



Aldridge Transportation Consultants, LLC

Advanced Transportation Planning and Traffic Engineering

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Highlands Ranch, CO 80126
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September 2, 2021

Mr. Robert Palmer
Strategic Land Solutions, Inc.
2595 Ponderosa Road
Franktown, Colorado 80116

RE: Transportation Impact Study - Revised
McDonald's – SEC E. Iliff Ave. & S. Blackhawk St., Aurora, CO

Dear Mr. Palmer:

Aldridge Transportation Consultants (ATC) is pleased to present this traffic impact study for the proposed construction of a McDonald's restaurant on the SEC of E. Iliff Ave. and S. Blackhawk St. in Aurora.

ATC is professional service firm specializing in traffic engineering and transportation planning. ATC's principal, John M.W. Aldridge is a Colorado licensed professional engineer. In the past 20 years, ATC has prepared over 1,000 traffic impact studies, designed over 100 traffic signals, and has provided expert witness testimony on engineering design and access issues on multi-million-dollar interchange and highway projects in Kansas and Colorado.

We acknowledge that City of Aurora's review of this study is only for general performance with submittal requirements, current design criteria, and standard engineering principles and practice.

ATC appreciates the opportunity to be of service. Please call if you have any questions. We can be reached at 303-703-9112.

Respectfully submitted,
Aldridge Transportation Consultants, LLC

John M.W. Aldridge, P.E.
Principal





INTRODUCTION

This Traffic Impact Study examines the potential impact on traffic that would be caused by the development of a McDonald's restaurant on the southeast corner of E. Iliff Ave. and S. Blackhawk St. Figure 1 shows the location of the site and the surrounding streets and intersections. Note the site plan on Figure 1 is conceptual and subject to change.

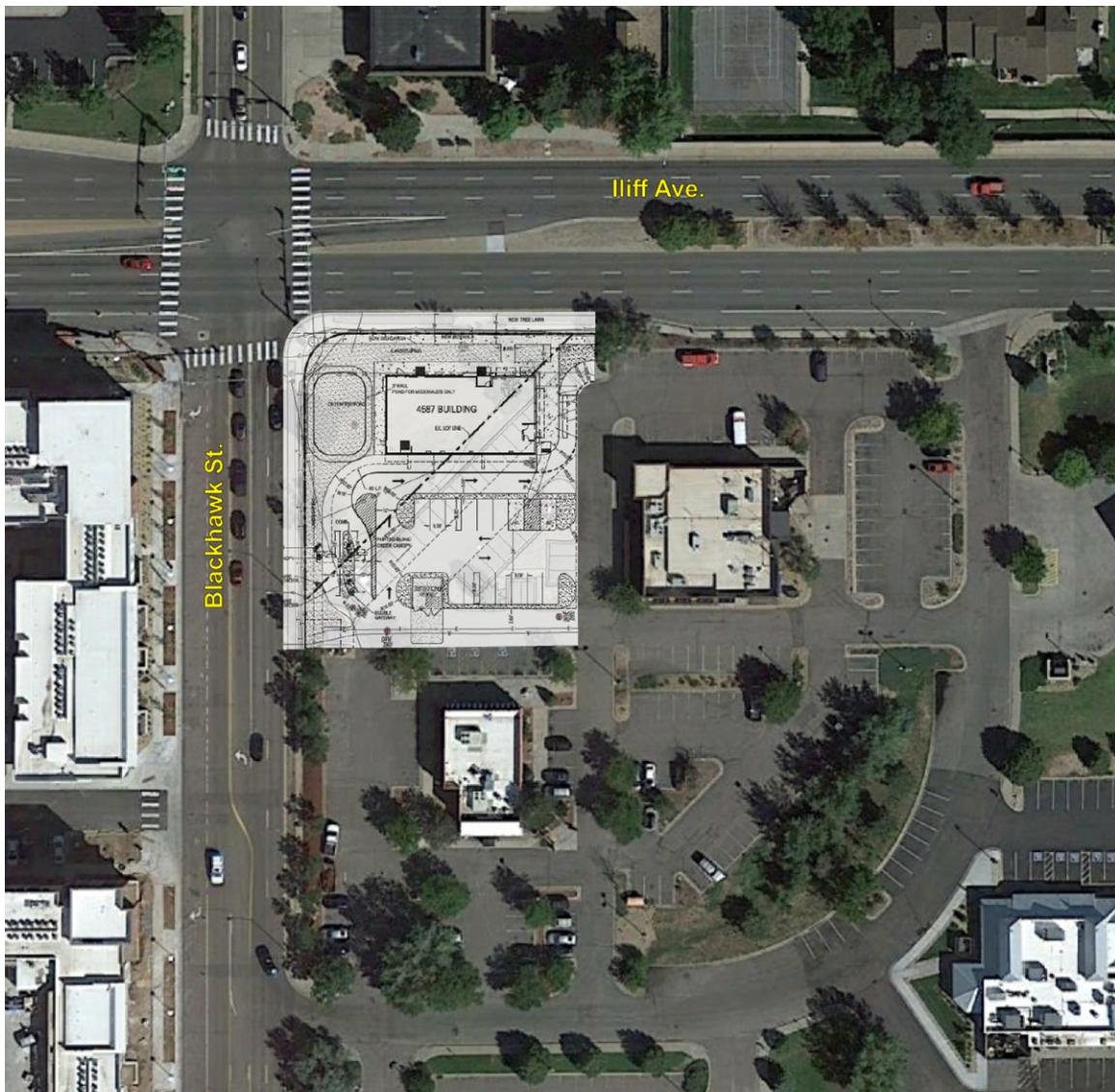


Figure 1 Site Location and Surrounding Streets and Intersections

EXISTING CONDITIONS

E. Iliff Ave. is a 6-lane Principal Arterial. It is divided by a raised concrete median and carries approximately 56,000 ADT per the City's GIS for traffic counts. The posted speed limit is 40 mph.



