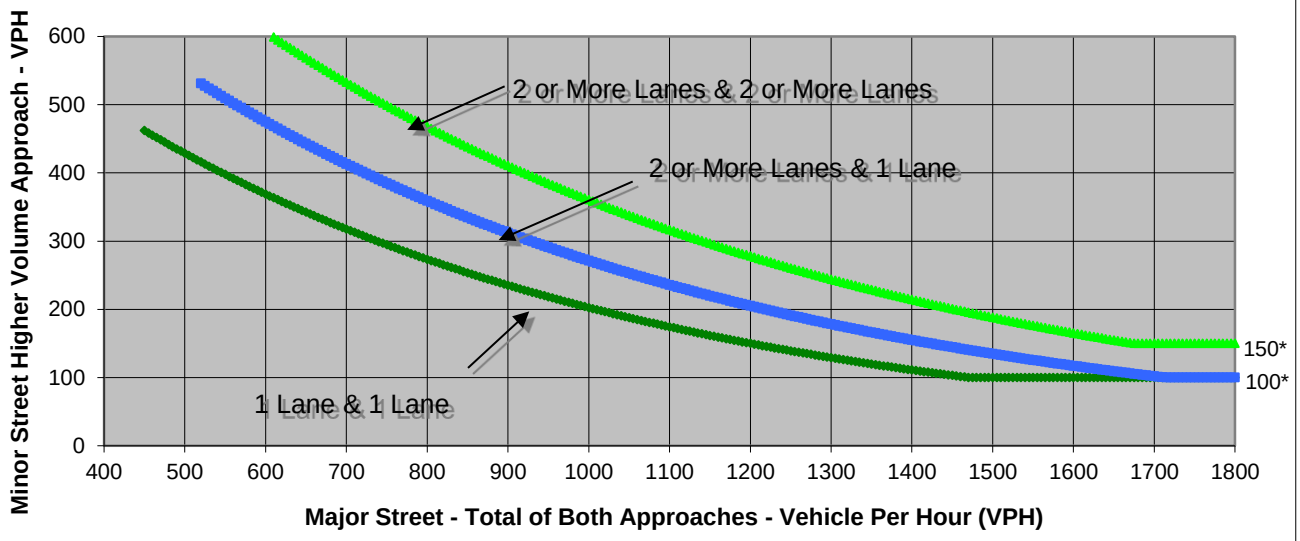
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	18	0
Through	89	59	0	0
Right	0	16	7	0
Total	91	75	25	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**166**	**25**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

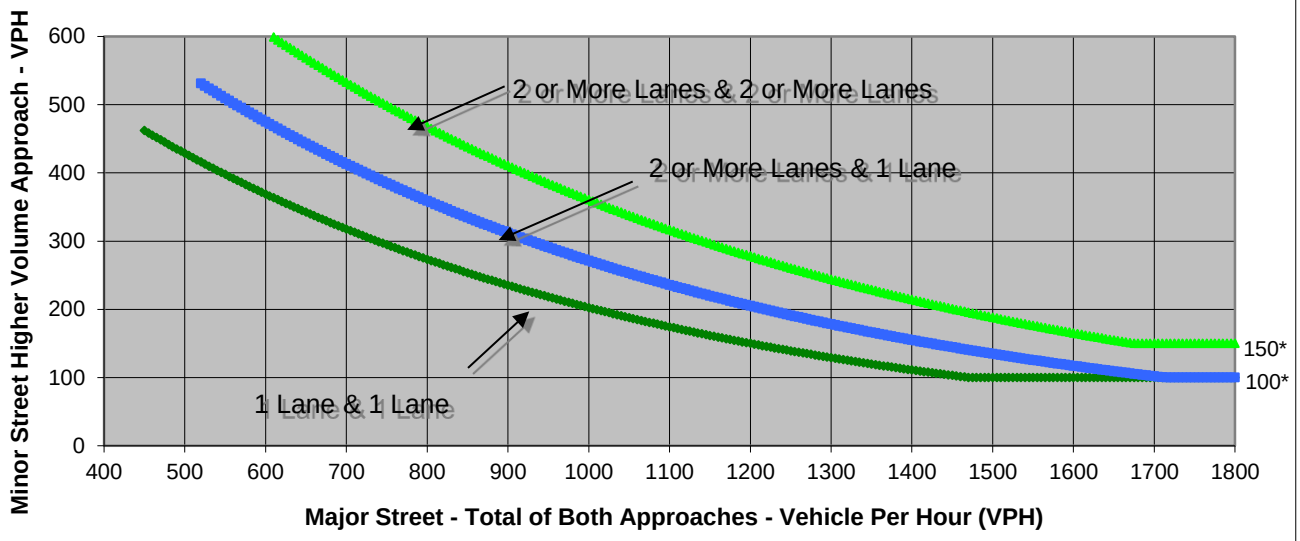
Turn Movement Volumes

	NB	SB	EB	WB
Left	23	0	25	0
Through	103	71	0	0
Right	0	21	24	0
Total	126	92	49	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**218**	**49**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

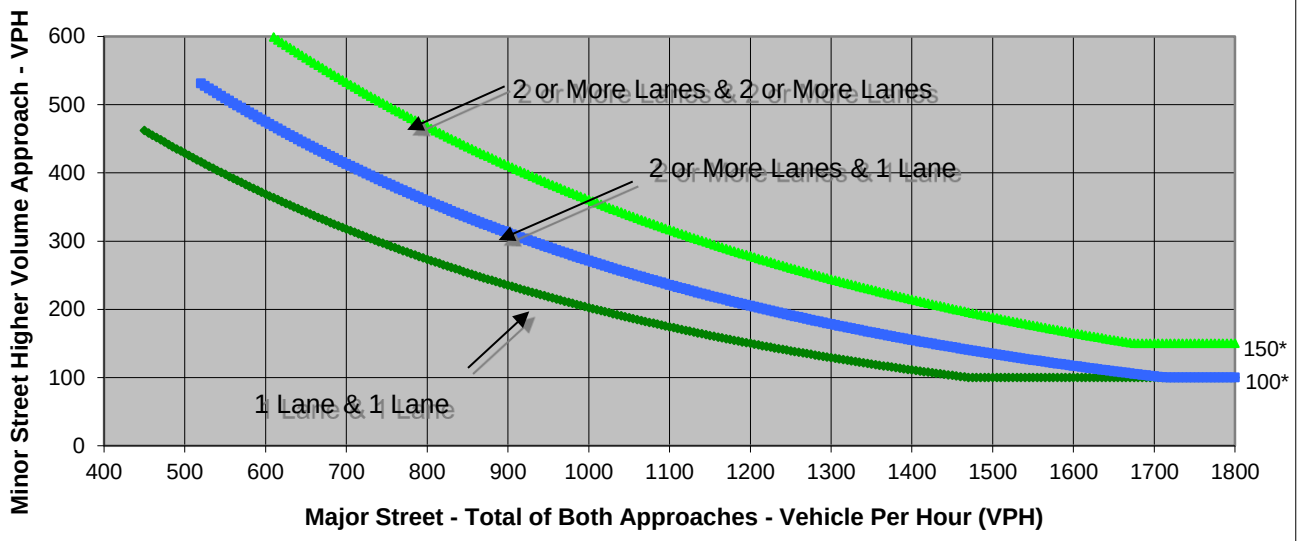
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	0	21	0
Through	106	74	0	0
Right	0	19	22	0
Total	128	93	43	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**221**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

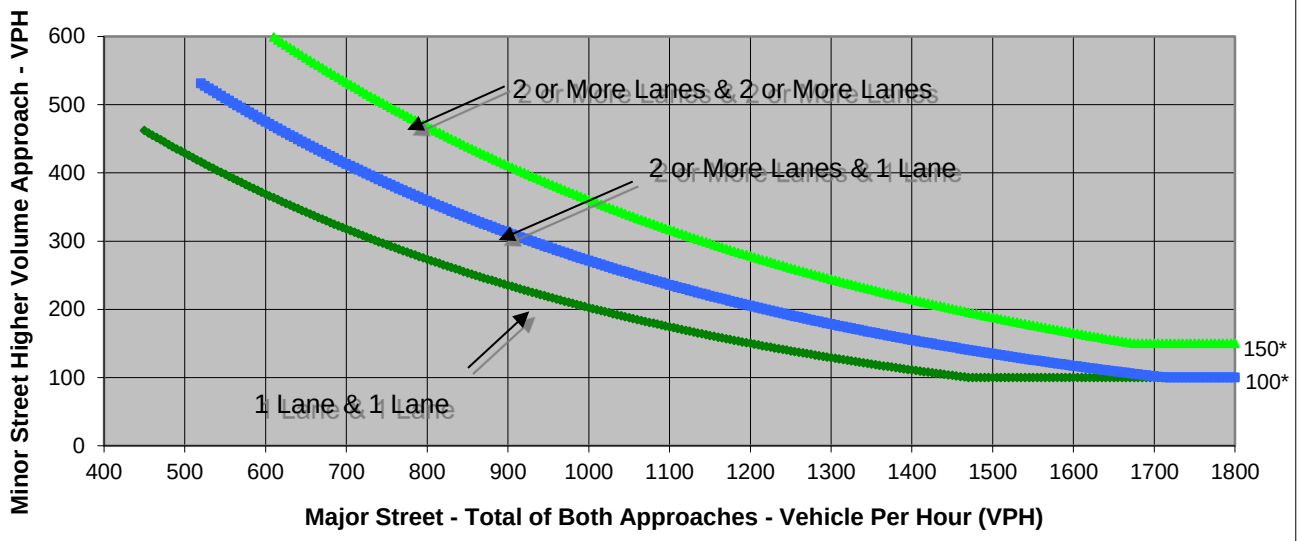
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	18	0
Through	104	74	0	0
Right	0	16	7	0
Total	106	90	25	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**196**	**25**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

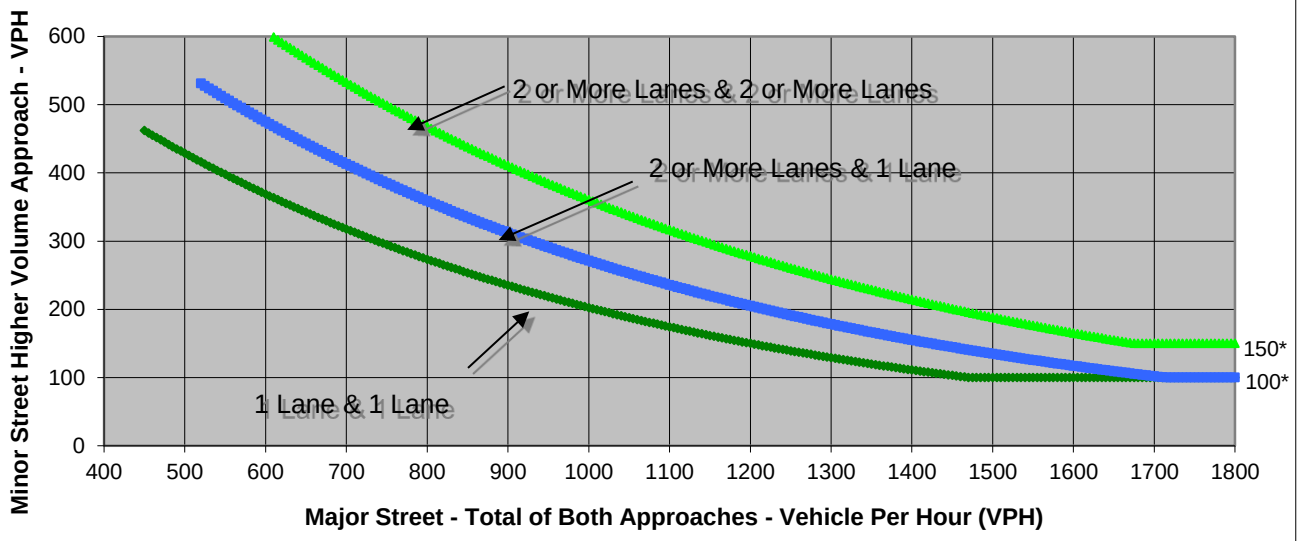
Turn Movement Volumes

	NB	SB	EB	WB
Left	23	0	25	0
Through	118	86	0	0
Right	0	21	24	0
Total	141	107	49	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**248**	**49**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Sherwin Avenue

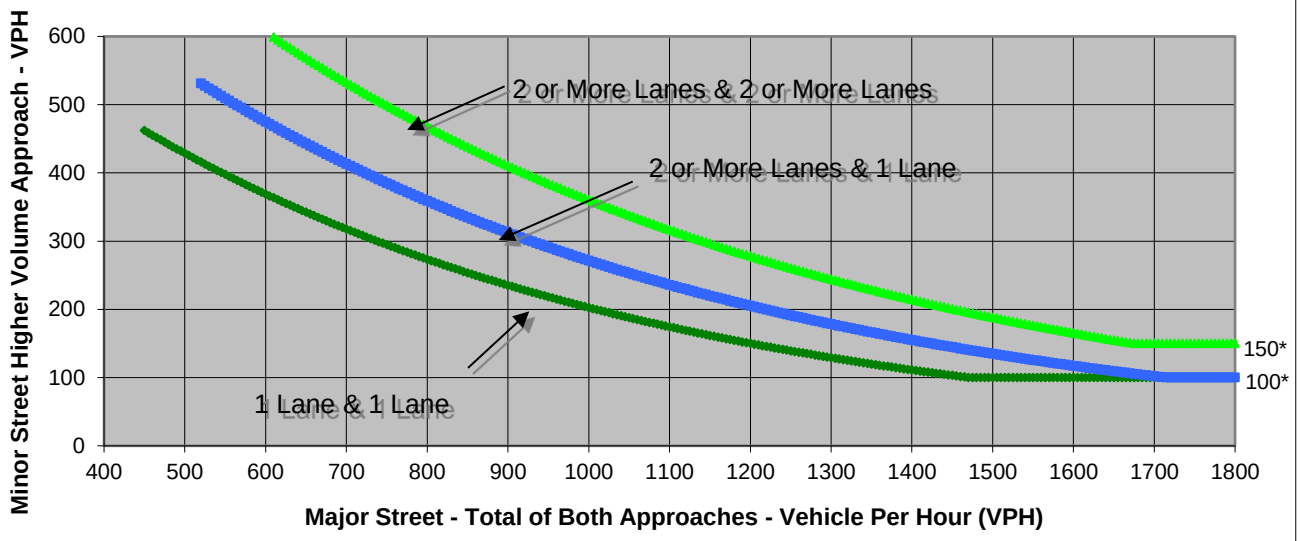
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	0	21	0
Through	121	89	0	0
Right	0	19	22	0
Total	143	108	43	0

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Sherwin Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**251**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

Major Street Halleck Street
Minor Street Park Avenue

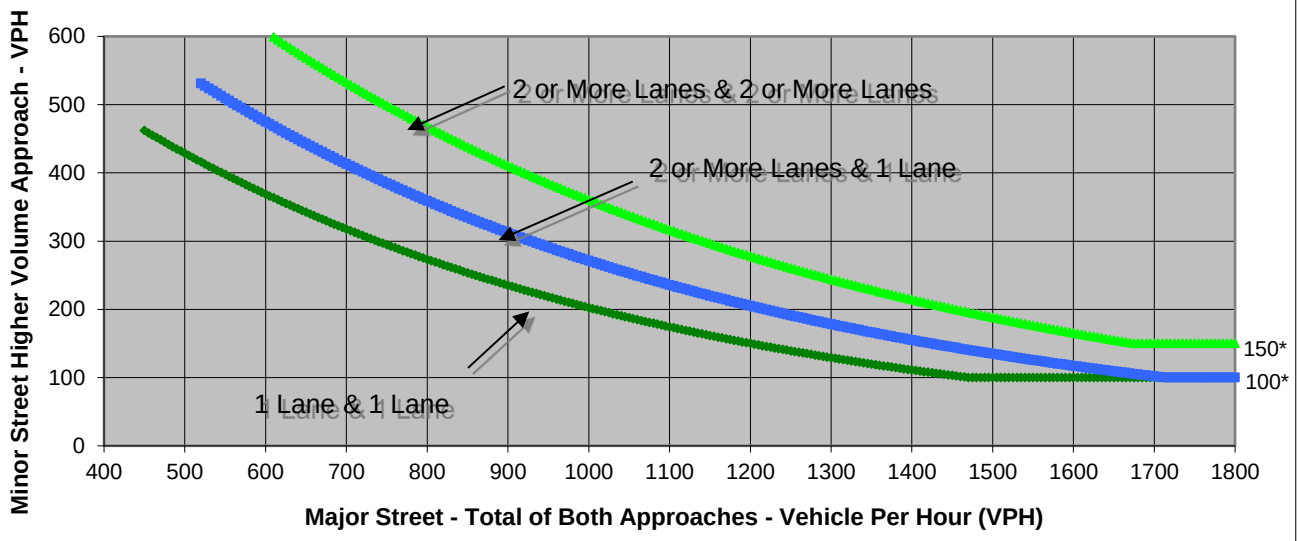
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	12	1	73
Through	14	17	7	3
Right	122	0	1	6
Total	136	29	9	82

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**165**	**82**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

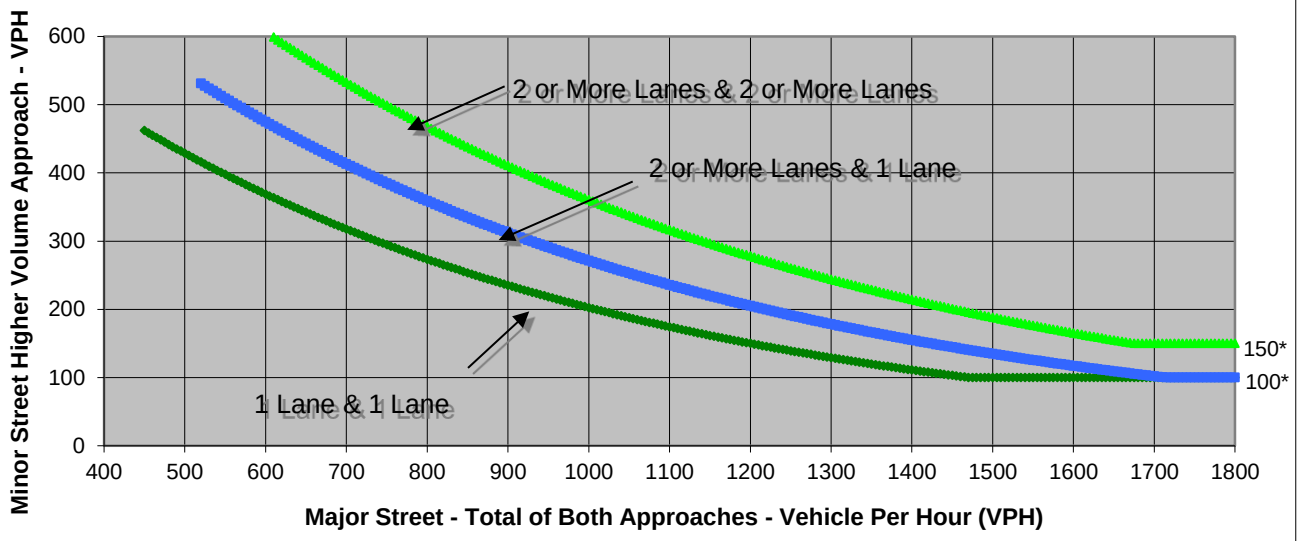
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	11	0	28
Through	8	8	2	2
Right	25	0	1	13
Total	33	19	3	43

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Halleck Street	Park Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**52**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