S. Blackhawk St. is a 4-lane Collector road. The ADT is approximately 8,000. The speed limit is 35 mph.

The intersection of S. Blackhawk St. and E. Iliff Ave. is traffic signal controlled with protected/permitted (flashing yellow arrows) left turn phasing on each approach.

AM and PM traffic counts were taken All Traffic Data on Wednesday, September 2, 2020. COA requested additional counts at the two access points, the right in/right out on Iliff Ave. and the full movement on Blackhawk St. They were taken on Tuesday, May 4, 2021. Due to COVID-19, COA required an adjustment to the September 2, 2020, traffic counts. We assumed that the May 4, 2021, traffic counts are back to normal or have established a “new” normal.¹ Our analysis of the 2020 counts for the westbound entering movement and the eastbound leaving movement compared to the 2021 similar movements at the driveway found a difference factor of 1.12 in the AM peak hour and 1.14 in the PM peak hour. The 2020 counts were adjusted accordingly to establish the existing 2021 AM and PM counts at the Blackhawk St. and Iliff Ave. intersection. The volumes were “balanced” between the driveways and the intersection. The count worksheets and graphics are provided in the appendix for reference. Note that a city comment received after this study was submitted in May indicated that they required the 2018 counts to be factored by DRCOG growth rate to 2021. This proved to be unnecessary as we had post COVID 2021 traffic counts at the driveway locations.

PEDESTRIAN CONNECTIVITY

Detached sidewalks are present on both frontages (Iliff and Blackhawk). The intersection of Iliff and Blackhawk features crosswalks and pedestrian actuated traffic signal control. Access to the McDonald’s inside will be available from the bus stop via a break in the landscaped areas.

ACCESS LOCATIONS

The site is accessible from two existing locations. On E. Iliff Ave. approximately 375 feet east of S. Blackhawk St. there is a right in/right out access that features a 125-foot right turn lane. On S. Blackhawk St. there is a full movement driveway approximately 400 feet south of E. Iliff Ave. It features a 50-foot left turn lane. Both accesses serve other uses including a 7-11 convenience store and gas station, a Boston Market restaurant, a Texas Roadhouse restaurant, and a Ajuua Mexican restaurant.

LAND USE and TRIP GENERATION

The property will be developed with 4,000 square foot McDonald’s fast food restaurant with a drive through window. The trip generation rates are from the *ITE Trip Generation Manual, 10th Edition*. The following worksheet provides the ADT and AM/PM Peak Hour traffic volumes.

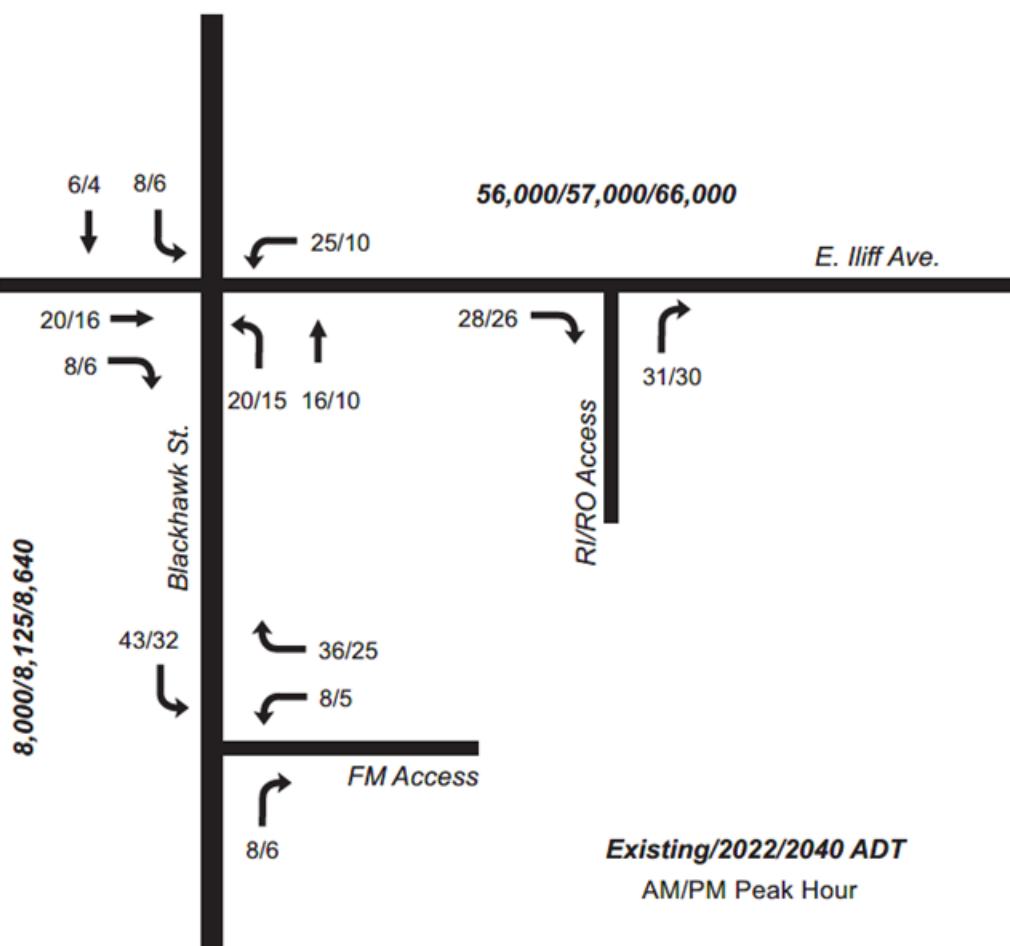
¹ A “new” normal is the finding of ITE research in “What a Transportation Professional Needs to Know About Count and Studies During a Pandemic” July 2020.



Trip Generation Worksheet											
ITE Code	Land Use	Unit	Quantity	ADT	AM			PM			
					In	Out	Total	In	Out	Total	
934	Fast Food Restaurant W/Drive Thru Window	KSF	4	470.95	20.50	19.69		16.99	15.68		
				1790	78	75	153	65	60	124	
Total Trips				1790	78	75	153	65	60	124	

TRAFFIC DISTRIBUTION & ASSIGNMENT

The distribution and assignment of the site generated traffic at each access and at each intersection in the 2022- and 2040-time frame are shown in the following graphic.





FUTURE TRAFFIC VOLUMES

The City's Traffic Impact Study Guidelines state that future traffic volumes are generally available from the City's Transportation Planning. It also states, "*For some cases developers may instead calculate future background traffic by applying a 2% growth rate factor per year, compounded annually, to existing traffic. In either case, the estimates should account for future development adjacent to or near the proposed site based on the current zoning for undeveloped parcels within the study area.*". In this case though, using the 2% factor would overstate the future background volumes on these sections of E. Iliff Ave. and S. Blackhawk St. based on the following facts.

- 1) The subject sections of E. Iliff Ave. and S. Blackhawk St. are not included in any of the City's transportation planning documents i.e., NEATS or SEATS. But it is included in the DRCOG Focus Model volume forecasts for 2040.
- 2) The City participates in the development of the DRCOG Focus Model by providing growth and development data on households, employment, income etc. for the model's traffic analysis zones (TAZ). The Focus model provides assigned volumes for 2015 and 2040 which is based on data provided by the City. This includes any potential for higher density redevelopment.

The DRCOG Focus Model Assigned Volumes for 2015 and 2040 shows an overall 25-year growth on the four legs of the intersection of 1.23. This equates to a growth rate of approximately .8 percent per annum. Using the DRCOG assigned volumes the 20-year growth factor is 1.18. This was applied to determine the future background traffic. The 2-year growth rate is very small at 1.016.

Using the DRCOG volume projections is a more accurate method to determine the background traffic volumes per the direction and guidance of the City's Traffic Impact Study Guidelines and Section 3.4.1.

PEAK HOUR INTERSECTION LEVEL OF SERVICE

ATC uses Synchro v.10 for operations analyses. The Synchro methodology is based on the 6th Edition of the Highway Capacity Manual (HCM). The table summarizes the AM and PM peak hour LOS for the Existing, 2022 Background and Total and the 2040 Background and Total conditions. Synchro graphics and reports for each timeframe are provided in the appendix.

The HCM states that, "*LOS is used to translate complex numerical performance rating into a simple A-F system representative of the travelers' perception of the quality of service provided by a facility or service. Practitioners and decision makers alike must understand that the LOS letter result hides much of the complexity of facility performance*²". LOS is a letter rating from A to F. LOS A indicates free-flow traffic conditions and no delay at intersections. LOS F is heavy traffic congestion with significant delay. LOS is provided for the overall operations at signalized intersections. LOS D is generally the benchmark for acceptable signalized intersection operations during the weekday peak hours. The critical movement, not the overall, indicates the LOS rating for unsignalized intersections, which is generally a left turn out from the minor street approach. Caution must be used when evaluating the LOS at unsignalized intersections particularly when LOS F is shown. In case of LOS F, the HCM recommends that other evaluation methods should be

² HCM version 6, Chapter 5, pages 5-3 – 5-6.



considered such as the volume over capacity ratios, the 95th percentile queue length, and duration of LOS F to make the most effective traffic control decision³. LOS F at unsignalized intersections is typically normal during the weekday peak hours as the duration of the LOS F condition is relatively short.

COA's Traffic Impact Study Guidelines defer to the latest edition of the HCM for evaluating traffic operations. The HCM does not provide benchmark LOS ratings because LOS can be superficial and at unsignalized and signalized intersections only relates control delay in seconds per vehicle and does not take into account volume over capacity ratios, queuing data, and the duration of the LOS condition. i.e., Synchro only analyzes two cycles at signalized intersections and a single vehicle delayed for more than 50 seconds on the minor approach will record LOS F.

COA's benchmark for overall signalized intersection operations during the peak hour is LOS D. Individual movements may fall to LOS E, but in most cases the overall intersection must operate or be projected to operate at LOS D or better during the AM and PM peak hours. Synchro optimizes the cycle length and phase times to achieve the least overall delay. Typically, resolving any movement at LOS F with signal timing will shift the problem to another movement. Resolution generally involves physical changes to the intersection geometry.

Level of Service Summary LOS/Delay in Seconds										
Intersection	Existing		2022 Background		2022 Total		2040 Background		2040 Total	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Signalized										
E. Iliff Ave./Blackhawk St.	C/23.8	C/28.9	C/23.8	C/31.1	C/24.3	C/32.1	C25.9	C/34.6	C/27.1	C/32.8
Unsignalized										
Iliff Ave. Access	B/13.7	E/43.8	B/13.8	E/46.0	B/14.6	F/65.9	C/15.0	F/73.9	C/16.2	F/129.4
Blackhawk St. Access	B/13.0	D/27.2	B/13.2	D/28.2	B/14.8	D/33.1	B/14.4	E/36.5	C/16.4	E/36.8

There will be no significant change to the operation of the signalized intersection at E. Iliff Ave. and Blackhawk St. as a result of the added traffic from McDonald's. It currently operates at LOS C/C in the AM/PM peak hours, respectively, and will continue to do so in the 2022 and 2040 background and total conditions. The access locations will operate acceptably as well. At the Iliff Ave. the right in/right out in the Existing and 2022 Background conditions the access rates LOS B/E. In the 2022 PM Total condition and the 2040 PM Background and Total conditions the intersection will operate at LOS C/F. However, the 95th percentile queue length for the right turn out in the 2040 Total PM condition is five vehicles and the v/c ratio is .833 which are acceptable evaluation measures in accord with the HCM 6th Edition.

Note that, "per COA LOS guidelines, minor movements can only fall below LOS D if they have an alternate route available. Vehicles at right out access movements have an alternate route by using the full access and turning right at the signalized intersection."