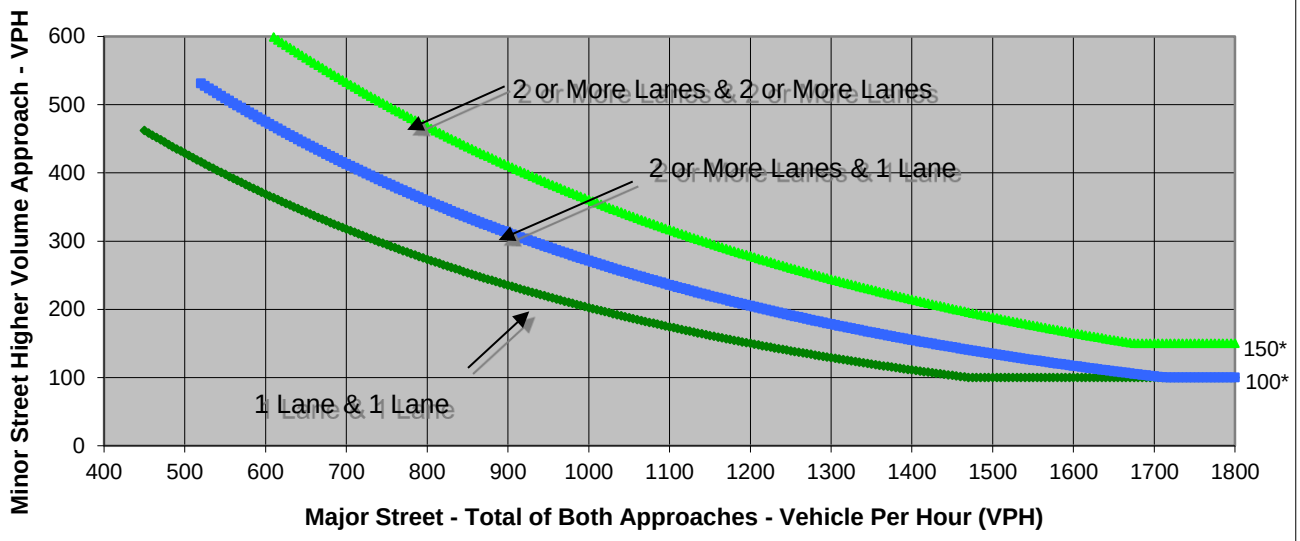
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	24	0	28
Through	8	8	2	2
Right	25	0	1	27
Total	33	32	3	57

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**65**	**57**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

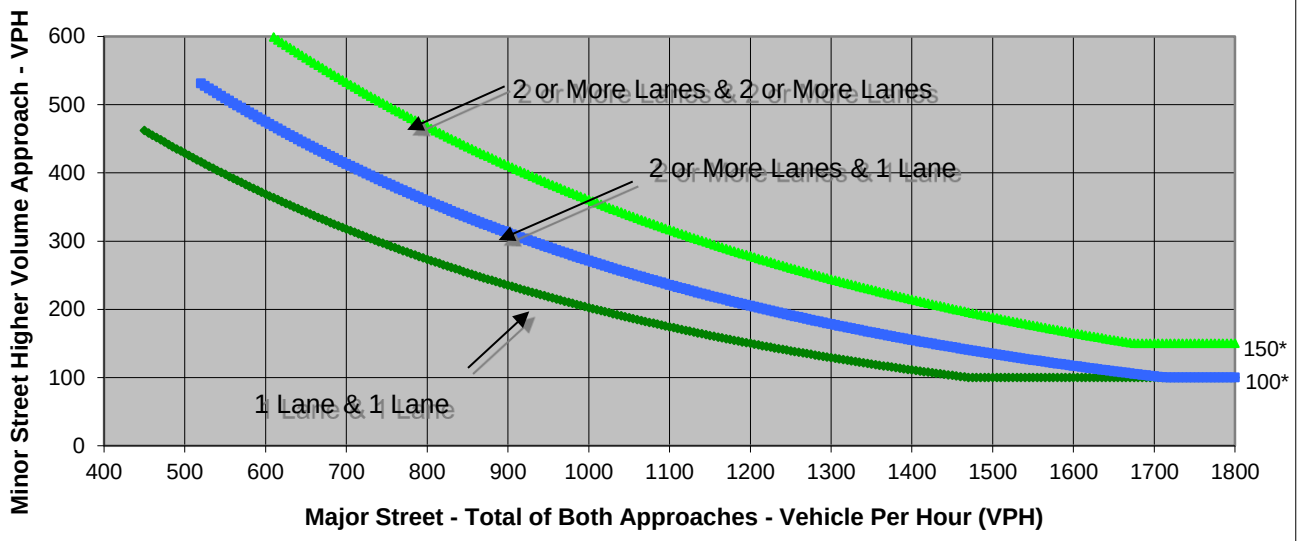
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	11	0	28
Through	8	8	2	2
Right	25	0	1	13
Total	33	19	3	43

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**52**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

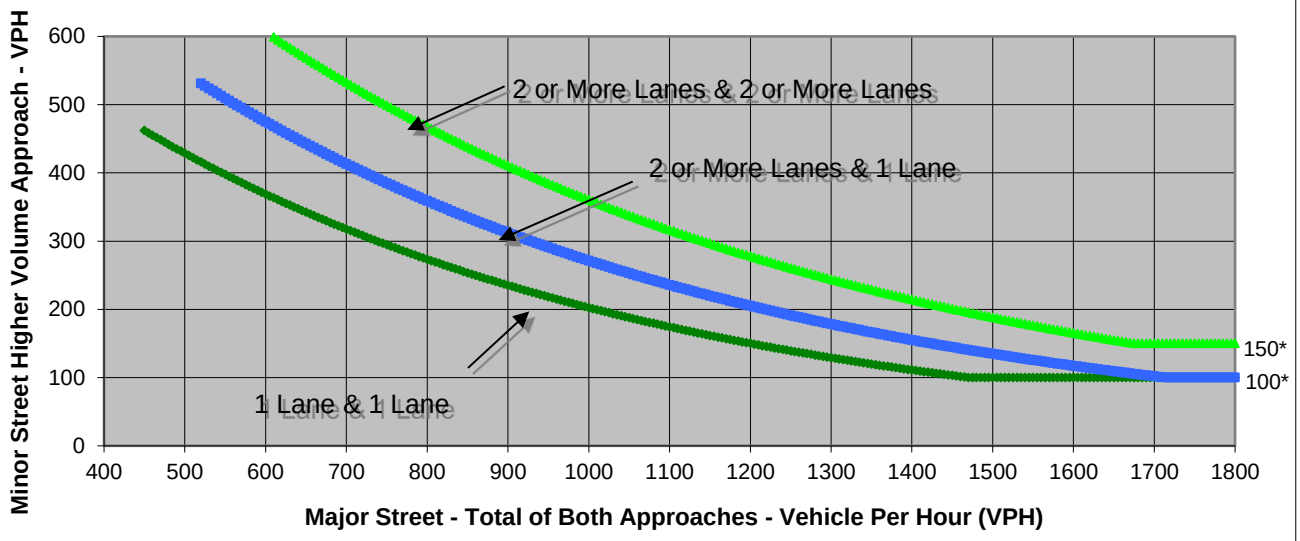
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	11	0	28
Through	8	8	2	2
Right	25	0	1	13
Total	33	19	3	43

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**52**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

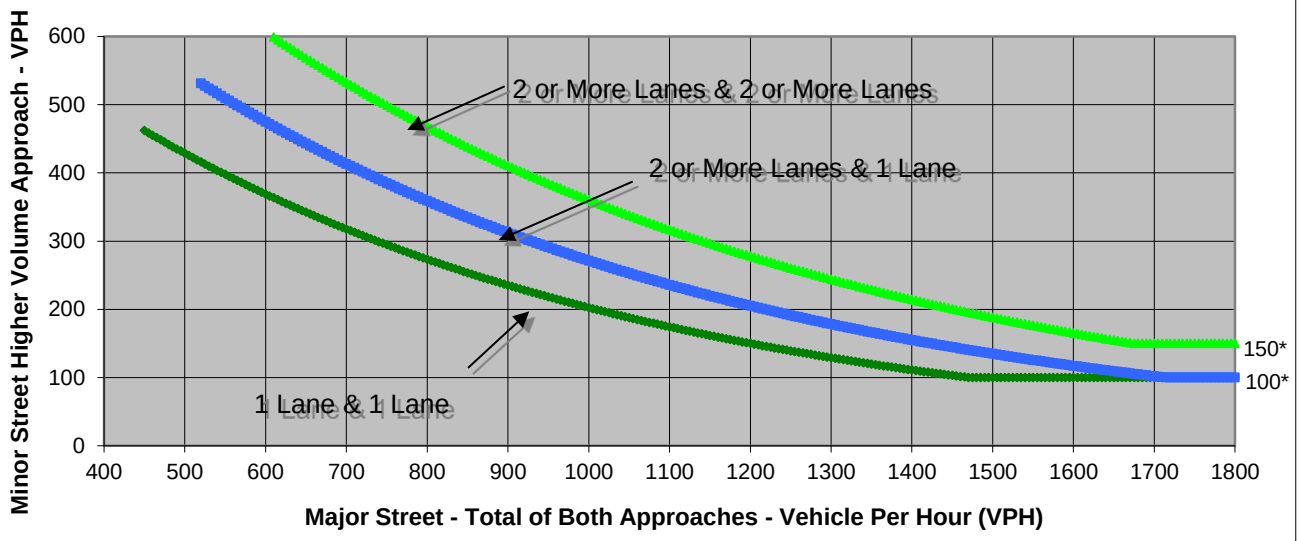
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	24	0	28
Through	8	8	2	2
Right	25	0	1	27
Total	33	32	3	57

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**65**	**57**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

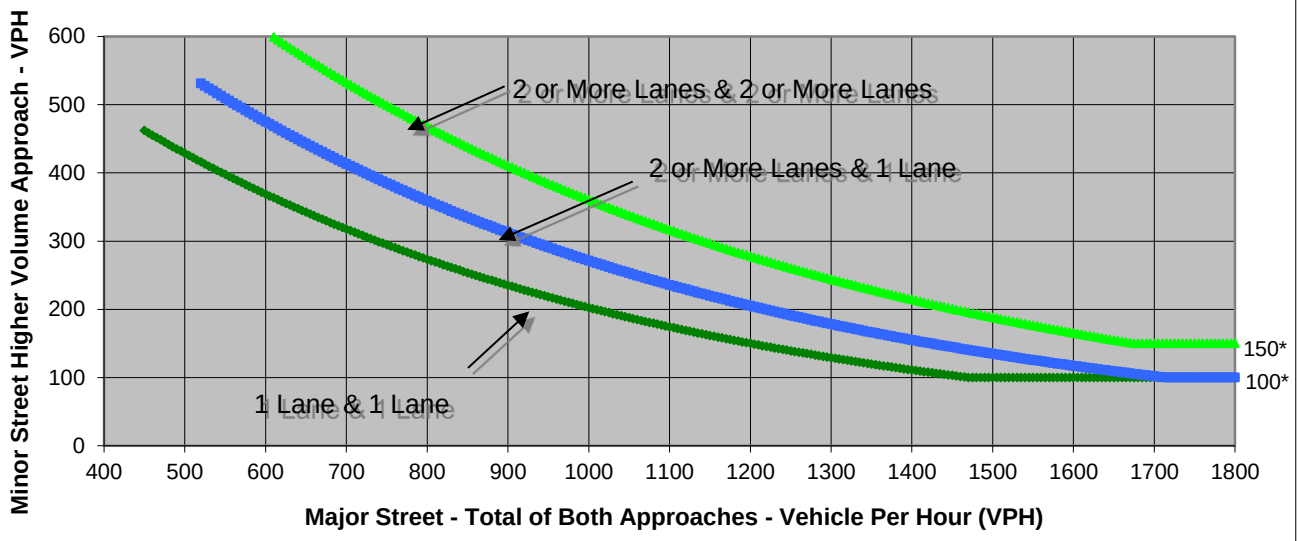
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	11	0	28
Through	8	8	2	2
Right	25	0	1	13
Total	33	19	3	43

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**52**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

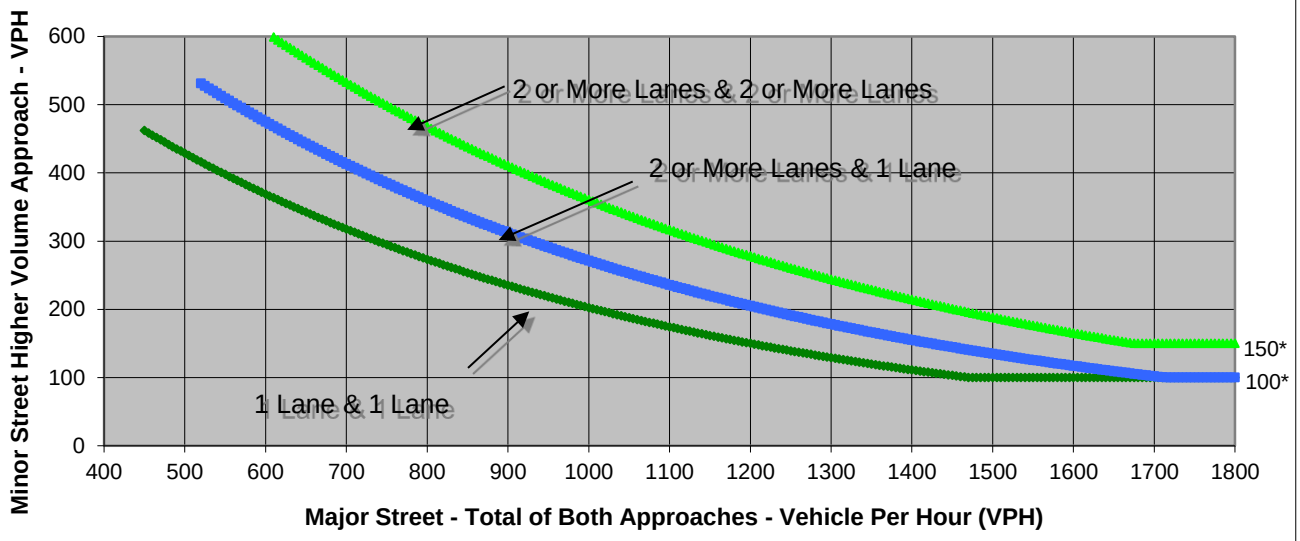
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	11	0	28
Through	8	8	2	2
Right	25	0	1	13
Total	33	19	3	43

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**52**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

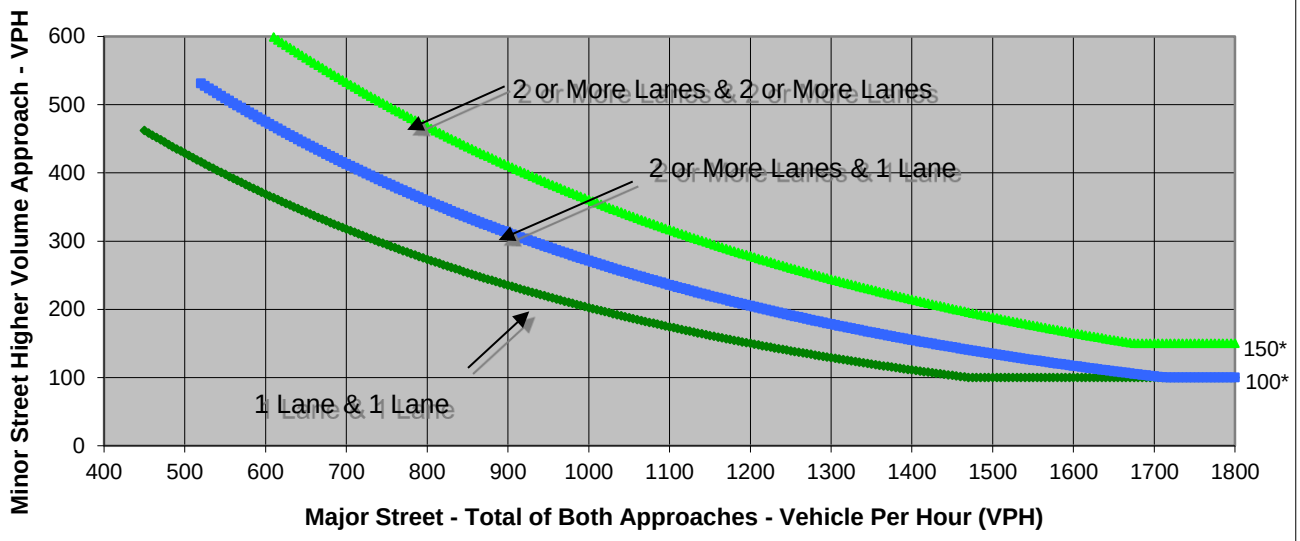
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	24	0	28
Through	8	8	2	2
Right	25	0	1	27
Total	33	32	3	57

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**65**	**57**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Halleck Street
Minor Street Park Avenue

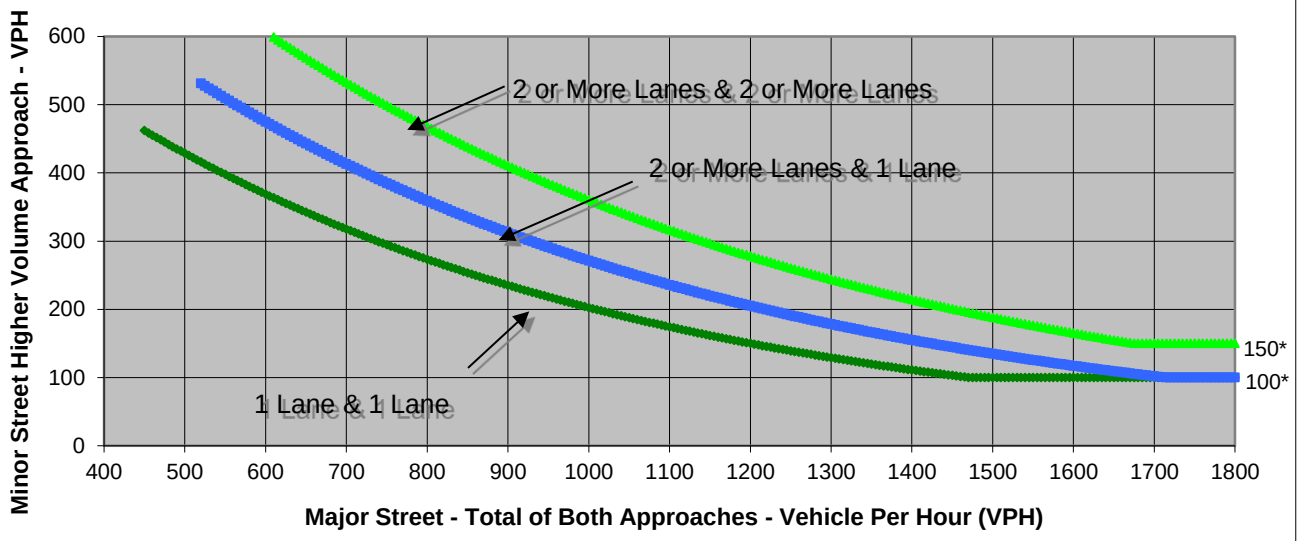
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	11	0	28
Through	8	8	2	2
Right	25	0	1	13
Total	33	19	3	43

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Halleck Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**52**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

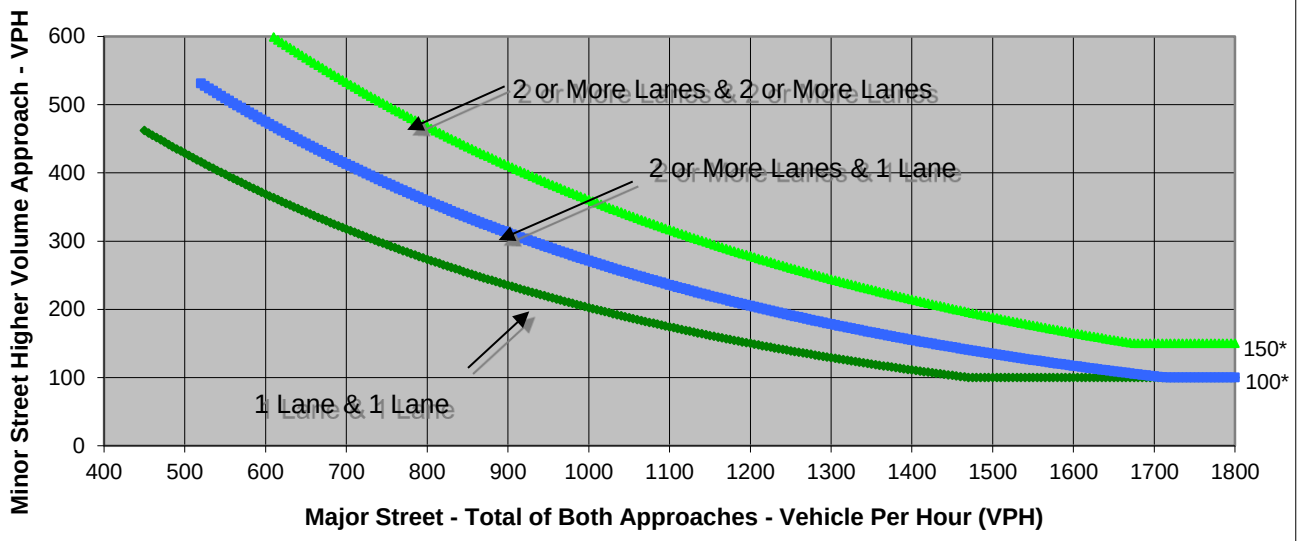
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	5	3	12
Through	1	0	124	63
Right	23	1	19	11
Total	29	6	146	86

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**232**	**29**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

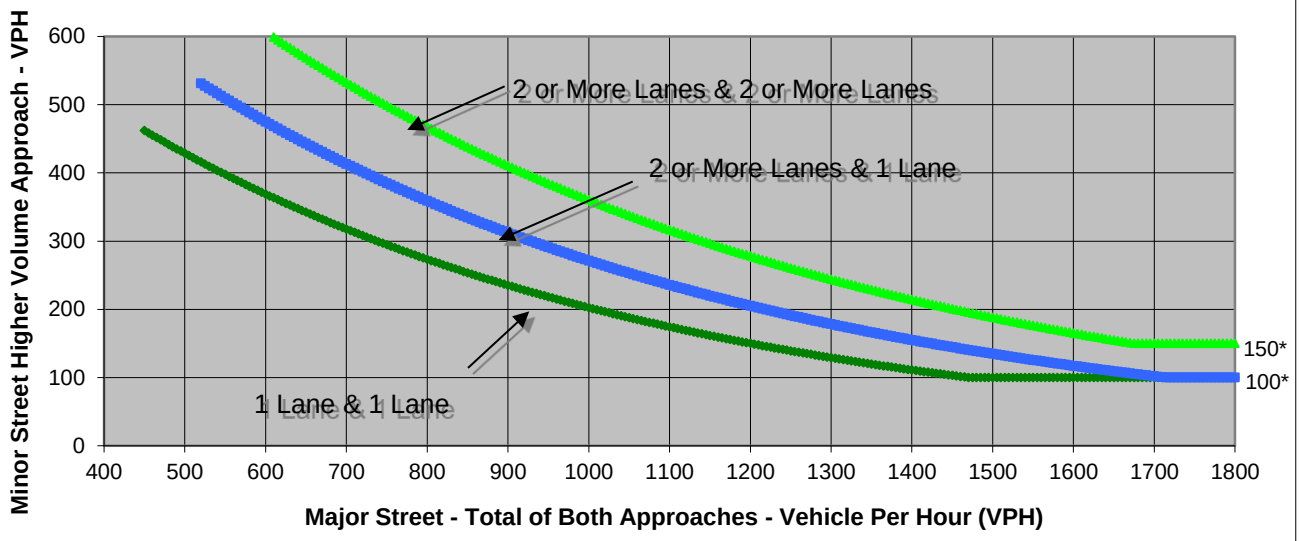
Turn Movement Volumes

	NB	SB	EB	WB
Left	11	19	7	12
Through	8	10	132	78
Right	23	4	20	28
Total	42	33	159	118

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**277**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

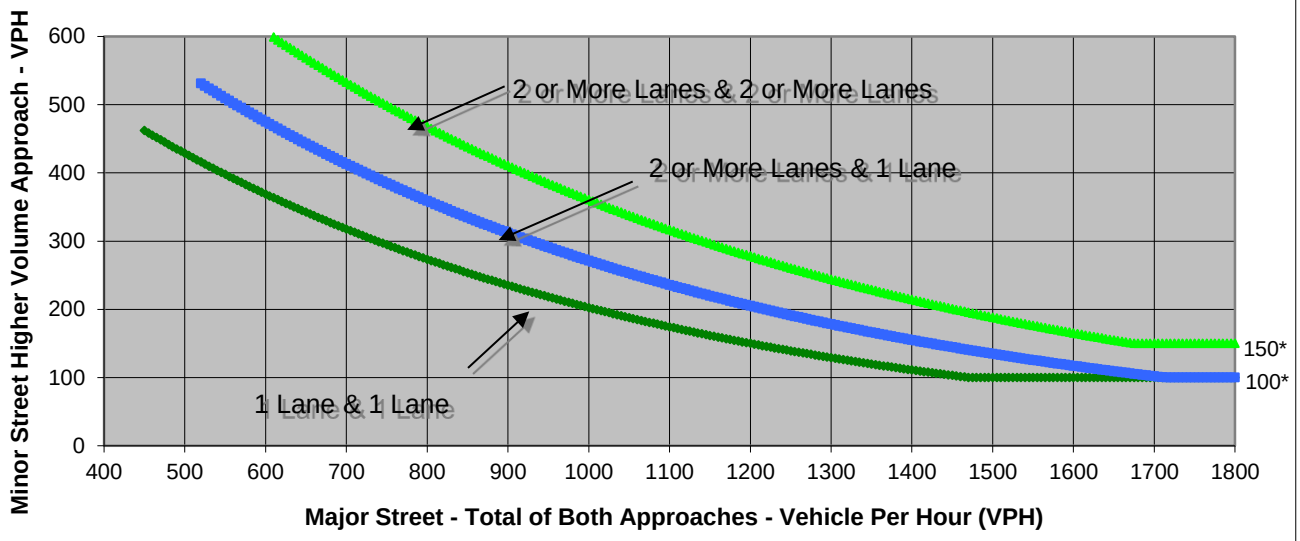
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	20	7	12
Through	12	12	124	63
Right	23	5	19	31
Total	40	37	150	106

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**256**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

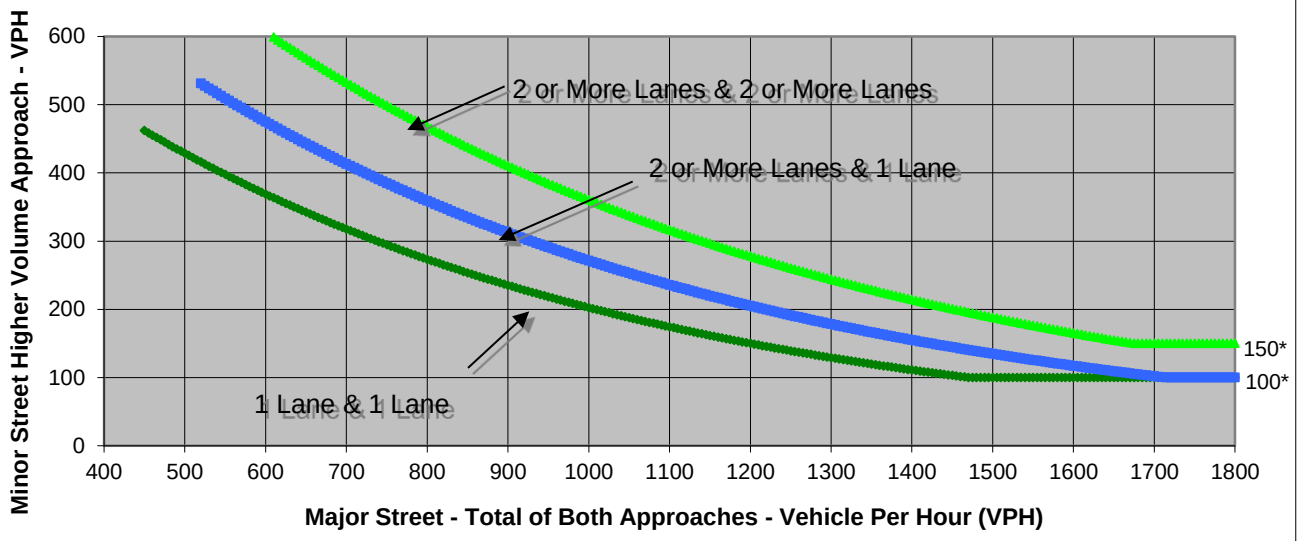
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	5	3	12
Through	1	0	133	81
Right	23	1	19	11
Total	29	6	155	104

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**259**	**29**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

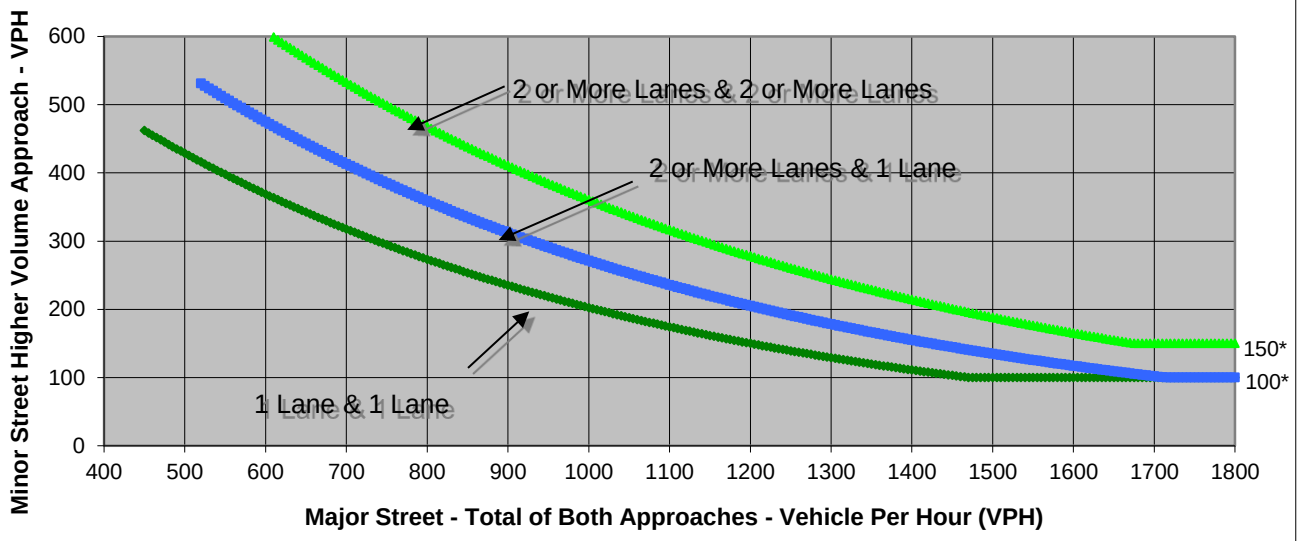
Turn Movement Volumes

	NB	SB	EB	WB
Left	11	19	7	12
Through	8	10	150	104
Right	23	4	20	28
Total	42	33	177	144

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**321**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

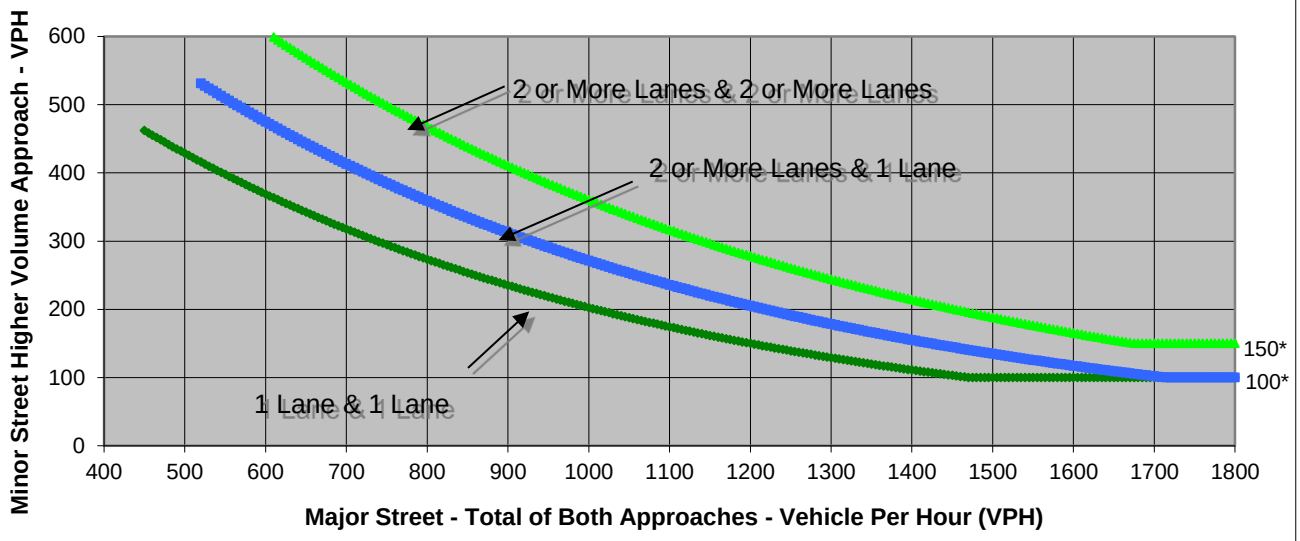
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	20	7	12
Through	12	12	133	81
Right	23	5	19	31
Total	40	37	159	124

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**283**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

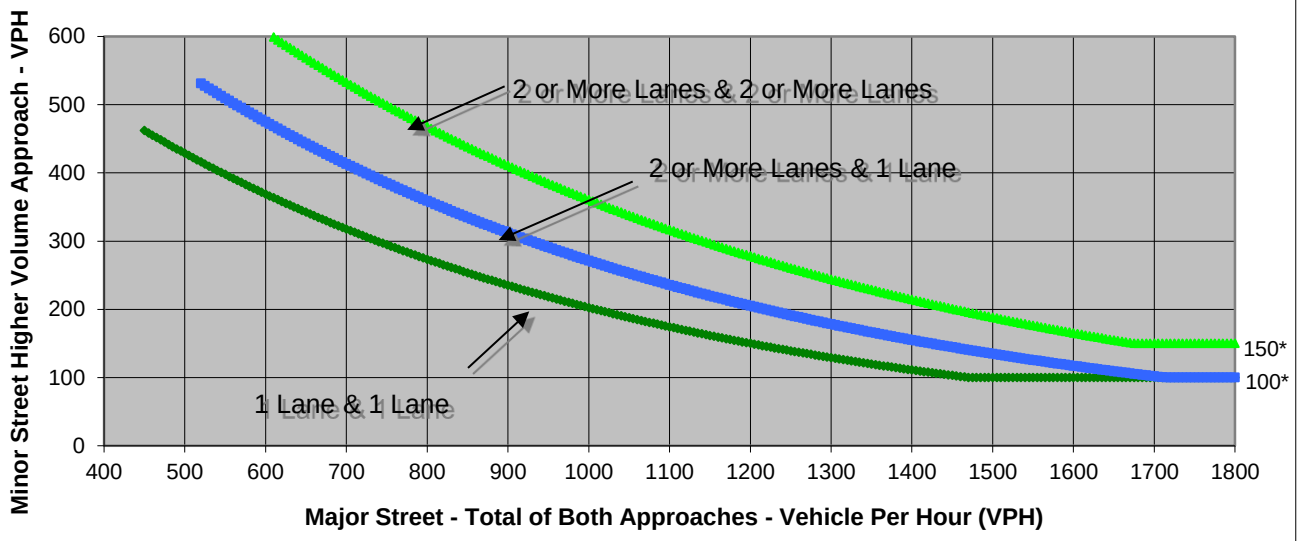
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	5	3	12
Through	1	0	135	91
Right	23	1	19	11
Total	29	6	157	114

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**271**	**29**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

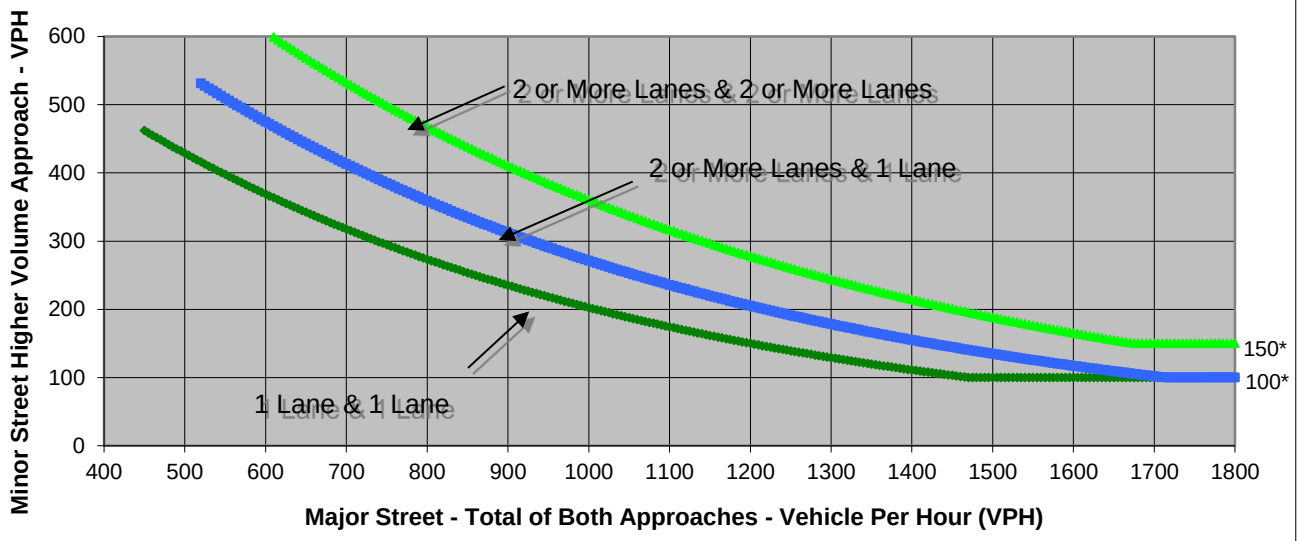
Turn Movement Volumes

	NB	SB	EB	WB
Left	11	19	7	12
Through	8	10	152	115
Right	23	4	20	28
Total	42	33	179	155

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**334**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Park Avenue
Minor Street Hubbard Street

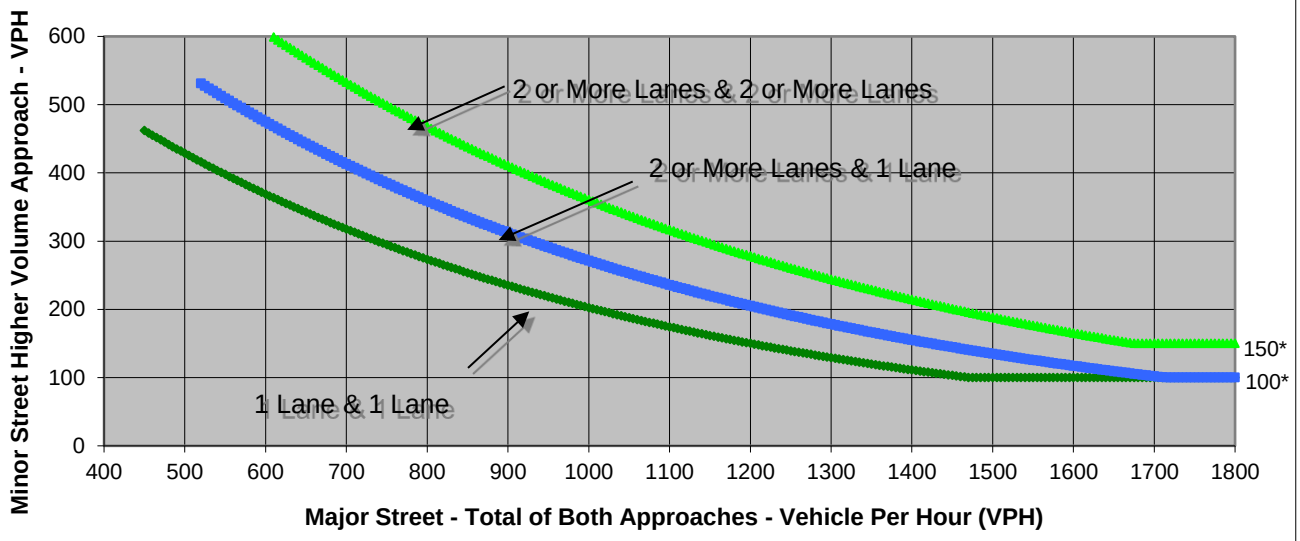
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	20	7	12
Through	12	12	135	91
Right	23	5	19	31
Total	40	37	161	134

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**295**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