The access on Blackhawk operates at LOS B/C in the Existing condition and will continue to do so in the 2022 Background and Total conditions. In the 2040 Background and Total conditions, it will operate at LOS B/D.

³ ditto



QUEUE ANALYSIS

The City requested a queue length analysis for the westbound left turn storage bay at the intersection of E. Iliff Ave. and Blackhawk St. The storage bay is currently 100 feet. The queue analysis in the table below shows that the 95th percentile queue length exceeds the storage bay length in the 2022 Total PM peak hour, and both the 2040 Background and Total PM peak hour. At the Blackhawk access the storage length of 50 feet is not exceeded in any of the analysis time frames. Note one vehicle is approximately 25 feet.

Intersection	Storage Length	95th Percentile Queue Length Analysis									
		Existing		2022 Background		2022 Total		2040 Background		2040 Total	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
EBL at Iliff/Blackhawk (feet)	250	78	63	83	83	156	154	156	118	161	119
WBL at Iliff/Blackhawk (feet)	100	60	53	61	61	124	70	124	149	80	153
NBL at Iliff/Blackhawk (feet)	250	132	201	135	135	219	219	219	367	256	400
SBL at Iliff/Blackhawk (feet)	175	53	80	54	60	63	83	83	122	91	128
SBL at the Blackhawk Access (vehicles)	2	0	1	0	1	1	1	0	1	1	1
EBR at the Iliff Access (vehicles)	n/a	1	2	1	2	1	3	1	2	1	5

The table shows that both the northbound and westbound left turn bays will need to be lengthened by 2040 to accommodate the anticipated queue length. It should be noted that the 95th percentile queue length at signalized intersection is calculated by formula vs. observed and dependent upon the amount of time allocated to the left turn phase. Adjustments to the phase time such as an increase in the maximum green for the phase could allow the total queue to clear in one cycle. We also expect by 2040 that full implementation of real time adaptive traffic signal control will significantly reduce queueing and delay.

ON-SITE DRIVE THRU QUEUING

COA relies on a 2012 ITE report “Drive Through Queue Generation” to determine the stacking length for fast-food restaurants. In this case the report recommends stacking of 12 vehicles or 240 feet. There is approximately 300 feet from the entry merge point of two internal approaches to the pay and pick-up windows. There are two order boards/canopies which make the drive-thru operation quick and efficient. Moreover, any spill will be internal and not have any impact on the driveways or adjacent streets.

MITIGATION

No mitigation to the streets and intersections are required by the additional traffic generated by the McDonald's except for possibly extending the length of the westbound left turn storage bay at the Iliff/Blackhawk intersection. We would first recommend in the short term if spill-over is observed with signal timing schemes to maximize the green interval on the left turn movement to clear the queue in one cycle. In the long-term, queue spill-over is likely to require physical improvement by lengthening the turn lane.

TRAFFIC CALMING

There are a considerable number of traffic calming techniques to address a myriad of traffic related problems including speeding, cut-through traffic, and pedestrian safety. However, there first needs to be identification of a problem or perception of a problem to be resolved. Most importantly there needs to be consensus among the residents and/or business owners that would be affected and agreements with the public agency on maintenance of i.e., landscaping or streetscape features. As



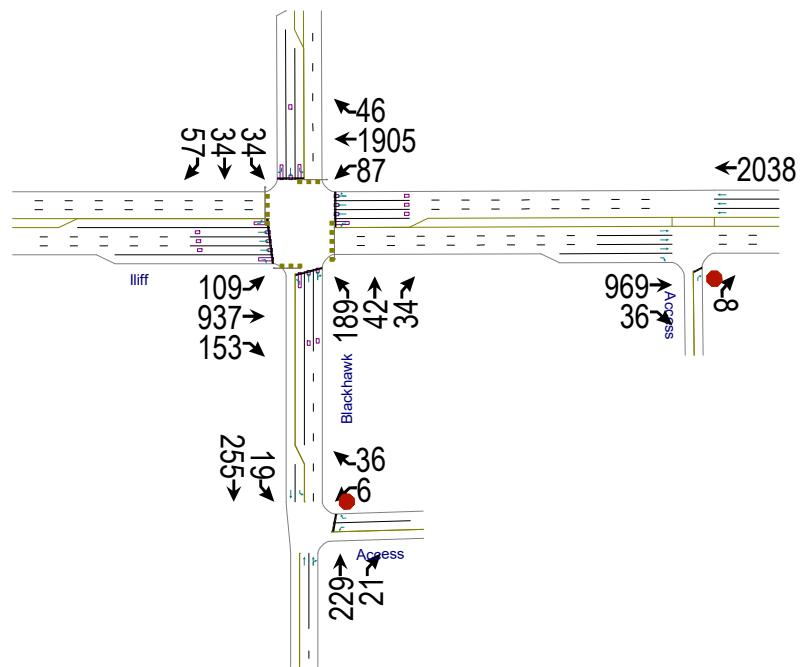
this is a private property any internal deployment of traffic calming (principally speed bumps) would be the prerogative of the business owners.

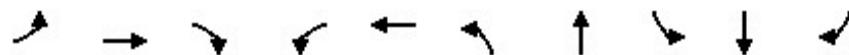
CONCLUSIONS & RECOMMENDATIONS

Based on the analysis, traffic from the site can be absorbed by the adjacent streets and intersections and not cause a safety or operational problem. The proposed access locations are the best engineering fit for the parcel's configuration and accessibility to the streets. Aside from the possible lengthening of the westbound left turn lane, the intersection of E. Iliff Ave. and Blackhawk St. is fully developed and no improvements to the geometry or traffic control are needed in the short-term or foreseeable future.