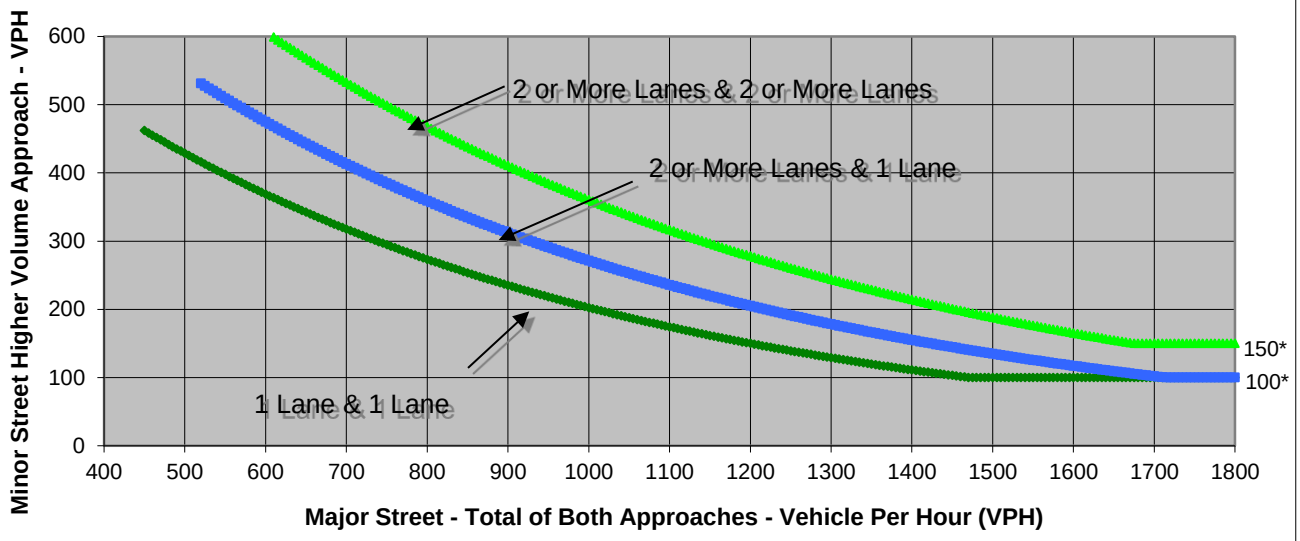
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	4	0	8
Through	2	0	35	43
Right	10	1	11	3
Total	14	5	46	54

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**100**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

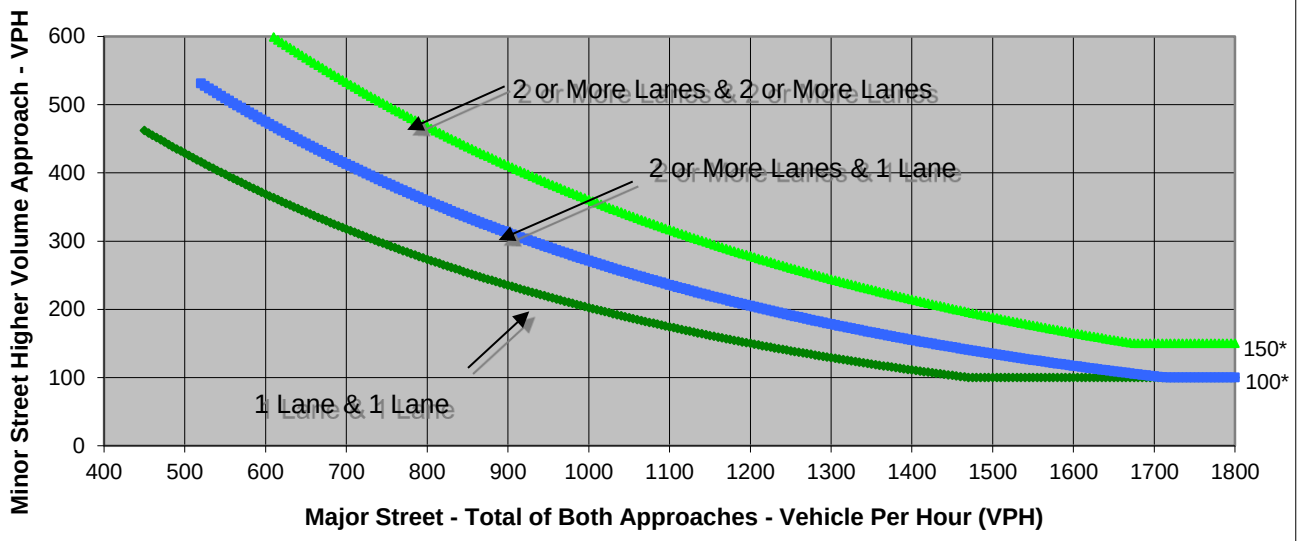
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	15	0	8
Through	7	16	45	53
Right	10	1	14	20
Total	23	32	59	81

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**140**	**32**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

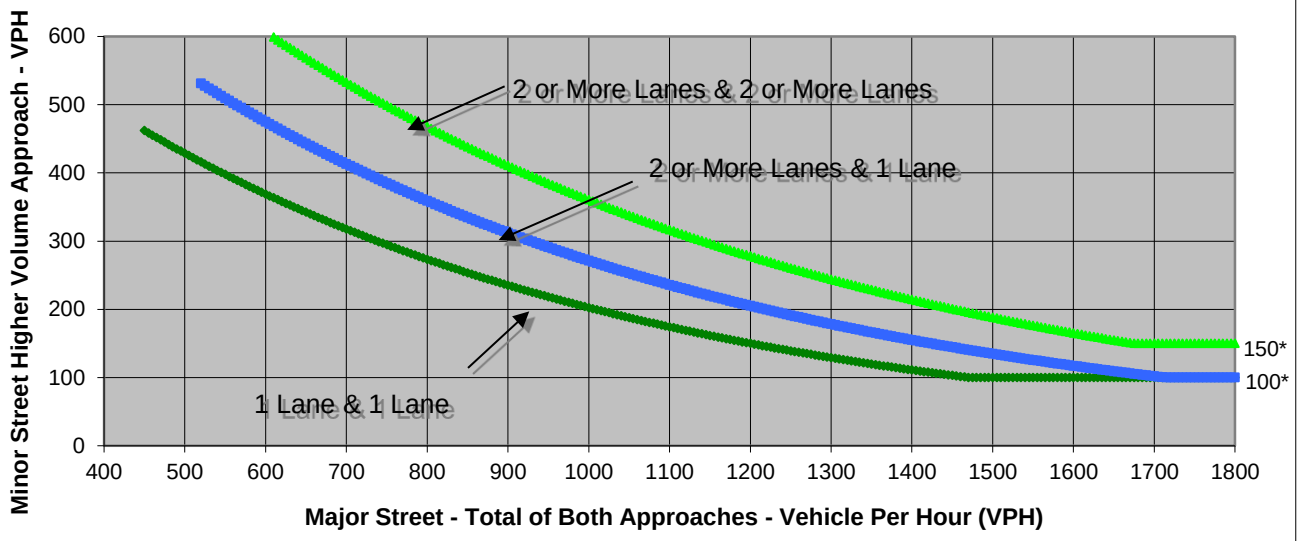
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	17	0	8
Through	10	20	35	43
Right	10	1	11	22
Total	22	38	46	73

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**119**	**38**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

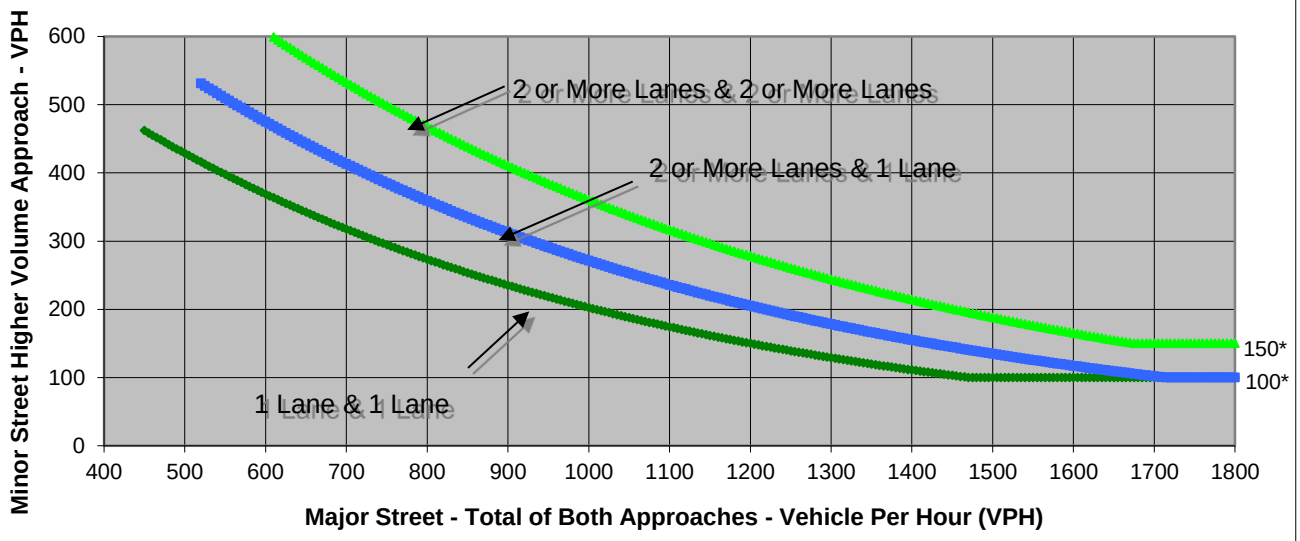
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	4	0	8
Through	2	0	35	43
Right	10	1	11	3
Total	14	5	46	54

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**100**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

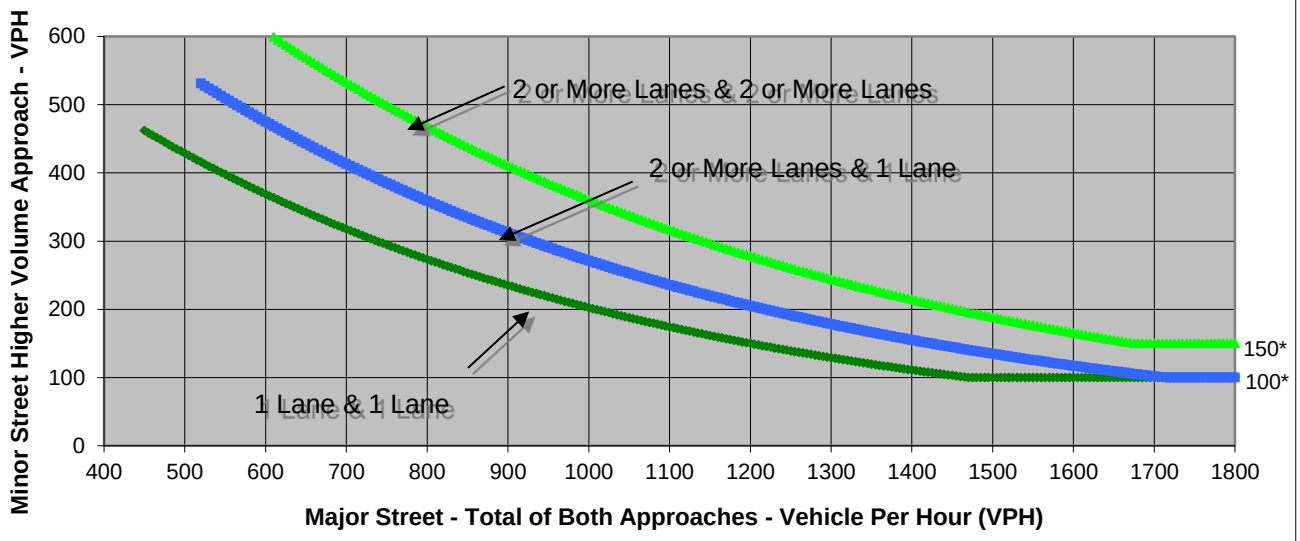
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	15	0	8
Through	7	16	45	53
Right	10	1	14	20
Total	23	32	59	81

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**140**	**32**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

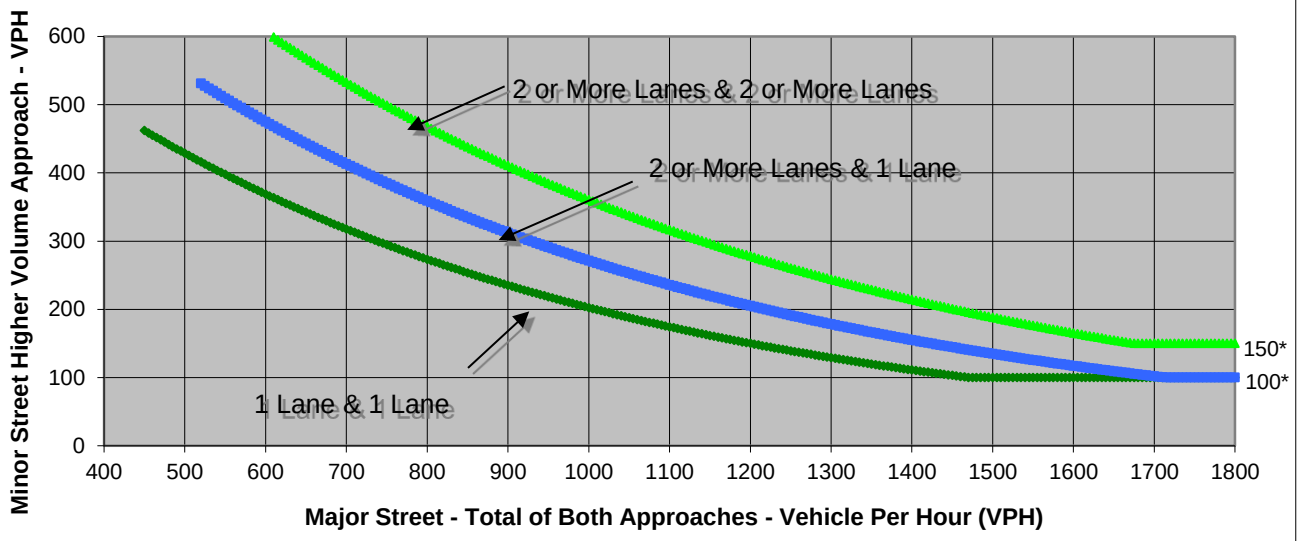
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	17	0	8
Through	10	20	35	43
Right	10	1	11	22
Total	22	38	46	73

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**119**	**38**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

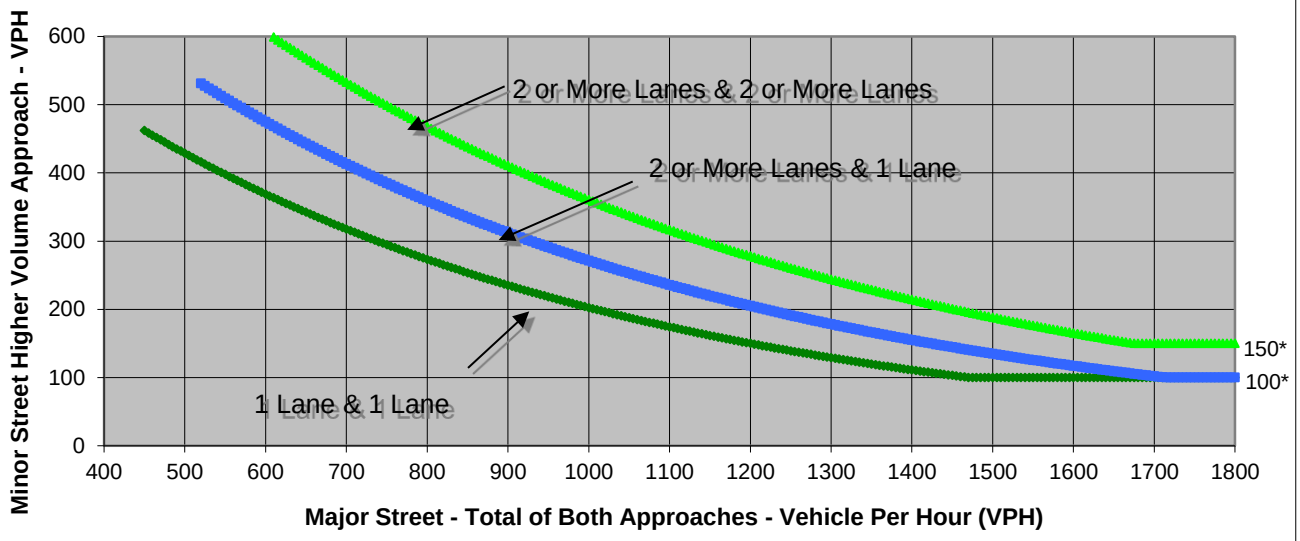
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	4	0	8
Through	2	0	35	43
Right	10	1	11	3
Total	14	5	46	54

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**100**	**14**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

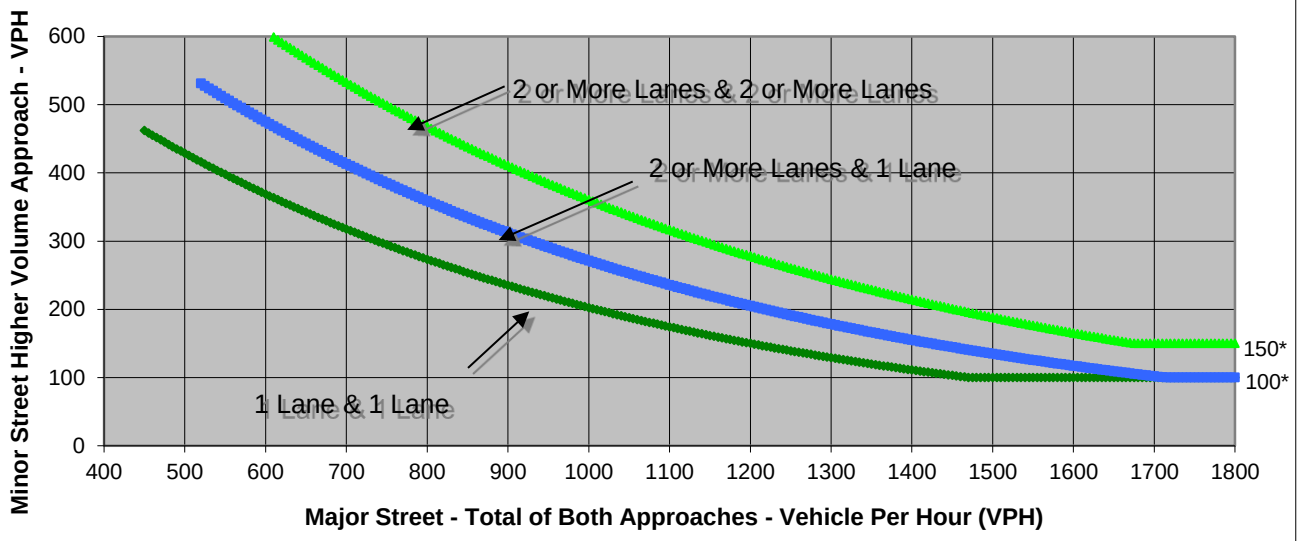
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	15	0	8
Through	7	16	45	53
Right	10	1	14	20
Total	23	32	59	81

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**140**	**32**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Park Avenue
Minor Street Hubbard Street

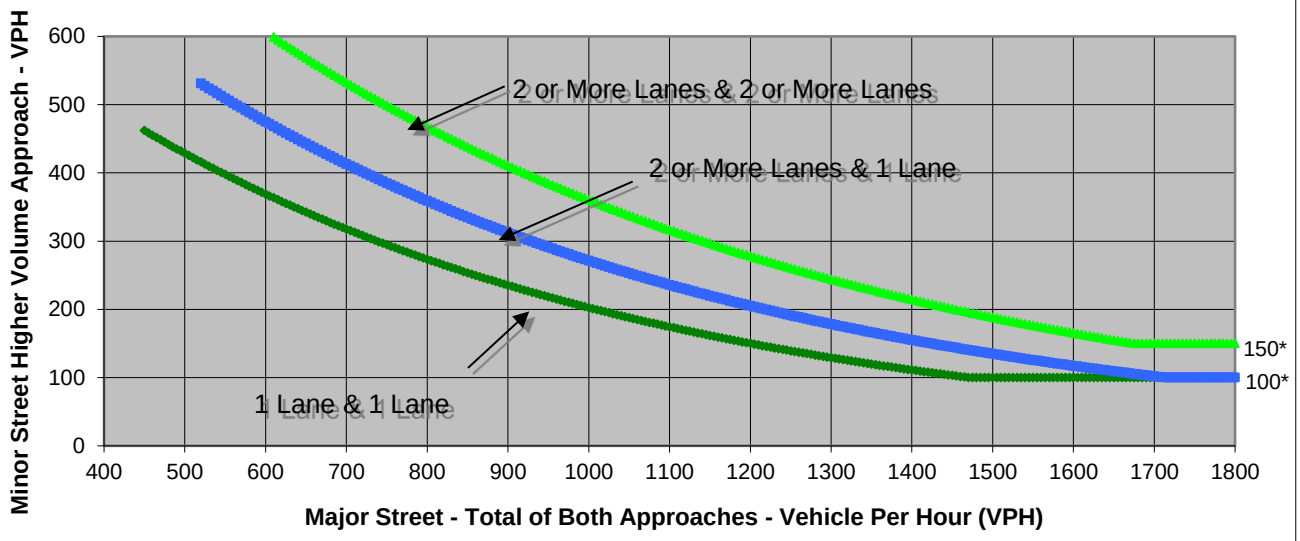
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	17	0	8
Through	10	20	35	43
Right	10	1	11	22
Total	22	38	46	73

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Park Avenue	Minor Street Hubbard Street	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**119**	**38**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

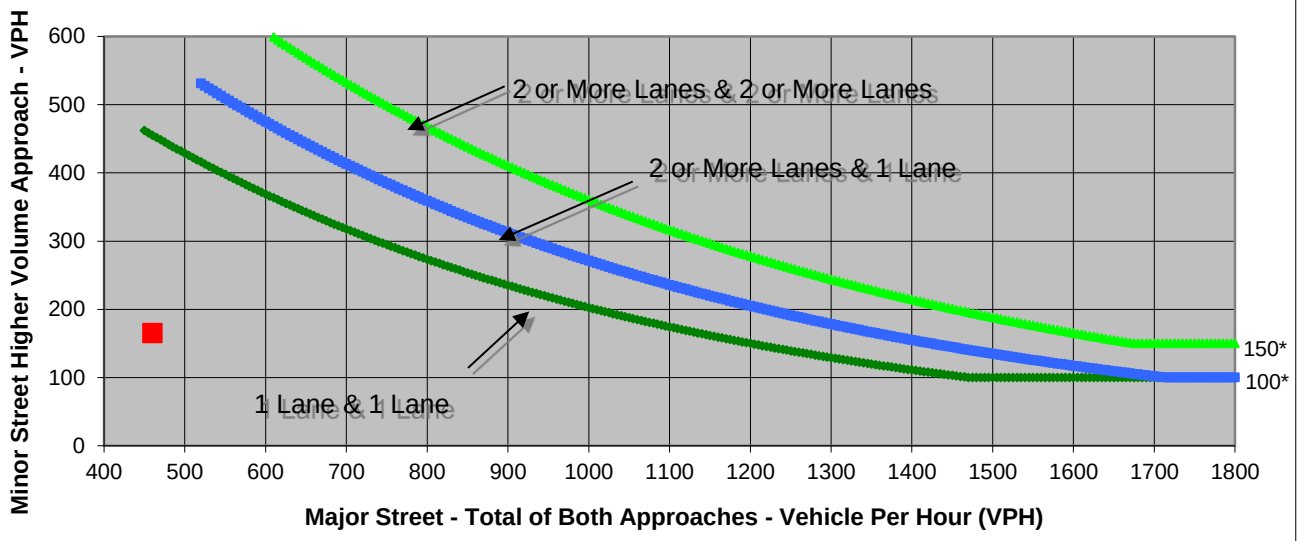
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	39	79	34
Through	180	165	64	48
Right	40	19	22	13
Total	237	223	165	95

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**460**	**165**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

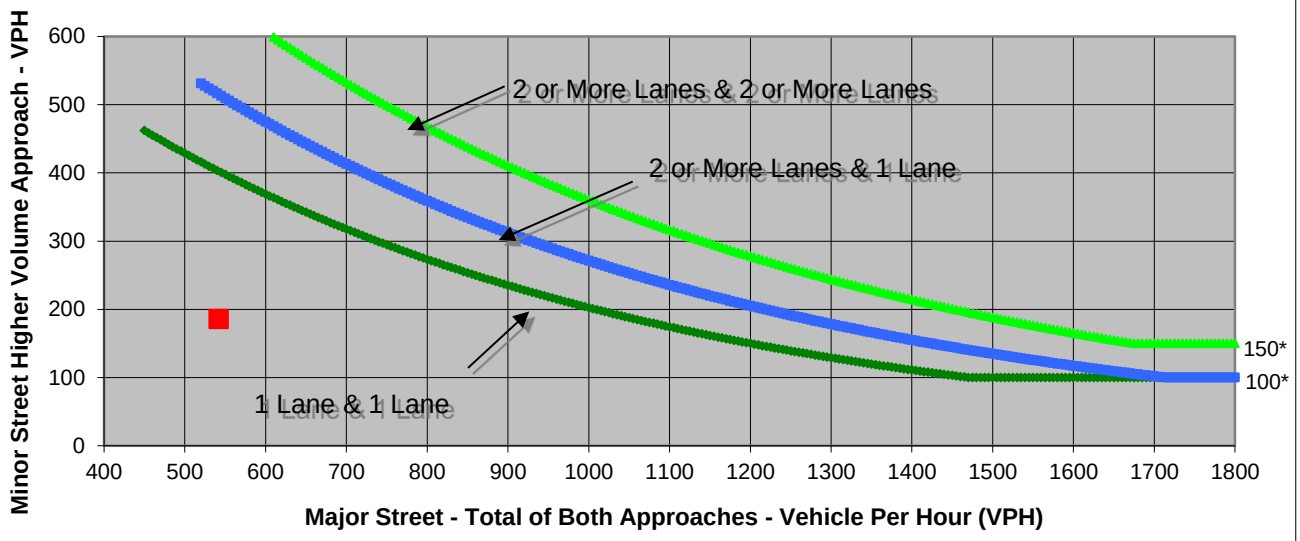
Turn Movement Volumes

	NB	SB	EB	WB
Left	36	60	79	34
Through	205	182	74	61
Right	40	19	33	33
Total	281	261	186	128

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**542**	**186**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

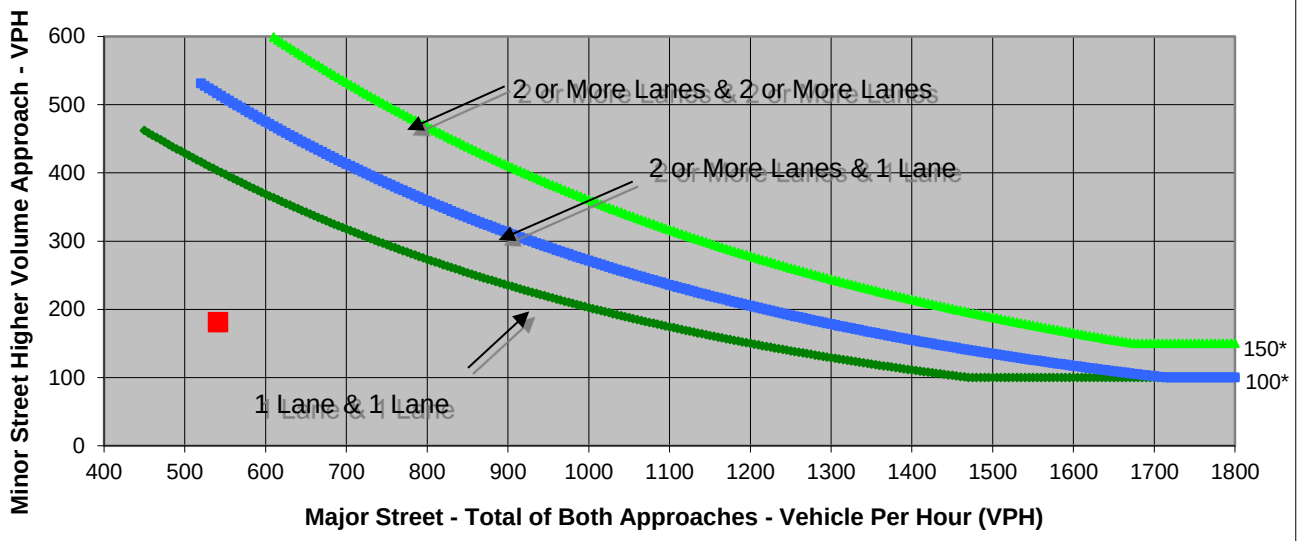
Turn Movement Volumes

	NB	SB	EB	WB
Left	33	62	79	34
Through	206	181	72	51
Right	40	19	30	36
Total	279	262	181	121

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Horton Street	Park Avenue	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**541**	**181**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Major Street	Horton Street
Minor Street	Park Avenue
Project	Sherwin Williams
Scenario	Near Term Conditions
Peak Hour	PM

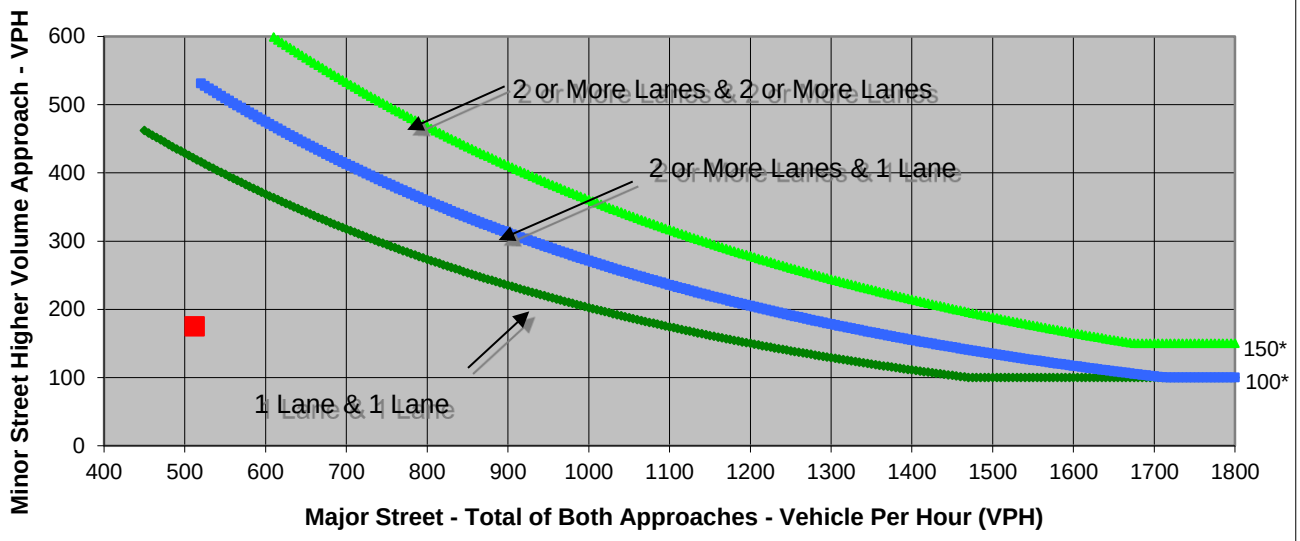
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	48	87	34
Through	185	186	66	49
Right	40	36	22	15
Total	242	270	175	98

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**512**	**175**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

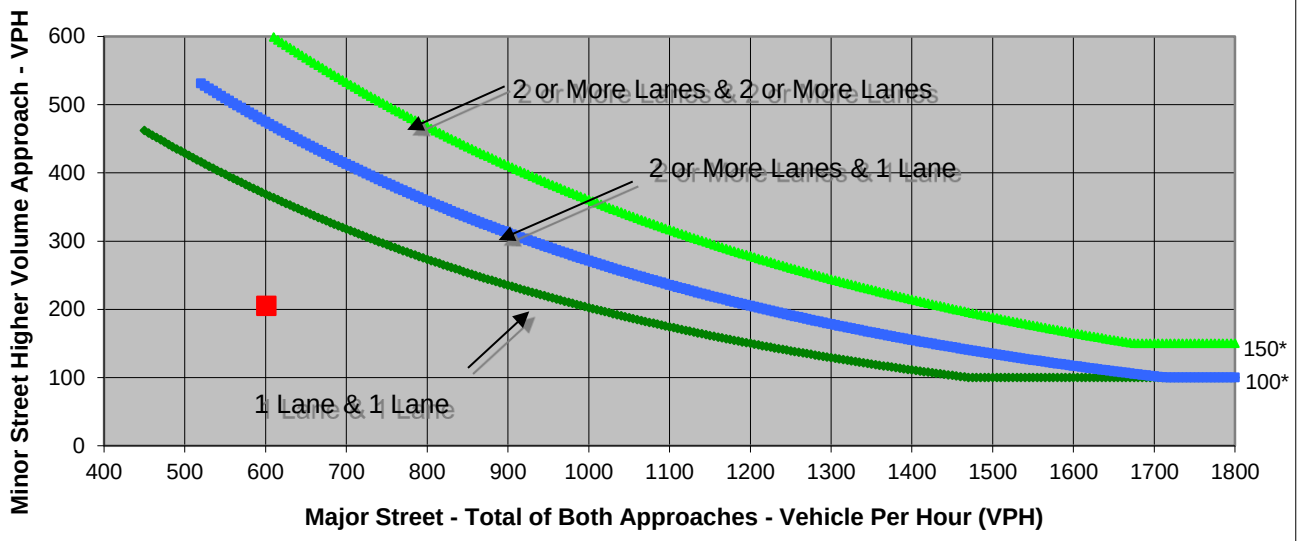
Turn Movement Volumes

	NB	SB	EB	WB
Left	36	69	96	34
Through	209	203	76	62
Right	40	44	33	35
Total	285	316	205	131

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**601**	**205**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

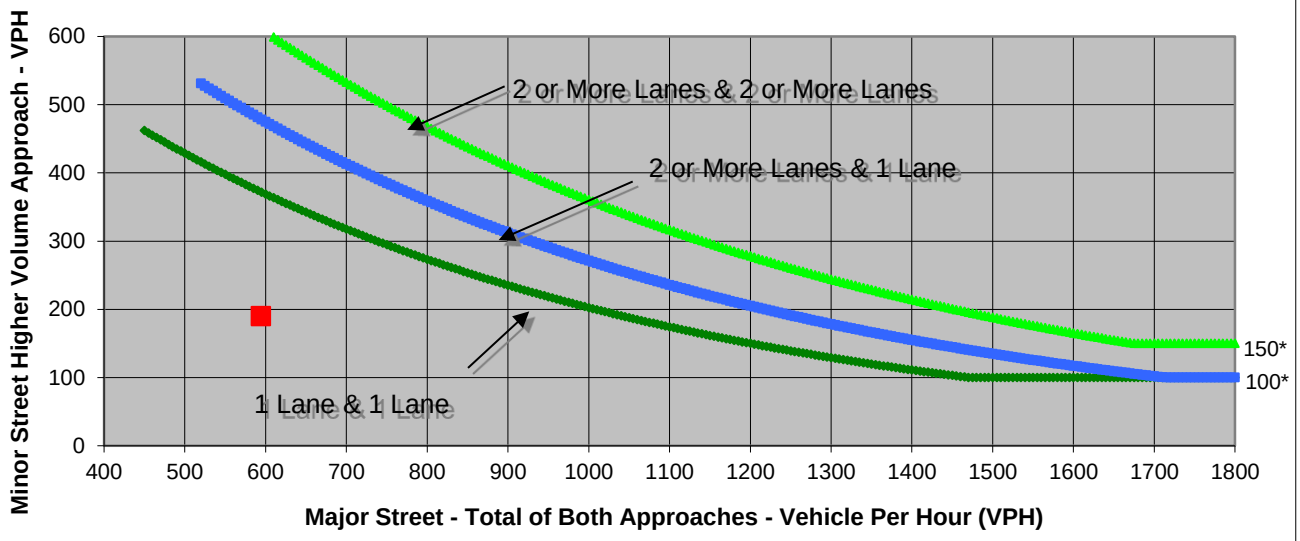
Turn Movement Volumes

	NB	SB	EB	WB
Left	33	72	87	34
Through	211	202	73	52
Right	40	36	30	39
Total	284	310	190	125

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**594**	**190**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

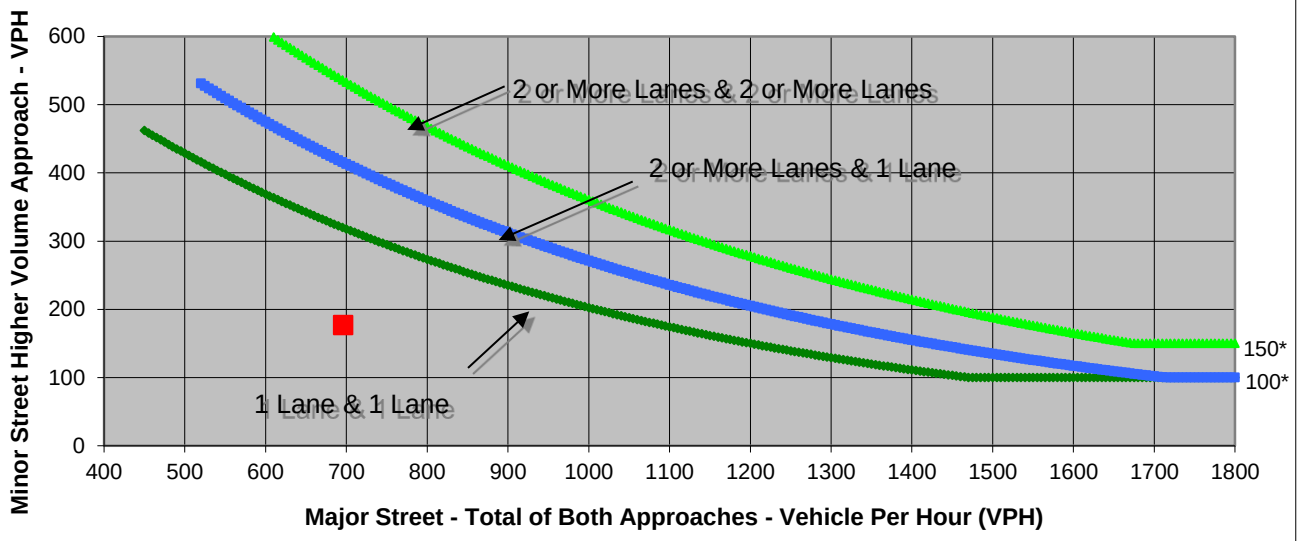
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	56	89	34
Through	209	328	66	49
Right	40	46	22	16
Total	266	430	177	99

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**696**	**177**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

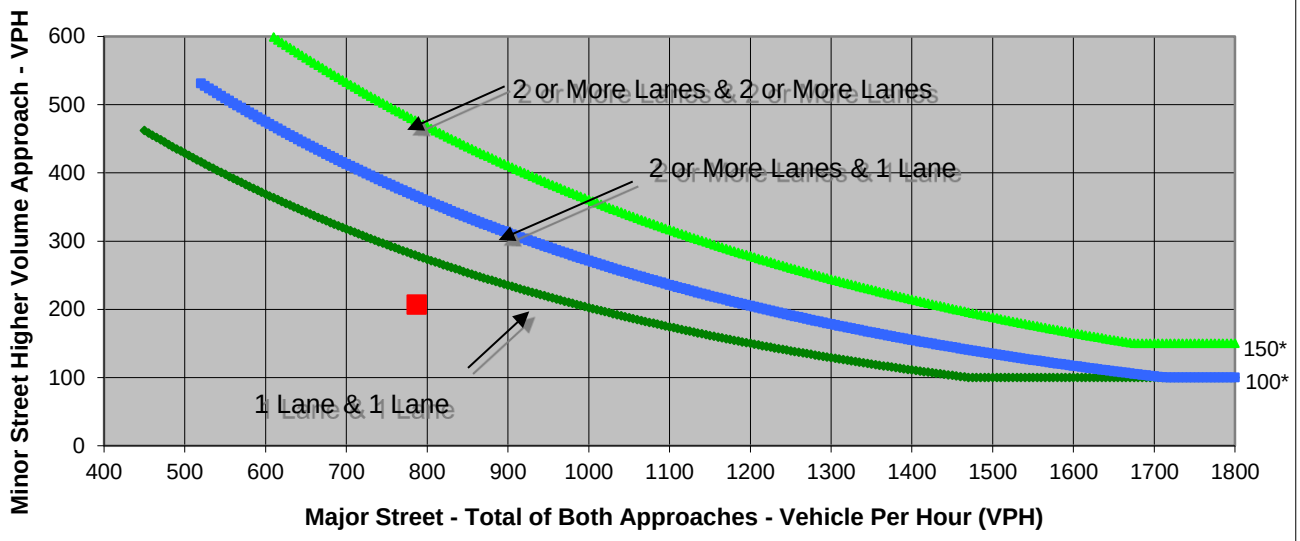
Turn Movement Volumes

	NB	SB	EB	WB
Left	36	77	98	34
Through	234	345	76	62
Right	40	55	33	36
Total	310	477	207	132