APPENDIX





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	119	1019	166	94	2121	206	83	37	37	62
v/c Ratio	0.59	0.42	0.20	0.30	0.90	0.53	0.09	0.10	0.10	0.15
Control Delay	24.5	16.2	3.0	11.2	28.8	30.3	17.7	22.3	30.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	16.2	3.0	11.2	28.8	30.3	17.7	22.3	30.2	0.7
Queue Length 50th (ft)	28	138	0	22	390	89	11	14	17	0
Queue Length 95th (ft)	#79	173	33	43	466	149	30	36	43	1
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	200	2455	850	312	2355	392	876	362	374	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	0.59	0.42	0.20	0.30	0.90	0.53	0.09	0.10	0.10	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	96	822	134	76	1671	40	166	37	30	30	30	50
Future Volume (veh/h)	96	822	134	76	1671	40	166	37	30	30	30	50
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	1019	166	94	2071	50	206	46	37	37	37	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	2444	759	334	2439	59	444	468	338	404	376	319
Arrive On Green	0.05	0.48	0.48	0.05	0.48	0.48	0.07	0.24	0.24	0.03	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	5129	124	1781	1970	1421	1781	1870	1585
Grp Volume(v), veh/h	119	1019	166	94	1373	748	206	41	42	37	37	62
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1848	1781	1777	1615	1781	1870	1585
Q Serve(g_s), s	3.0	11.7	5.5	2.4	31.9	32.1	6.3	1.6	1.8	1.5	1.5	2.9
Cycle Q Clear(g_c), s	3.0	11.7	5.5	2.4	31.9	32.1	6.3	1.6	1.8	1.5	1.5	2.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	198	2444	759	334	1619	879	444	422	384	404	376	319
V/C Ratio(X)	0.60	0.42	0.22	0.28	0.85	0.85	0.46	0.10	0.11	0.09	0.10	0.19
Avail Cap(c_a), veh/h	218	2444	759	370	1619	879	444	422	384	445	376	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	15.3	13.7	11.6	20.7	20.8	27.0	26.8	26.9	26.9	29.3	29.9
Incr Delay (d2), s/veh	3.9	0.5	0.7	0.5	5.7	10.1	0.8	0.5	0.6	0.1	0.5	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.3	4.4	2.0	0.9	13.0	15.3	3.8	0.7	0.8	0.6	0.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.7	15.8	14.3	12.0	26.5	30.9	27.8	27.2	27.4	27.0	29.8	31.2
LnGrp LOS	C	B	B	B	C	C	C	C	C	C	C	C
Approach Vol, veh/h	1304				2215			289			136	
Approach Delay, s/veh	16.3				27.4			27.6			29.7	
Approach LOS	B				C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.0	47.6	10.8	22.6	9.3	47.3	7.5	25.9				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.3	41.3	6.3	18.1	5.8	41.8	5.1	19.3				
Max Q Clear Time (g_c+l1), s	4.4	13.7	8.3	4.9	5.0	34.1	3.5	3.8				
Green Ext Time (p_c), s	0.0	9.1	0.0	0.2	0.0	6.7	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				23.8								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	969	36	0	2038	0	8
Future Vol, veh/h	969	36	0	2038	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1053	39	0	2215	0	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach EB WB NB

HCM Control Delay, s 0 0 13.7

HCM LOS B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	424	-	-	-
HCM Lane V/C Ratio	0.021	-	-	-
HCM Control Delay (s)	13.7	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection

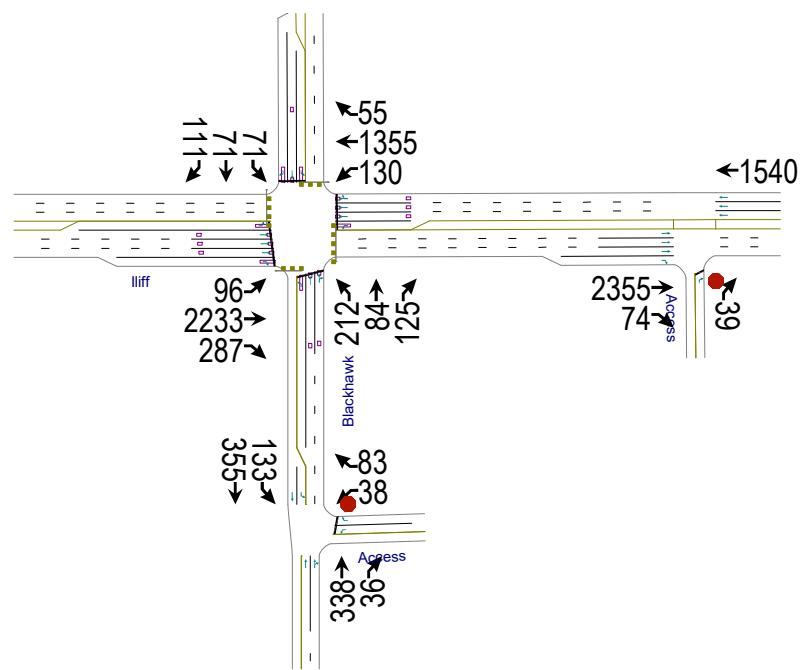
Int Delay, s/veh 1

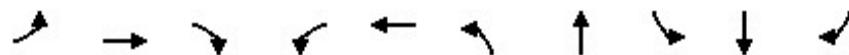
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↑		↑	↑
Traffic Vol, veh/h	6	36	229	21	19	255
Future Vol, veh/h	6	36	229	21	19	255
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	39	249	23	21	277

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	580	136	0	0	272
Stage 1	261	-	-	-	-
Stage 2	319	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	461	888	-	-	1290
Stage 1	760	-	-	-	-
Stage 2	736	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	454	888	-	-	1290
Mov Cap-2 Maneuver	454	-	-	-	-
Stage 1	760	-	-	-	-
Stage 2	724	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	454	888	1290	-
HCM Lane V/C Ratio	-	-	0.014	0.044	0.016	-
HCM Control Delay (s)	-	-	13	9.2	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	105	2427	312	141	1533	230	227	77	77	121
v/c Ratio	0.45	0.98	0.35	0.77	0.63	0.63	0.28	0.23	0.21	0.29
Control Delay	15.3	37.7	4.6	43.1	19.5	36.2	13.8	24.9	31.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	37.7	4.6	43.1	19.5	36.2	13.8	24.9	31.7	7.4
Queue Length 50th (ft)	24	475	19	33	239	103	22	31	37	0
Queue Length 95th (ft)	53	#616	64	#131	298	170	54	65	75	41
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	261	2474	896	183	2432	364	822	328	374	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	0.40	0.98	0.35	0.77	0.63	0.63	0.28	0.23	0.21	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	86	1994	256	116	1210	49	189	75	112	63	63	99
Future Volume (veh/h)	86	1994	256	116	1210	49	189	75	112	63	63	99
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	2427	312	141	1473	60	230	91	136	77	77	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	2485	771	181	2469	101	379	373	333	322	376	319
Arrive On Green	0.05	0.49	0.49	0.06	0.49	0.49	0.06	0.21	0.21	0.05	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	5033	205	1781	1777	1585	1781	1870	1585
Grp Volume(v), veh/h	105	2427	312	141	996	537	230	91	136	77	77	121
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1833	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	2.6	41.9	11.3	3.5	19.0	19.0	5.1	3.8	6.7	3.1	3.1	5.9
Cycle Q Clear(g_c), s	2.6	41.9	11.3	3.5	19.0	19.0	5.1	3.8	6.7	3.1	3.1	5.9
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	2485	771	181	1670	900	379	373	333	322	376	319
V/C Ratio(X)	0.39	0.98	0.40	0.78	0.60	0.60	0.61	0.24	0.41	0.24	0.20	0.38
Avail Cap(c_a), veh/h	353	2485	771	181	1670	900	379	373	333	337	376	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	22.6	14.8	20.9	16.5	16.5	30.5	29.6	30.7	26.7	30.0	31.1
Incr Delay (d2), s/veh	0.9	13.4	1.6	19.1	1.6	2.9	2.8	1.6	3.7	0.4	1.2	3.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.0	18.4	4.2	2.3	7.3	8.2	2.3	1.8	2.9	1.3	1.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.9	36.0	16.3	40.0	18.1	19.4	33.2	31.2	34.4	27.1	31.2	34.5
LnGrp LOS	B	D	B	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h	2844				1674			457		275		
Approach Delay, s/veh	33.0				20.4			33.2		31.5		
Approach LOS	C				C			C		C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.5	48.3	9.6	22.6	9.1	48.7	8.8	23.4				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	43.8	5.1	18.1	9.0	39.8	5.1	18.1				
Max Q Clear Time (g_c+l1), s	5.5	43.9	7.1	7.9	4.6	21.0	5.1	8.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.1	10.6	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay				28.9								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	2355	74	0	1540	0	39
Future Vol, veh/h	2355	74	0	1540	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2560	80	0	1674	0	42

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	43.8
HCM LOS		E	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	134	-	-	-
HCM Lane V/C Ratio	0.316	-	-	-
HCM Control Delay (s)	43.8	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	1.3	-	-	-

Intersection

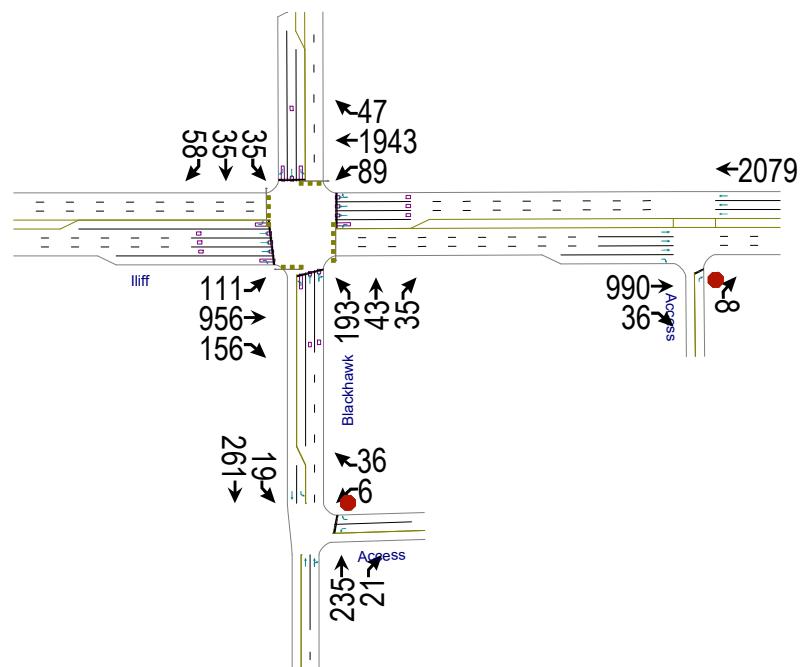
Int Delay, s/veh 3

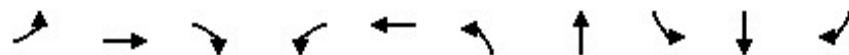
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↓		↑	↑
Traffic Vol, veh/h	38	83	338	36	133	355
Future Vol, veh/h	38	83	338	36	133	355
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	90	367	39	145	386