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**787**	**207**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour PM

Major Street Horton Street
Minor Street Park Avenue

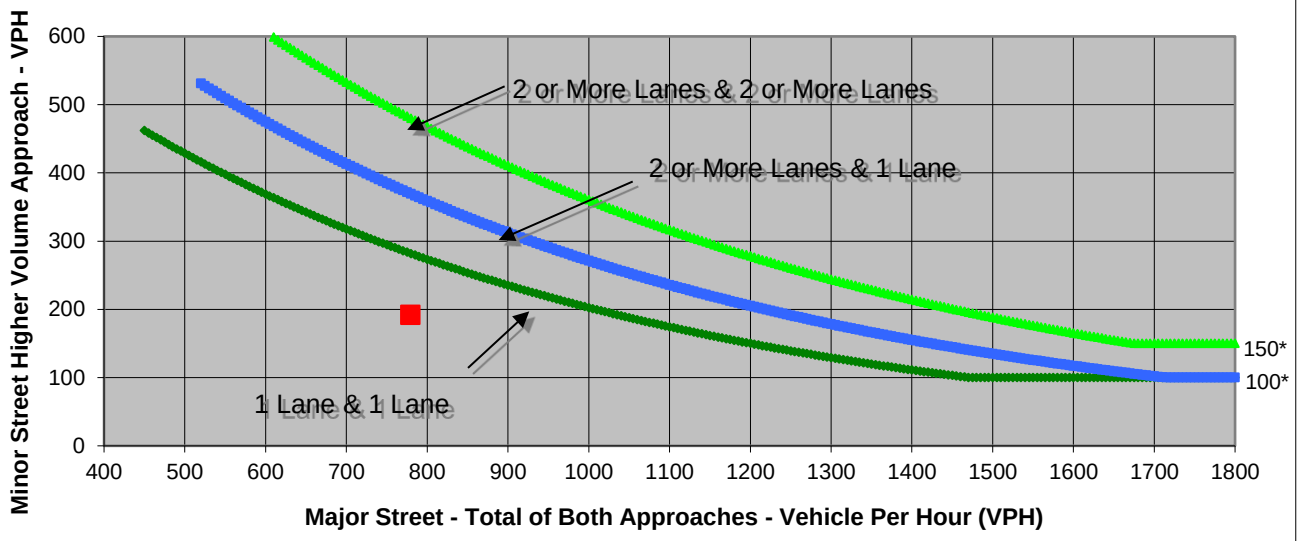
Turn Movement Volumes

	NB	SB	EB	WB
Left	33	80	89	34
Through	236	344	73	52
Right	40	46	30	40
Total	309	470	192	126

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**779**	**192**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 9

Project Sherwin Williams
Scenario Existing Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

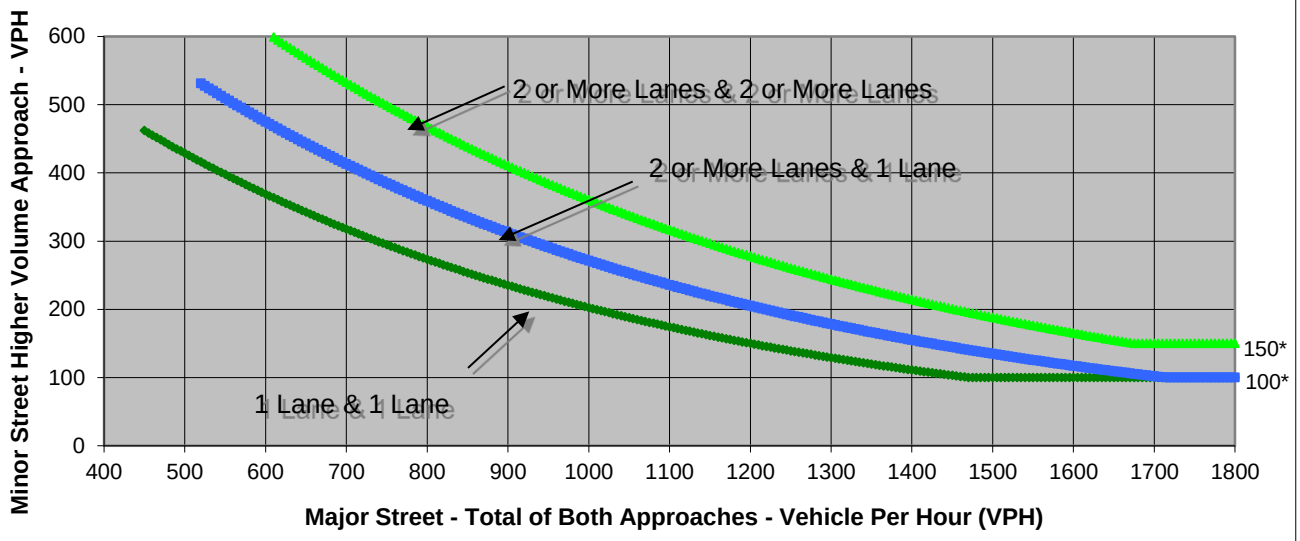
Turn Movement Volumes

	NB	SB	EB	WB
Left	14	10	7	30
Through	74	36	31	31
Right	36	12	18	4
Total	124	58	56	65

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**182**	**65**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 2 of 9

Project Sherwin Williams
Scenario Existing PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

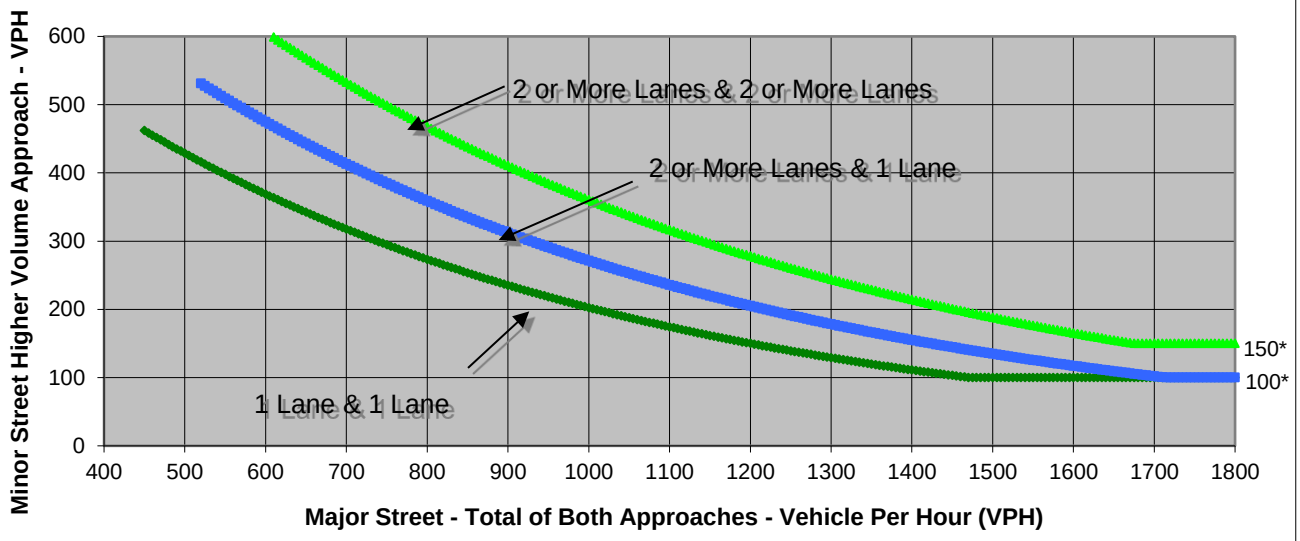
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	28	7	30
Through	92	48	43	42
Right	36	12	27	21
Total	158	88	77	93

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**246**	**93**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 3 of 9

Project Sherwin Williams
Scenario Existing PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

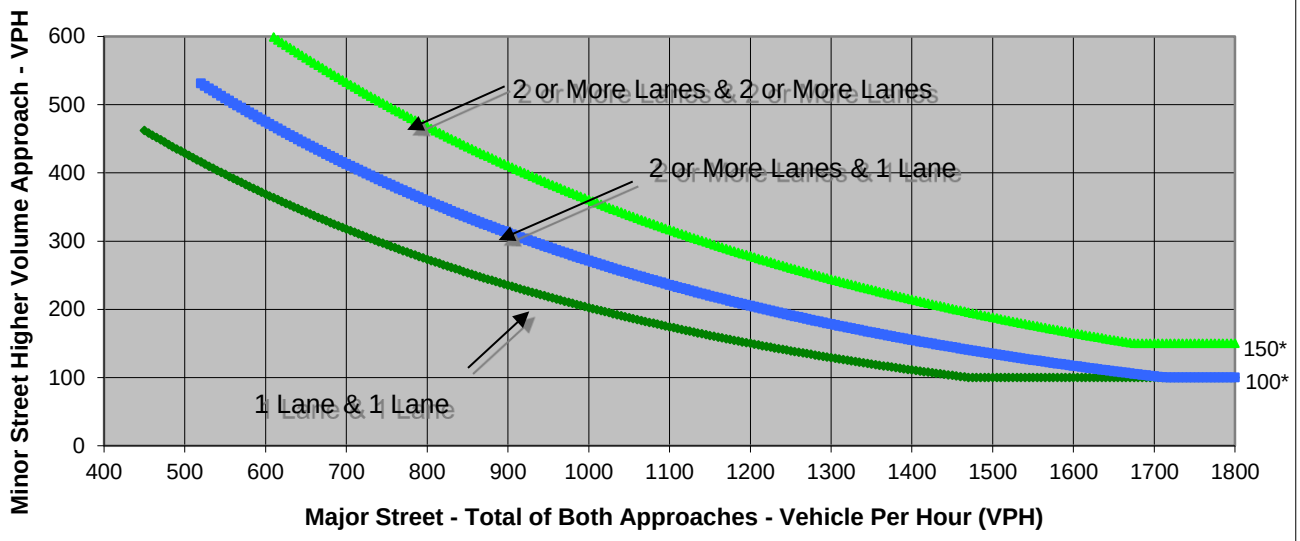
Turn Movement Volumes

	NB	SB	EB	WB
Left	29	31	7	30
Through	92	46	38	34
Right	36	12	24	23
Total	157	89	69	87

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**246**	**87**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 4 of 9

Project Sherwin Williams
Scenario Near Term Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

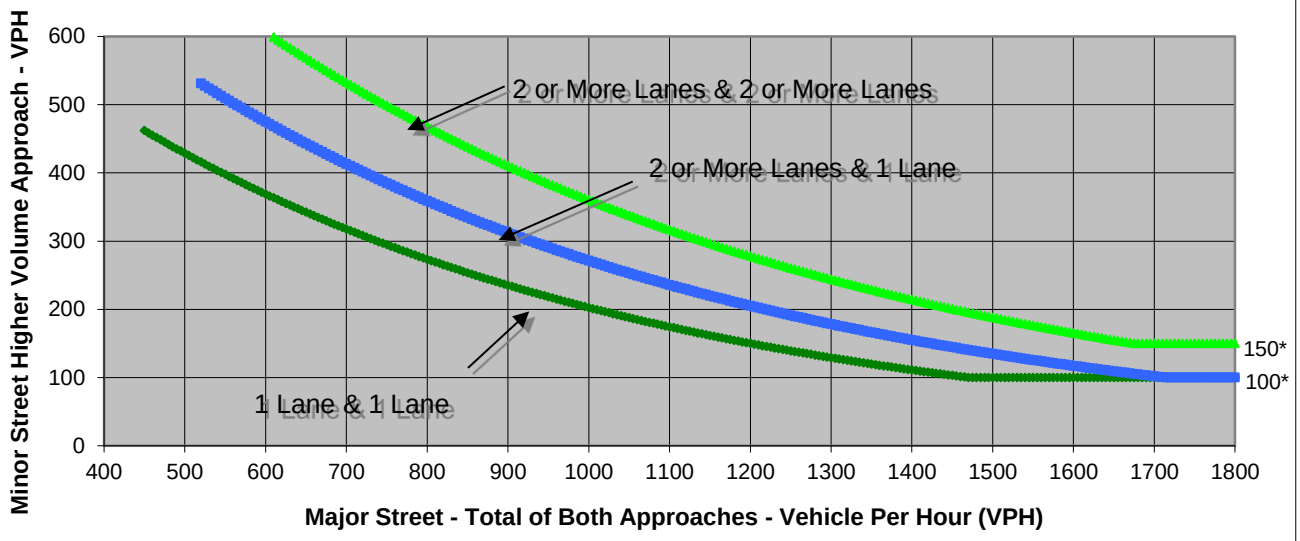
Turn Movement Volumes

	NB	SB	EB	WB
Left	14	12	7	30
Through	76	38	31	31
Right	36	12	18	6
Total	126	62	56	67

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**188**	**67**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 5 of 9

Project Sherwin Williams
Scenario Near Term PPA Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

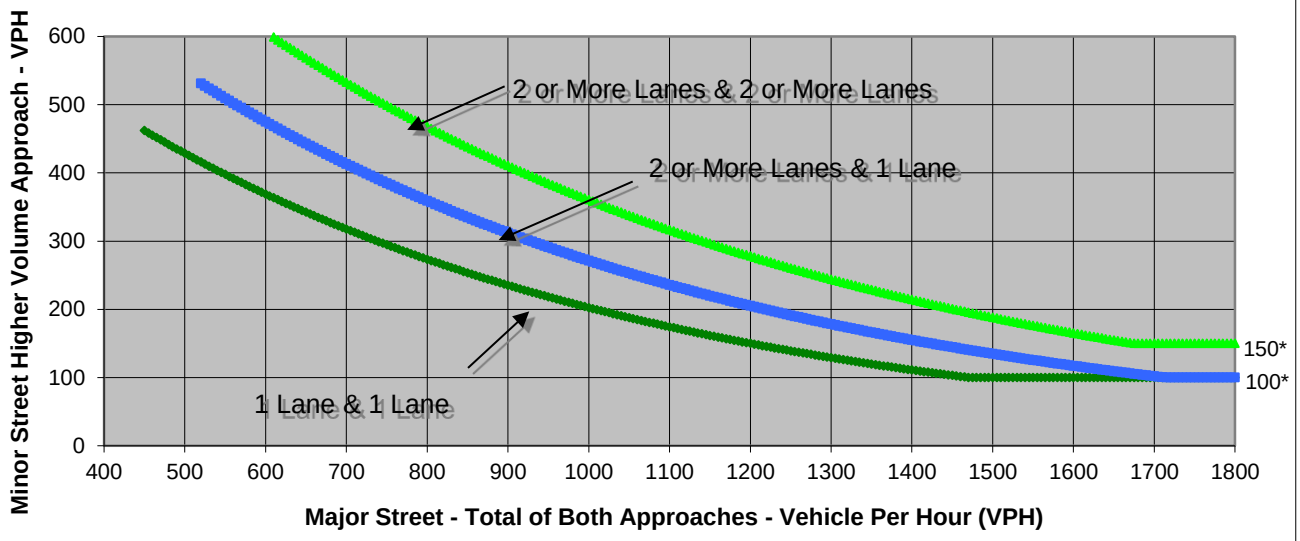
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	29	7	30
Through	94	50	43	42
Right	36	12	27	23
Total	160	91	77	95

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**251**	**95**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 6 of 9

Project Sherwin Williams
Scenario Near Term PPB Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

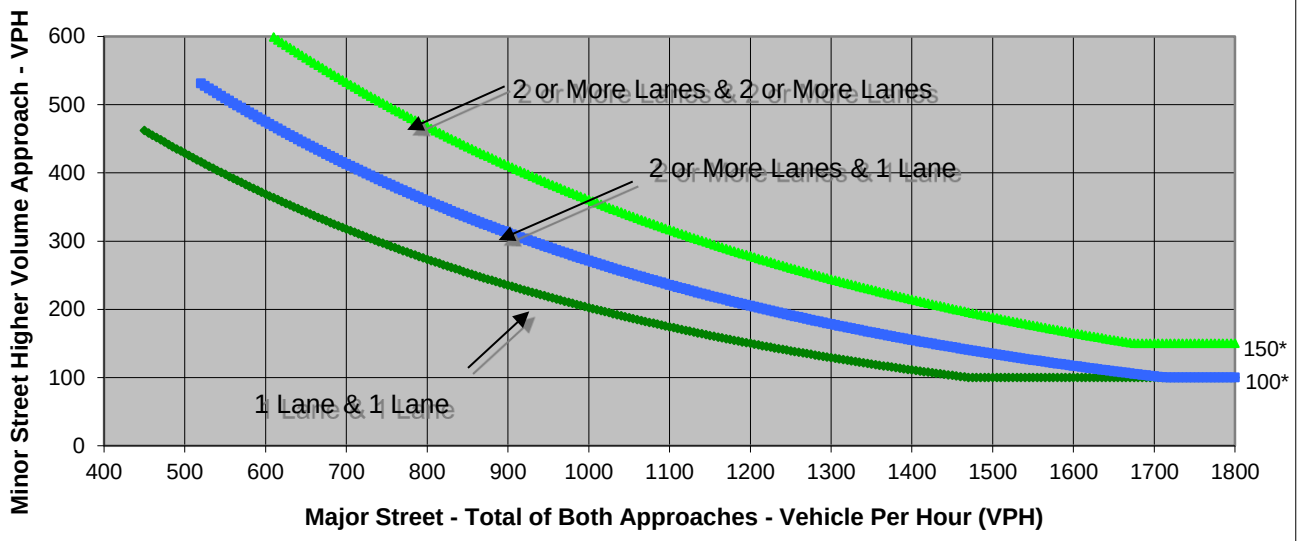
Turn Movement Volumes

	NB	SB	EB	WB
Left	29	32	7	30
Through	94	48	38	34
Right	36	12	24	25
Total	159	92	69	89

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**251**	**89**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 7 of 9

Project Sherwin Williams
Scenario Near Term with Novartis Conditions
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

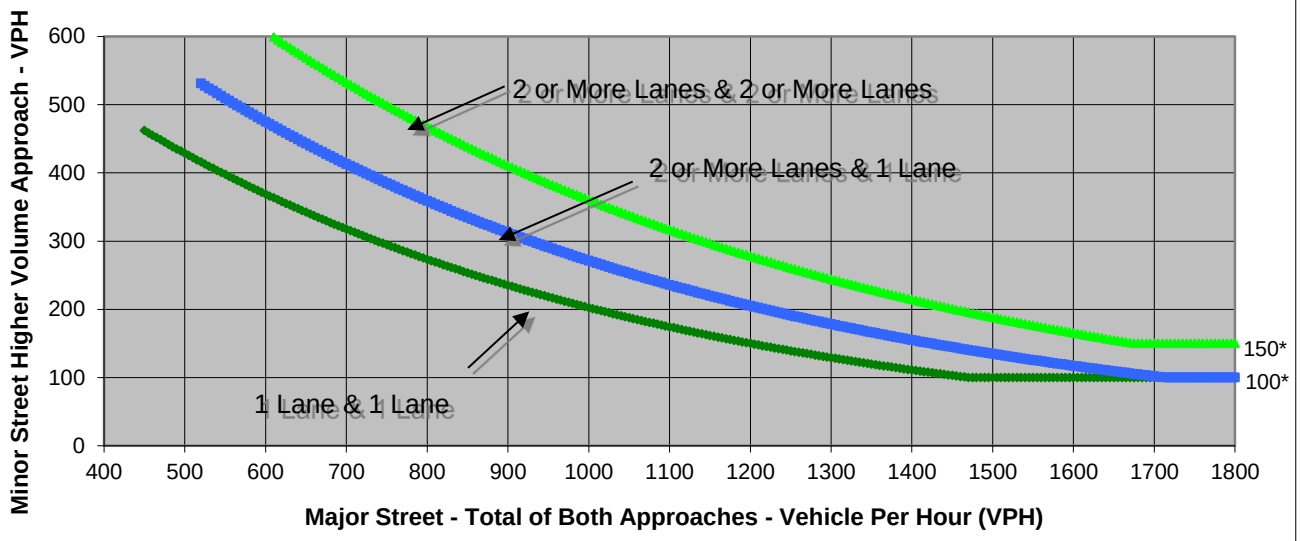
Turn Movement Volumes

	NB	SB	EB	WB
Left	14	13	7	30
Through	90	52	31	31
Right	36	12	18	7
Total	140	77	56	68

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**217**	**68**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 8 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPA Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

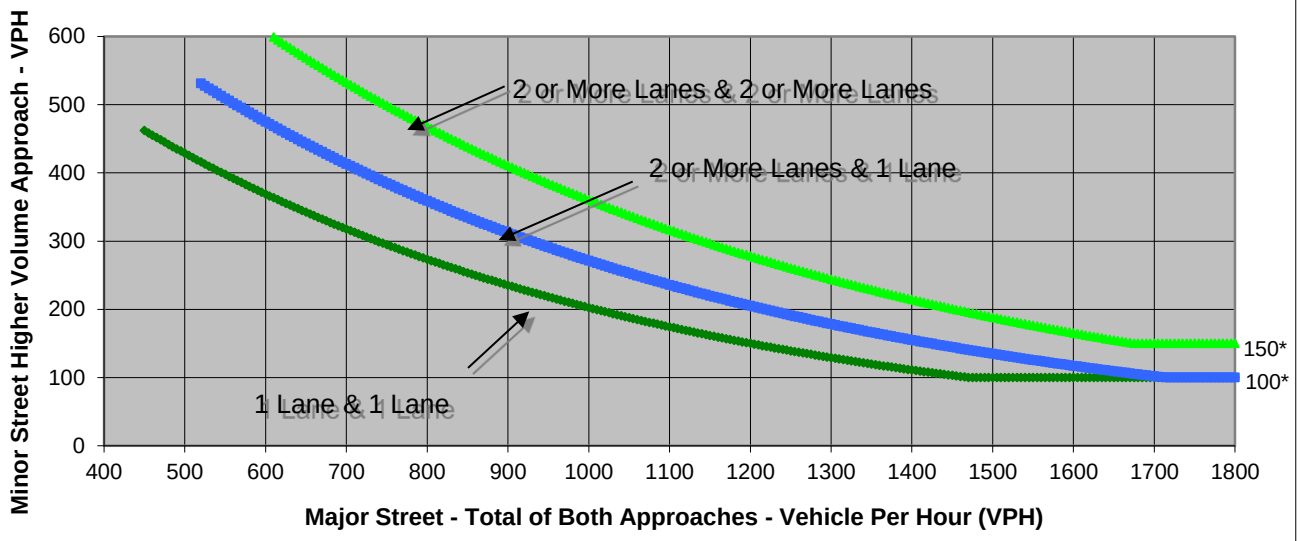
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	30	7	30
Through	108	64	43	42
Right	36	12	27	24
Total	174	106	77	96

Major Street Direction

x North/South
East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**280**	**96**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 9 of 9

Project Sherwin Williams
Scenario Near Term with Novartis PPB Condi
Peak Hour Saturday

Major Street Horton Street
Minor Street Park Avenue

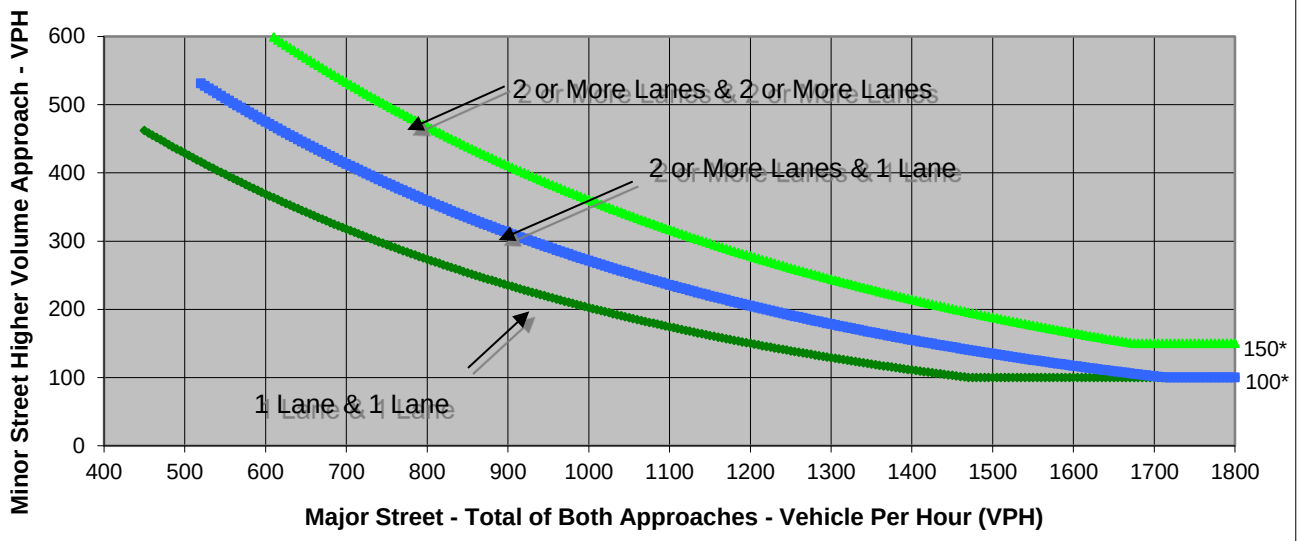
Turn Movement Volumes

	NB	SB	EB	WB
Left	29	33	7	30
Through	109	62	38	34
Right	36	12	24	26
Total	174	107	69	90

Major Street Direction

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



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

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street Horton Street	Minor Street Park Avenue	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**281**	**90**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

APPENDIX E HORTON STREET TURN RESTRICTION ASSESSMENT

FEHR PEERS

MEMORANDUM

Date: December 14, 2015

To: Judy Malamut, LSA

From: Kathrin Tellez

Subject: Sherwin-Williams – Horton Street Turn Restriction Assessment

WC14-3200

Fehr & Peers prepared a Draft Transportation Impact Analysis (TIA) for the proposed redevelopment of the Sherwin-Williams site in Emeryville dated December 2015 that identified potential transportation impacts of the project. Information regarding the proposed project, analysis scenarios and parameters is provided in that document. This memorandum focuses on evaluating potential mitigation measures for Impact TC-1:

Impact TC-1: The City of Emeryville *Pedestrian and Bicycle Plan* designates Horton Street as a bicycle boulevard (analysis segments A, B and C). Existing weekday daily traffic volumes on Horton Street are approximately 3,500 vehicles per day (VPD) from south of Sherwin Avenue to north of 53rd Street, exceeding the desired level for a bicycle boulevard west of Hollis Street. With either Project Option A or Option B Project, traffic volumes on Horton Street are expected to increase by approximately 300 to 1,400 VPD, increasing daily traffic volumes by more than 2 percent. This is considered a ***significant impact***.

Mitigation was proposed in the Draft TIA, but the effects of those mitigation measures were not quantifiable and the impact was potentially significant and unavoidable.

In consultation with the Project team, turn restrictions preventing through traffic on Horton Street at several locations was proposed as a mitigation measure, consistent with the potential for Level 4 or Level 5 traffic calming measures along the corridor identified in the *Pedestrian and Bicycle Plan*. Turn restrictions would be accomplished through the construction of a physical barrier that would prevent through vehicle traffic. Barriers would be constructed to permit bicycle travel through the barrier locations; emergency vehicle access along the corridor would be maintained

through permitting emergency vehicles to travel in the opposing direction of travel, if necessary. This may require the prohibition of on-street parking in the intersections influence area where turn restrictions are implemented.

Restricting movements at some intersections along the corridor would shift through traffic to other streets, and would potentially change the travel patterns of trips with an origin or destination along the corridor, potentially reducing vehicle trips on the corridor to levels established by guidelines provided in the *Pedestrian and Bicycle Plan* for a bicycle boulevard. However, the shifts in traffic could result in secondary impacts to other roadway segments or intersections.

Several locations were considered for implementing turn restrictions. For northbound travel along the corridor, turn restrictions at 40th Street would be most effective in reducing through traffic, and would be least disruptive to local circulation than other locations along the corridor. For southbound traffic, several locations were reviewed, including at Stanford Avenue, 45th Street and 53rd Street. Preliminary analysis of the potential traffic shifts indicated that prohibiting southbound travel at 53rd Street would be the most effective in reducing traffic volumes on Horton Street to levels considered appropriate for a bicycle boulevard, as defined by guidance in the *Pedestrian and Bicycle Plan,* as compared to turn restrictions at 45th Street or Stanford Avenue.

To assess the secondary impacts of turn restrictions at locations on Horton Street, the following was assumed:

Horton Street at 40th Street – at this intersection, a barrier would be located on the east side of Horton Street, north of 40th Street, prohibiting the northbound through movement, the eastbound left-turn movement and the westbound right-turn movement. This would result in some vehicle traffic shifting to the Hollis Street corridor and some traffic shifting to Holden and Hubbard Streets. Two-way travel would be maintained beyond the barrier location to facilitate access to local land uses.

Horton Street at 53rd Street – at this intersection, a barrier would be placed on southbound Horton Street on the south side of 53rd Street, prohibiting the southbound through movement and the westbound left-turn movement. This would result in some vehicle traffic shifting to the Hollis Street corridor as well as Stanford Avenue. Two-way travel would be maintained beyond the barrier location to facilitate access to local land uses.

The level of traffic that would divert from Horton Street was assessed based on a review of peak hour turning movement counts along the corridor, an estimate of the level of existing traffic with an origin or destination along the corridor, and an estimate of the amount of through traffic on Horton Street using GPS data to identifying the percentage of trips without an origin or destination along the corridor. The GPS data indicates that on a daily basis, approximately 10 percent of vehicle traffic along the corridor does not have an origin or a destination along the corridor and would likely divert to other travel routes with turn restrictions. Of the remaining traffic on Horton Street, approximately 20 to 30 percent have a destination on an east-west street, such as Park Avenue, Sherwin Avenue, 45th Street and 53rd Street, resulting in traffic shifting their primary north-south travel to Hollis, Holden or Hubbard streets, reducing overall travel on Horton Street. The remaining existing traffic has an origin or destination along Horton Street and turn restrictions would shift the location where they access Horton Street, but would not reduce vehicle traffic.

DAILY ROADWAY SEGMENT OPERATIONS

The level of existing traffic that is expected to shift with turn restrictions on Horton Street is presented in **Table 1,** which shows a reduction in traffic on Horton Street and an increase in traffic on 53rd and 45th streets. With turn restrictions, the level of daily traffic on Horton Street would be reduced below the threshold considered desirable for bicycle boulevards based on guidance provided in the *Pedestrian and Bicycle Plan* west of Hollis Street, and it would remain under that level with the addition of traffic from the Sherwin-Williams project. For comparison purposes, results of the roadway segment analysis without turn restrictions, as documented in the December 2015 TIA, is provided as an attachment for the existing, near-term and cumulative scenarios.

TABLE 1
EXISTING CONDITIONS DAILY TRAFFIC ANALYSIS

Roadway	Existing Average Daily Traffic Without Turn Restrictions[1]	Estimated Traffic Diversion[2]	Estimated Average Daily Traffic with Turn Restrictions	Project Daily Added Traffic[3]	Estimated Daily Traffic With Project With Turn Restrictions	Percent Increase
A. Horton Street, north of 53rd Street	***3,480***	-1,540	1,940	530	2,470	27%
B. Horton Street, between 45th and 53rd Street[4]	***3,530***	-2,050	1,480	840	2,320	57%
C. Horton Street, south of Sherwin Avenue	***3,460***	-1,930	1,530	740	2,270	48%
D. 53rd Street, east of Horton Street	600	140	740	190	930	26%
E. 45th Street, east of Horton Street	1,080	20	1,100	590	1,690	54%
F. 45th Street, west of San Pablo Ave	***2,630***	0	***2,630***	140	***2,770***[6]	5%
G. 45th Street, east of San Pablo Ave	1,490	0	1,490	10	1,500	< 1%
H. 53rd Street, west of San Pablo Avenue[5]	***2,440***	0	***2,440***	40	***2,480***[6]	2%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. Based on traffic counts as documented in the December 2015 TIA.
2. Based on existing turning movements along the Horton Street corridor, likely diversion of through traffic to parallel routes, and changes to travel patterns for trips with an origin or destination along the corridor.
3. Based on weekday daily Project trip generation and distribution percentages considering turn restrictions at 40th Street for northbound traffic and 53rd Street for southbound traffic.
4. City's Speed Feedback Counts on Horton Street between 45th Street and 53rd Street is approximately 4,100. This count has not been calibrated to other sources of count data along the corridor and may not be accurate as the count could include bicycles. City has no such numbers for any of the other segments analyzed in the above table.
5. Daily traffic volume estimated based on PM peak hour volumes on the roadway segment.
6. See December 2015 TIA for discussion of this impact; analysis results presented in this memo do not change the conclusions presented in the December 2015 TIA.
Source: Fehr & Peers, 2015

The diversion of traffic from Horton Street would not result in secondary impacts to other bicycle boulevards in the study area. However, two additional bicycle boulevards currently experience traffic volumes greater than desired; 45th and 53rd streets, west of San Pablo Avenue. The implementation of turn restrictions on Horton Street is not projected to increase traffic on these roadway segments, nor does it appreciably change the amount of traffic that would be added with the project. The impacts and mitigation measures for these segments is as noted in the December 2015 TIA.

An assessment of near-term and cumulative roadway segment operations with turn restrictions was also conducted, as presented in **Tables 2** and **3**. Information regarding the near-term and cumulative projects is provided in the December 2015 TIA. With the addition of traffic from projects expected to be built and occupied over the next 5 to 10 years and diverters on Horton Street, daily traffic volumes are expected to remain under 3,000 vehicles a day on Horton Street, and it would remain under that level with the addition of traffic from the Sherwin-Williams project.

Traffic volumes on 45th Street, east of San Pablo Avenue are projected to increase to 1,550 vehicles per day with traffic generated from approved and pending projects that are expected to be constructed in the next 5 to 10 years. The project would increase traffic on this segment by less than 1 percent. Traffic volumes on 45th and 53rd Streets west of San Pablo Avenue would also increase to over 3,000 vehicles per day with the traffic generated from approved and pending projects. Added traffic on 53rd Street is primarily due to the traffic from the Emery Center of Community Life, which would have the elementary school drop-off/pick-up zone located 53rd Street, west of San Pablo Avenue.

The near-term project impact to 45th and 53rd Streets west of San Pablo Avenue and 45th Street east of San Pablo Avenue with turn restrictions on Horton Street is the same as identified in the December 2015 TIA.

TABLE 2
NEAR-TERM CONDITIONS DAILY TRAFFIC ANALYSIS

Roadway	Existing Average Daily Traffic With Turn Restrictions[1]	Added Traffic From Near-Term Projects[2]	Near-term Without Project With Turn Restrictions	Project Daily Added Traffic[3]	Total Daily Traffic Near-Term With Project with Turn Restrictions	Percent Increase
A. Horton Street, north of 53rd Street	1,940	60	2,000	530	2,530	27%
B. Horton Street, between 45th and 53rd Street	1,480	100	1,580	840	2,420	53%
C. Horton Street, south of Sherwin Avenue	1,530	190	1,720	740	2,460	43%
D. 53rd Street, east of Horton Street	740	40	780	190	970	24%
E. 45th Street, east of Horton Street	1,100	70	1,170	590	1,760	50%
F. 45th Street, west of San Pablo Ave	***2,630***	420	***3,050***	140	***3,190***[4]	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***[4]	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,290	***3,730***	40	***3,770***[4]	1%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. See Table 1.
2. Reflects potential routing of new trips to the transportation system considering turn restrictions on Horton Street.
3. Based on weekday daily Project trip generation and distribution percentages considering turn restrictions at 40th Street for northbound traffic and 53rd Street for southbound traffic.
4. See December 2015 TIA for discussion of this impact; analysis results presented in this memo do not change the conclusions presented in the December 2015 TIA.
Source: Fehr & Peers, 2015

TABLE 3
CUMULATIVE CONDITIONS DAILY TRAFFIC ANALYSIS

Roadway	Existing Average Daily Traffic With Diverters[1]	Added Traffic From Near-Term and Cumulative Projects With Diverters[2]	Cumulative Without Project With Diverters Volume	Project Daily Added Traffic[2]	Total Daily Traffic With Project in Cumulative Condition	Percent Increase
A. Horton Street, north of 53rd Street	1,940	1,460	***3,400***	530	***3,930***	16%
B. Horton Street, between 45th and 53rd Street	1,480	190	1,670	840	2,510	50%
C. Horton Street, south of Sherwin Avenue	1,530	190	1,720	740	2,460	43%
D. 53rd Street, east of Horton Street	740	1,200	1,940	190	2,130	10%
E. 45th Street, east of Horton Street	1,100	70	1,170	590	1,760	50%
F. 45th Street, west of San Pablo Ave	***2,630***	420	***3,050***	140	***3,190***[4]	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***[4]	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,750	***4,190***	40	***4,230***[4]	1%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. See Table 1.
2. Reflects potential routing of new trips to the transportation system considering turn restrictions on Horton Street.
3. Based on weekday daily Project trip generation and distribution percentages considering turn restrictions at 40th Street for northbound traffic and 53rd Street for southbound traffic.
4. See December 2015 TIA for discussion of this impact; analysis results presented in this memo do not change the conclusions presented in the December 2015 TIA.
Source: Fehr & Peers, 2015

In the cumulative condition assuming full build-out of the Novartis Campus, traffic volumes on Horton Street, north of 53rd Street could exceed 3,000 vehicles per day. The addition of project trips would increase the volumes further. As it is uncertain if the Novartis project would move forward as previously contemplated, there are potentially opportunities through the design of

that site to orient traffic to 53rd Street and Hollis Street, reducing the level of traffic on Horton Street north of 53rd Street. Additionally, there are dedicated bicycle lanes on Horton Street, north of 53rd Street providing bicyclists with dedicated right-of way. Redesignating this portion of Horton Street from a bicycle boulevard to a Class II bicycle facility could be considered.

The cumulative project impact to 45th west of San Pablo Avenue and 45th Street east of San Pablo Avenue with the turn restriction on Horton Street is the same as identified in the December 2015 TIA.

For the segment of 53rd Street, west of San Pablo Avenue, the diverters would affect the projection on the level of project traffic that would use this roadway, such that the added traffic would be less than 2 percent in the near-term and cumulative condition, reducing the impact to a less-than-significant level.

PEAK HOUR INTERSECTION OPERATIONS

Turn restrictions on Horton Street has the potential to affect peak hour intersection operations on the Horton and Hollis street corridors. To assess the potential for peak hour secondary intersection impacts, peak hour traffic volumes were reassigned to the roadway network at the sixteen intersections noted on **Figure 1**, as these intersections would experience the most peak hour traffic volume change with the turn restrictions on Horton Street. Peak hour intersection operations were evaluated based on the analysis methods described in the December 2015 TIA.

Results of the assessment are presented in **Table 4** for the existing condition, **Table 5** for the near-term condition and **Table 6** for the cumulative condition, including without turn restrictions, with turn restrictions, with turn restrictions with project Option A, and with turn restrictions with project Option B for all scenarios.

In the ***existing*** condition with turn restrictions, operations of the Hollis Street at 45th Street would degrade with vehicles and transit vehicles experiencing significant levels of delay. Peak hour traffic signal warrants would also be met. The addition of traffic from either project Option A or Option B would further degrade operations. Installation of a traffic signal is recommended.

In the ***near-term*** condition with turn restrictions, operations of Hollis Street at 45th Street would further worsen from the existing condition. At the 40th Street at Horton Street intersection

operations would degrade to level of service (LOS) E prior to implementation of turn restrictions, with the turn restrictions slightly improving operations.

The addition of traffic from either project Option A or Option B would further degrade operations of the above intersections and would also result in LOS E conditions for vehicles, including transit vehicles at the Powell Street at Hollis Street intersection. At the Powell Street at Hollis Street intersection, improvements have been identified in the transportation impact fee program. These improvements strive to improve the pedestrian and bicycle realm at the intersection. To improve operations for vehicles, including transit vehicles, additional intersection capacity would need to be provided, which may be contrary to other City goals at these intersections.

In the ***cumulative*** condition with turn restrictions, operations of Hollis Street at 45th Street would degrade with vehicles and transit vehicles experiencing level of service (LOS) F conditions. At the 40th Street at Horton Street intersection operations would degrade to LOS E prior to implementation of turn restrictions, with turn restrictions slightly improving operations.