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1063	203	0	0	406
Stage 1	387	-	-	-	-
Stage 2	676	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	232	805	-	-	1151
Stage 1	657	-	-	-	-
Stage 2	504	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	203	805	-	-	1151
Mov Cap-2 Maneuver	203	-	-	-	-
Stage 1	657	-	-	-	-
Stage 2	440	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.4	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	203	805	1151	-
HCM Lane V/C Ratio	-	-	0.203	0.112	0.126	-
HCM Control Delay (s)	-	-	27.2	10	8.6	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0.4	0.4	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	121	1039	170	96	2163	210	85	38	38	63
v/c Ratio	0.62	0.42	0.20	0.31	0.90	0.55	0.10	0.10	0.10	0.15
Control Delay	26.8	16.0	2.9	11.0	28.1	31.9	17.9	22.7	30.3	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	16.0	2.9	11.0	28.1	31.9	17.9	22.7	30.3	0.8
Queue Length 50th (ft)	28	140	0	22	395	92	11	15	18	0
Queue Length 95th (ft)	#87	176	33	43	471	154	31	38	44	2
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	194	2480	859	313	2405	383	855	362	374	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	0.62	0.42	0.20	0.31	0.90	0.55	0.10	0.10	0.10	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	109	937	153	87	1905	46	189	42	34	34	34	57
Future Volume (veh/h)	109	937	153	87	1905	46	189	42	34	34	34	57
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	1039	170	96	2112	51	210	47	38	38	38	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	2477	769	333	2472	60	432	453	328	405	376	319
Arrive On Green	0.05	0.49	0.49	0.05	0.48	0.48	0.06	0.23	0.23	0.03	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	5129	124	1781	1966	1425	1781	1870	1585
Grp Volume(v), veh/h	121	1039	170	96	1401	762	210	42	43	38	38	63
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1848	1781	1777	1614	1781	1870	1585
Q Serve(g_s), s	3.0	11.8	5.6	2.4	32.6	32.7	5.7	1.7	1.9	1.5	1.5	3.0
Cycle Q Clear(g_c), s	3.0	11.8	5.6	2.4	32.6	32.7	5.7	1.7	1.9	1.5	1.5	3.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	197	2477	769	333	1641	891	432	409	372	405	376	319
V/C Ratio(X)	0.61	0.42	0.22	0.29	0.85	0.86	0.49	0.10	0.12	0.09	0.10	0.20
Avail Cap(c_a), veh/h	211	2477	769	372	1641	891	432	409	372	445	376	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	15.0	13.4	11.3	20.5	20.5	28.2	27.3	27.4	26.9	29.3	29.9
Incr Delay (d2), s/veh	4.7	0.5	0.7	0.5	5.9	10.3	0.9	0.5	0.6	0.1	0.5	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.4	4.5	2.0	0.9	13.3	15.6	3.9	0.8	0.8	0.6	0.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.6	15.5	14.0	11.8	26.4	30.9	29.0	27.8	28.0	27.0	29.9	31.3
LnGrp LOS	C	B	B	B	C	C	C	C	C	C	C	C
Approach Vol, veh/h	1330				2259			295			139	
Approach Delay, s/veh	16.1				27.3			28.7			29.7	
Approach LOS	B				C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.0	48.2	10.2	22.6	9.3	47.9	7.6	25.2				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	41.7	5.7	18.1	5.5	42.7	5.1	18.7				
Max Q Clear Time (g_c+l1), s	4.4	13.8	7.7	5.0	5.0	34.7	3.5	3.9				
Green Ext Time (p_c), s	0.0	9.3	0.0	0.2	0.0	6.9	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				23.8								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	990	36	0	2079	0	8
Future Vol, veh/h	990	36	0	2079	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1076	39	0	2260	0	9

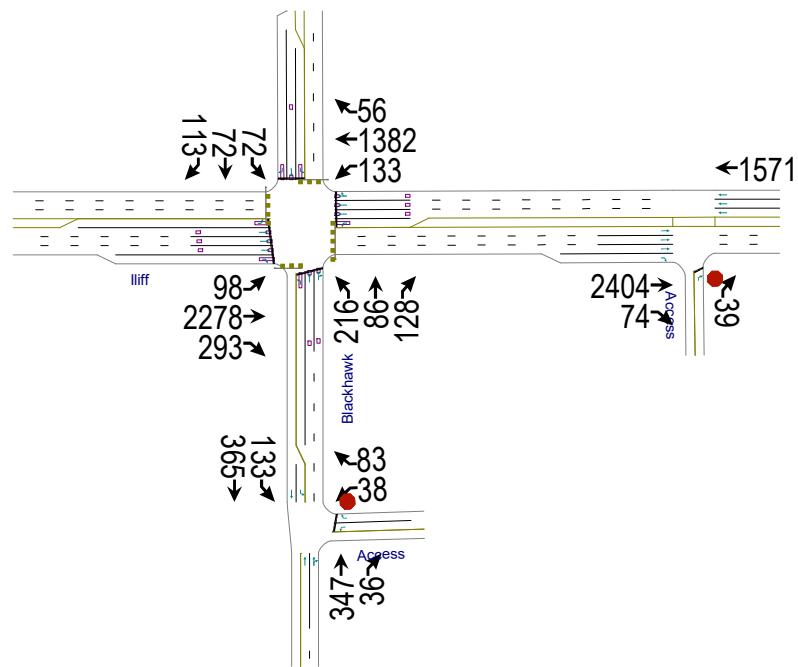
Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.92
Pot Cap-1 Maneuver	-	0	-	417
Stage 1	-	0	-	0
Stage 2	-	0	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	417
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

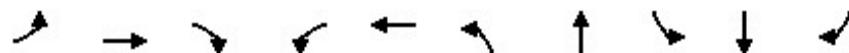
Approach EB WB NB

HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	417	-	-	-
HCM Lane V/C Ratio	0.021	-	-	-
HCM Control Delay (s)	13.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↓		↑	↑
Traffic Vol, veh/h	6	36	235	21	19	261
Future Vol, veh/h	6	36	235	21	19	261
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	39	255	23	21	284
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	593	139	0	0	278	0
Stage 1	267	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	452	884	-	-	1283	-
Stage 1	754	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	445	884	-	-	1283	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	754	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.9	0	0.5			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	445	884	1283	-
HCM Lane V/C Ratio	-	-	0.015	0.044	0.016	-
HCM Control Delay (s)	-	-	13.2	9.3	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	106	2476	318	144	1563	235	232	79	79	123
v/c Ratio	0.45	1.00	0.35	0.79	0.64	0.65	0.28	0.24	0.21	0.29
Control Delay	15.4	42.3	4.8	45.4	19.8	37.0	13.8	25.0	31.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	42.3	4.8	45.4	19.8	37.0	13.8	25.0	31.8	7.6
Queue Length 50th (ft)	24	~494	21	34	246	106	23	32	38	0
Queue Length 95th (ft)	53	#638	67	#134	306	#176	54	66	77	42
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	261	2474	896	183	2432	363	824	327	374	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	0.41	1.00	0.35	0.79	0.64	0.65	0.28	0.24	0.21	0.29