The addition of traffic from either project Option A or Option B would further degrade operations of the above intersections and would also result in LOS F conditions for vehicles, including transit vehicles at the Powell Street at Hollis Street intersection and at the Park Avenue at Hollis Street intersection. At the Park Avenue at Hollis Street intersection, increasing the cycle length would decrease delay for vehicles, resulting in LOS D operations. However, increasing the cycle length would increase delay for pedestrians as some may need to wait longer to cross the street.

The added traffic at the Hollis Street at 40th Street intersection would also increase vehicle queues for the westbound left-turn movement and the southbound movement. Monitoring and adjusting signal timing would minimize some vehicle queue spillback, but extending the eastbound left-turn pocket to provide at least 200 feet of vehicle storage would minimize the potential for vehicle queue spillback to the through lanes.

This completes our assessment of the potential for turn restrictions closure to mitigate the bicycle boulevard impact on Horton Street, and the analysis of the potential secondary impacts. Please call Kathrin at (925) 930-7100 if you have questions.

Attachments:

Figure 1 Turn Restriction Assumptions and Analysis Locations

TABLE 4
EXISTING CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Existing		Existing Plus Turn Restrictions		Existing Plus Turn Restrictions Plus Project Option A		Existing Plus Turn Restrictions Plus Project Option B	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
8	Powell Street/ Hollis Street	Signal	PM SAT	38 39	D D	40 38	D D	43 39	D D	43 39	D D
10	Horton Street/ Stanford Avenue	AWSC	AM PM SAT	8 10 7	A A A	7 9 7	A A A	7 9 7	A A A	7 9 7	A A A
11	Hollis Street/ Stanford Avenue	Signal	PM SAT	7 3	A A	8 4	A A	9 5	A A	9 5	A A
12	Horton Street/ 53rd Street	AWSC	AM PM SAT	8 10 7	A A A	7 8 7	A A A	8 9 7	A A A	8 9 7	A A A
13	Hollis Street/ 53rd Street	Signal	PM SAT	8 4	A A	9 5	A A	9 6	A A	9 6	A A
14	Horton Street/ 46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	--	--	4 (11) 4 (11) 6 (10)	A (B) A (B) A (A)	5 (11) 4 (11) 7 (10)	A (B) A (B) A (A)
15	Horton Street/ 45th Street	AWSC	AM PM SAT	8 10 7	A A A	7 8 7	A A A	8 8 7	A A A	8 8 7	A A A

TABLE 4
EXISTING CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Existing		Existing Plus Turn Restrictions		Existing Plus Turn Restrictions Plus Project Option A		Existing Plus Turn Restrictions Plus Project Option B	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
16	Hollis Street/ 45th Street	AWSC	PM SAT	32 11	D B	111 12	F B	139 13	F B	140 13	F B
17	Halleck Street/ Sherwin Avenue	Free/ SSSC	AM PM SAT	No Conflicting Movements		No Conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No Conflicting Movements	
18	Hubbard Street/ Sherwin Avenue/ Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)	8 (10) 7 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/ Sherwin Avenue	SSSC	AM PM SAT	1 (11) 1 (13) 1 (9)	A (B) A (B) A (A)	2 (9) 2 (11) 3 (9)	A (A) A (B) A (A)	2 (10) 3 (11) 4 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)
20	Halleck Street/ Park Avenue	SSSC	PM SAT	8 (11) 7 (10)	A (B) A (A)	8 (11) 7 (10)	A (B) A (A)	8 (12) 6 (10)	A (B) A (A)	8 (11) 7 (10)	A (B) A (A)
21	Hubbard Street/ Park Avenue	SSSC	PM SAT	2 2	A A	2 (11) 3 (10)	A (B) A (A)	3 (12) 4 (11)	A (B) A (B)	3 (12) 4 (11)	A (B) A (B)

TABLE 4
EXISTING CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Existing		Existing Plus Turn Restrictions		Existing Plus Turn Restrictions Plus Project Option A		Existing Plus Turn Restrictions Plus Project Option B	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
22	Horton Street/ Park Avenue	AWSC	AM	9	A	8	A	8	A	8	A
			PM	11	B	8	A	9	A	9	A
			SAT	8	A	8	A	8	A	8	A
23	Hollis Street/ Park Avenue	Signal	PM	15	B	19	B	23	C	23	C
			SAT	12	B	13	B	14	B	14	B
24	Horton Street/ 40th Street	Signal	AM	28	C	24	C	25	C	25	C
			PM	47	D	40	D	40	D	40	D
			SAT	46	D	44	D	49	D	49	D
25	Hollis Street/ 40th Street[4]	Signal	PM	31	C	36	D	39	D	39	D
			SAT	31	C	30	C	32	C	32	C

Notes:
1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized
2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour
3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2010 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).
4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.
Source: Fehr & Peers, 2015.

TABLE 5
NEAR-TERM CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Near-Term		Near-Term Plus Turn Restrictions		Near-Term Plus Turn Restrictions Plus Project Option A		Near-Term Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
8	Powell Street/ Hollis Street	Signal	PM SAT	42 39	D D	53 40	D D	62 41	E D	63 41	E D
10	Horton Street/ Stanford Avenue	AWSC	AM PM SAT	8 11 7	A B A	7 9 7	A A A	7 9 7	A A A	7 9 7	A A A
11	Hollis Street/ Stanford Avenue	Signal	PM SAT	7 4	A A	9 6	A A	11 5	B A	11 5	B A
12	Horton Street/ 53rd Street	AWSC	AM PM SAT	8 10 7	A A A	7 8 7	A A A	8 9 7	A A A	8 9 7	A A A
13	Hollis Street/53rd Street	Signal	PM SAT	8 5	A A	9 6	A A	9 6	A A	9 6	A A
14	Horton Street/ 46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	--	--	4 (11) 4 (11) 6 (10)	A (B) A (B) A (A)	5 (11) 4 (11) 7 (10)	A (B) A (B) A (A)

TABLE 5
NEAR-TERM CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Near-Term		Near-Term Plus Turn Restrictions		Near-Term Plus Turn Restrictions Plus Project Option A		Near-Term Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
15	Horton Street/ 45th Street	AWSC	AM PM SAT	8 10 8	A B A	8 8 7	A A A	8 8 7	A A A	8 8 7	A A A
16	Hollis Street/ 45th Street	AWSC	PM SAT	54 12	F B	172 13	F B	206 15	F C	208 15	F C
17	Halleck Street/ Sherwin Avenue	Free	AM PM SAT	No Conflicting Movements		No Conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No Conflicting Movements	
18	Hubbard Street/ Sherwin Avenue/ Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	3 (9) 3 (9) 3 (9)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)	8 (10) 7 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/ Sherwin Avenue	SSSC	AM PM SAT	1 (10) 1 (13) 1 (9)	A (B) A (B) A (A)	2 (10) 2 (11) 3 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)
20	Halleck Street/ Park Avenue	SSSC	PM SAT	8 (12) 7 (10)	A (B) A (A)	8 (12) 7 (11)	A (B) A (B)	8 (12) 6 (10)	A (B) A (A)	9 (12) 7 (10)	A (B) A (A)

TABLE 5
NEAR-TERM CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Near-Term		Near-Term Plus Turn Restrictions		Near-Term Plus Turn Restrictions Plus Project Option A		Near-Term Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
21	Hubbard Street/ Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)	2 (11) 3 (10)	A (B) A (A)	3 (12) 4 (11)	A (B) A (B)	3 (12) 4 (11)	A (B) A (B)
22	Horton Street/ Park Avenue	AWSC	AM PM SAT	9 11 8	A B A	8 9 8	A A A	9 10 8	A A A	9 10 8	A A A
23	Hollis Street/ Park Avenue	Signal	PM SAT	15 12	B B	21 13	C B	31 14	C B	30 14	C B
24	Horton Street/ 40th Street	Signal	AM PM SAT	27 47 59	C D E	23 40 57	C D E	24 41 68	C D E	23 41 68	C D E
25	Hollis Street/40th Street[4]	Signal	PM SAT	32 31	C C	37 31	D C	39 32	D C	39 32	D C

Notes:
1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized
2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour
3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2010 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).
4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.
Source: Fehr & Peers, 2015.

TABLE 6
CUMULATIVE CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Cumulative		Cumulative Plus Turn Restrictions		Cumulative Plus Turn Restrictions Plus Project Option A		Cumulative Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
8	Powell Street/ Hollis Street	Signal	PM SAT	51 39	D D	75 41	E D	84 44	F D	86 44	F D
10	Horton Street/ Stanford Avenue	AWSC	AM PM SAT	10 13 7	A B A	7 11 7	A B A	9 11 7	A B A	9 12 7	A B A
11	Hollis Street/ Stanford Avenue	Signal	PM SAT	11 5	B A	12 5	B A	15 6	B A	15 6	B A
12	Horton Street/ 53rd Street	AWSC	AM PM SAT	10 12 8	A B A	7 9 7	A A A	8 9 7	A A A	8 9 7	A A A
13	Hollis Street/ 53rd Street	Signal	PM SAT	11 6	B A	22 6	C A	26 6	C A	26 6	C A
14	Horton Street/ 46th Street (Future Roadway)	SSSC	AM PM SAT	--	--	--	--	4 (11) 4 (11) 8 (8)	A (B) A (B) A (A)	5 (11) 4 (11) 8 (8)	A (B) A (B) A (A)
15	Horton Street/ 45th Street	AWSC	AM PM SAT	11 12 8	B B A	8 8 7	A A A	8 8 7	A A A	8 8 7	A A A

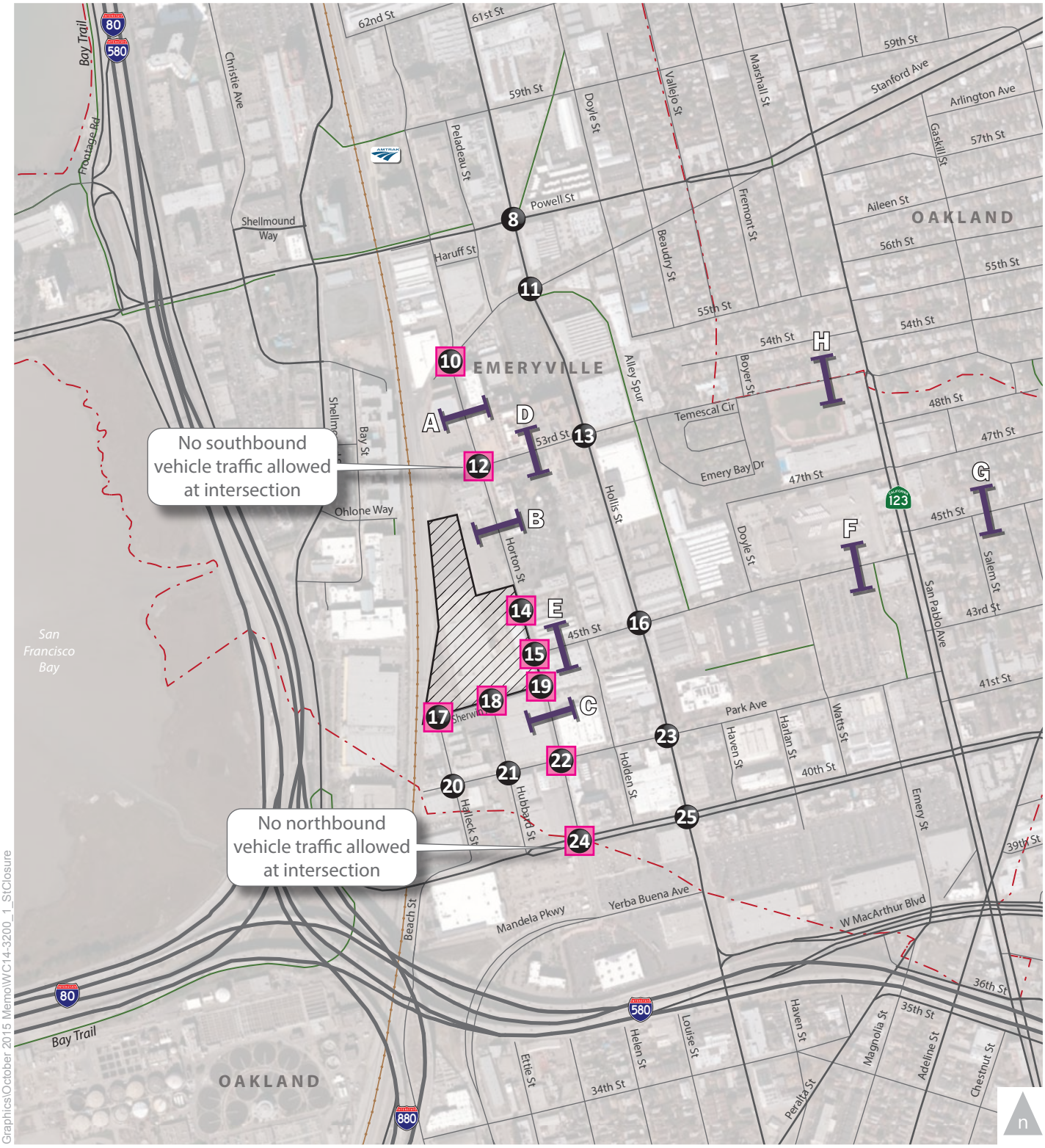
TABLE 6
CUMULATIVE CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Cumulative		Cumulative Plus Turn Restrictions		Cumulative Plus Turn Restrictions Plus Project Option A		Cumulative Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
16	Hollis Street/ 45th Street	AWSC	PM SAT	75 12	F B	284 14	F B	327 17	F C	329 17	F C
17	Halleck Street/ Sherwin Avenue	Free	AM PM SAT	No Conflicting Movements		No Conflicting Movements		4 (9) 4 (9) 3 (9)	A (A) A (A) A (A)	No Conflicting Movements	
18	Hubbard Street/ Sherwin Avenue/ Future Project Roadway	SSSC	AM PM SAT	3 (9) 2 (9) 3 (9)	A (A) A (A) A (A)	3 (9) 3 (9) 3 (9)	A (A) A (A) A (A)	7 (10) 6 (10) 7 (10)	A (A) A (A) A (A)	8 (10) 7 (10) 7 (10)	A (A) A (A) A (A)
19	Horton Street/ Sherwin Avenue	SSSC	AM PM SAT	1 (12) 1 (16) 1 (10)	A (B) A (C) A (A)	2 (10) 2 (11) 3 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)	3 (10) 3 (11) 4 (9)	A (A) A (B) A (A)
20	Halleck Street/ Park Avenue	SSSC	PM SAT	8 (12) 7 (10)	A (B) A (A)	8 (12) 7 (10)	A (B) A (A)	8 (12) 6 (10)	A (B) A (A)	9 (12) 7 (10)	A (B) A (A)
21	Hubbard Street/ Park Avenue	SSSC	PM SAT	2 (11) 2 (9)	A (B) A (A)	2 (11) 3 (10)	A (B) A (A)	3 (13) 4 (11)	A (B) A (B)	3 (12) 4 (11)	A (B) A (A)

TABLE 6
CUMULATIVE CONDITIONS
HORTON STREET TURN RESTRICTIONS INTERSECTION LEVEL OF SERVICE

Intersection		Control[1]	Peak Hour[2]	Cumulative		Cumulative Plus Turn Restrictions		Cumulative Plus Turn Restrictions Plus Project Option A		Cumulative Plus Turn Restrictions Plus Project Option A	
				Delay	Level of Service	Delay	Level of Service	Delay	Level of Service	Delay	Level of Service
22	Horton Street/ Park Avenue	AWSC	AM	11	B	8	A	9	A	9	A
			PM	16	C	9	A	10	A	10	A
			SAT	8	A	8	A	8	A	8	A
23	Hollis Street/ Park Avenue	Signal	PM	15	B	53	D	88	F	87	F
			SAT	12	B	13	B	14	B	14	B
24	Horton Street/ 40th Street	Signal	AM	28	C	23	C	24	C	23	C
			PM	61	E	40	D	41	D	41	D
			SAT	60	E	56	E	68	E	68	E
25	Hollis Street/ 40th Street[4]	Signal	PM	34	C	54	D	60	E	60	E
			SAT	31	C	31	C	32	C	32	C

Notes:
1. AWSC = all way stop control, SSSC = side street stop control, Signal = signalized
2 AM = weekday morning peak hour, PM = weekday evening peak hour, SAT = Saturday afternoon Peak Hour
3. LOS = Level of Service. LOS calculations conducted using the Synchro level of service analysis software package, which applies the method described in the *2010 Highway Capacity Manual*. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).
4. Actual delay may be worse than shown here due to the effects of vehicle queue spillback from adjacent intersections and pedestrians impeding turn movements.
Source: Fehr & Peers, 2015.



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LEGEND

- # Weekday PM and Saturday Peak Hour Analysis Study Intersection
- Project Site
- Daily Traffic Analysis Location
- # Weekday AM, PM, and Saturday Peak Hour Analysis Study Intersection

Figure 1

Horton Street Turn Restriction Assumptions and Analysis Locations

TABLE A-1
EXISTING WITH PROJECT DAILY TRAFFIC VOLUMES

Roadway	Existing Average Daily Traffic	Percent Daily Fluctuation	Project Daily Added Traffic[1]	Total Daily Traffic With Project	Percent Increase
A. Horton Street, north of 53rd Street	***3,480***	±1%	960	***4,440***	28%
B. Horton Street, between 45th and 53rd Street	***3,530***	±1%	1,370	***4,900***	39%
C. Horton Street, south of Sherwin Avenue	***3,460***	±1%	940	***4,400***	27%
D. 53rd Street, east of Horton Street	600	±2%	410	1,010	68%
E. 45th Street, east of Horton Street	1,080	±0%	280	1,360	26%
F. 45th Street, west of San Pablo Ave	***2,630***	±4%	140	***2,770***	5%
G. 45th Street, east of San Pablo Ave	1,490	±1%	10	1,500	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	--	100	***2,540***	4%

Notes: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. Based on weekday daily Project trip generation and distribution percentages.
Source: Fehr & Peers, 2015

TABLE A-2
NEAR-TERM WITH PROJECT DAILY TRAFFIC VOLUMES

Roadway	Existing Average Daily Traffic	Added Traffic From Near-Term Projects	Near-term Without Project Volume	Project Daily Added Traffic	Total Daily Near-Term Traffic With Project	Percent Increase With Project
A. Horton Street, north of 53rd Street	***3,480***	510	***3,990***	960	***4,950***	24%
B. Horton Street, between 45th and 53rd Street	***3,530***	560	***4,090***	1,370	***5,460***	33%
C. Horton Street, south of Sherwin Avenue	***3,460***	610	***4,070***	940	***5,010***	23%
D. 53rd Street, east of Horton Street	600	50	650	410	1,060	63%
E. 45th Street, east of Horton Street	1,080	50	1,130	280	1,410	25%
F. 45th Street, west of San Pablo Ave	***2,630***	230	***2,860***	140	***3,000***	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,300	***3,740***	100	***3,840***	3%

Note: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. Based on weekday daily Project trip generation and distribution percentages.
Source: Fehr & Peers, 2015

TABLE A-3
CUMULATIVE WITH PROJECT DAILY TRAFFIC VOLUMES

Roadway	Existing Average Daily Traffic	Added Traffic From Cumulative Projects	Cumulative Without Project Volume	Project Daily Added Traffic	Total Daily Cumulative Traffic With Project	Percent Increase With Project
A. Horton Street, north of 53rd Street	***3,480***	2,850	***6,330***	960	***7,290***	15%
B. Horton Street, between 45th and 53rd Street	***3,530***	2,450	***5,980***	1,370	***7,350***	23%
C. Horton Street, south of Sherwin Avenue	***3,460***	2,500	***5,960***	940	***6,900***	16%
D. 53rd Street, east of Horton Street	600	1680	2,280	410	2,690	18%
E. 45th Street, east of Horton Street	1,080	50	1,130	280	1,410	25%
F. 45th Street, west of San Pablo Ave	***2,630***	420	***3,050***	140	***3,190***	5%
G. 45th Street, east of San Pablo Ave	1,490	60	***1,550***	10	***1,560***	< 1%
H. 53rd Street, west of San Pablo Avenue	***2,440***	1,750	***4,190***	100	***4,290***	2%

Note: ***Italics*** indicates volumes exceed guidelines established for bicycle boulevards; 3,000 vehicles per day for roadways west of Hollis Street and 1,500 vehicles per day for roadways east of Hollis Street.
1. Based on weekday daily Project trip generation and distribution percentages.
Source: Fehr & Peers, 2015