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	96	2233	287	130	1355	55	212	84	125	71	71	111
Future Volume (veh/h)	96	2233	287	130	1355	55	212	84	125	71	71	111
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	2476	318	144	1502	61	235	93	139	79	79	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	2485	771	179	2469	100	377	371	331	320	376	319
Arrive On Green	0.05	0.49	0.49	0.06	0.49	0.49	0.06	0.21	0.21	0.05	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	5033	204	1781	1777	1585	1781	1870	1585
Grp Volume(v), veh/h	106	2476	318	144	1016	547	235	93	139	79	79	123
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1834	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	2.6	43.5	11.6	3.6	19.5	19.5	5.1	3.9	6.8	3.1	3.2	6.0
Cycle Q Clear(g_c), s	2.6	43.5	11.6	3.6	19.5	19.5	5.1	3.9	6.8	3.1	3.2	6.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	2485	771	179	1670	900	377	371	331	320	376	319
V/C Ratio(X)	0.40	1.00	0.41	0.80	0.61	0.61	0.62	0.25	0.42	0.25	0.21	0.39
Avail Cap(c_a), veh/h	348	2485	771	179	1670	900	377	371	331	333	376	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	23.0	14.8	20.9	16.6	16.6	30.7	29.7	30.9	26.7	30.0	31.1
Incr Delay (d2), s/veh	1.0	17.2	1.6	22.6	1.7	3.1	3.2	1.6	3.9	0.4	1.3	3.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.0	19.9	4.3	2.5	7.5	8.5	2.5	1.8	2.9	1.3	1.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.2	40.2	16.5	43.5	18.3	19.7	33.9	31.4	34.8	27.1	31.3	34.6
LnGrp LOS	B	D	B	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h	2900				1707			467			281	
Approach Delay, s/veh	36.7				20.9			33.6			31.6	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.5	48.3	9.6	22.6	9.1	48.7	8.9	23.3				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	43.8	5.1	18.1	9.0	39.8	5.1	18.1				
Max Q Clear Time (g_c+l1), s	5.6	45.5	7.1	8.0	4.6	21.5	5.1	8.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.1	10.6	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				31.1								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0.4

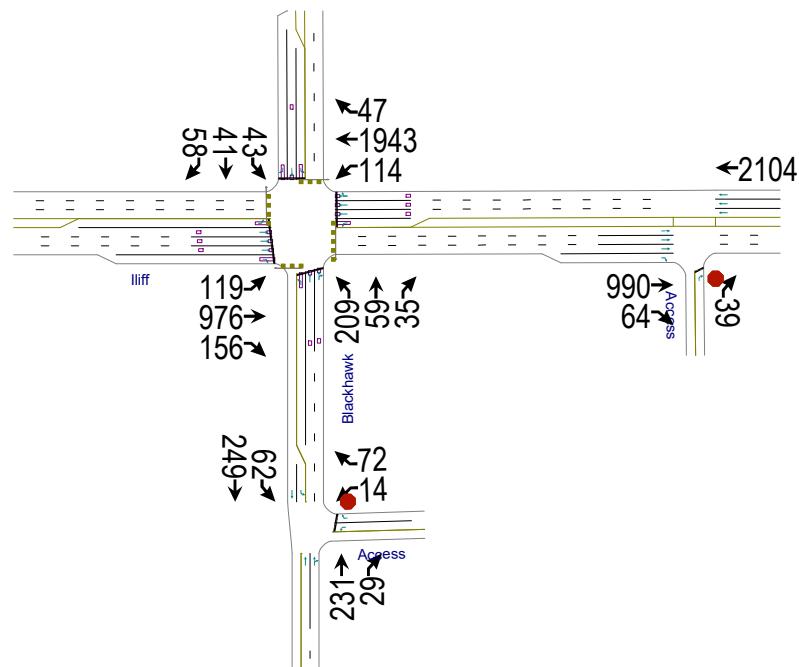
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	2404	74	0	1571	0	39
Future Vol, veh/h	2404	74	0	1571	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2613	80	0	1708	0	42

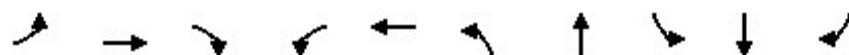
Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	46
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	129	-	-	-
HCM Lane V/C Ratio	0.329	-	-	-
HCM Control Delay (s)	46	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	1.3	-	-	-

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↓		↑	↑
Traffic Vol, veh/h	38	83	347	36	133	365
Future Vol, veh/h	38	83	347	36	133	365
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	90	377	39	145	397
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1084	208	0	0	416	0
Stage 1	397	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	225	799	-	-	1141	-
Stage 1	649	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	196	799	-	-	1141	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	649	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.8	0		2.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	196	799	1141	-
HCM Lane V/C Ratio	-	-	0.211	0.113	0.127	-
HCM Control Delay (s)	-	-	28.2	10.1	8.6	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	0.4	0.4	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	130	1061	170	124	2163	227	102	47	44	63
v/c Ratio	0.67	0.47	0.21	0.39	0.90	0.59	0.12	0.13	0.12	0.15
Control Delay	31.0	18.4	3.3	12.1	28.1	33.6	19.2	23.0	30.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	18.4	3.3	12.1	28.1	33.6	19.2	23.0	30.5	0.8
Queue Length 50th (ft)	31	150	0	29	395	101	15	19	21	0
Queue Length 95th (ft)	#101	191	35	54	471	166	36	44	49	2
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	194	2270	800	338	2405	382	865	358	374	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	0.67	0.47	0.21	0.37	0.90	0.59	0.12	0.13	0.12	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	117	957	153	112	1905	46	205	58	34	42	40	57
Future Volume (veh/h)	117	957	153	112	1905	46	205	58	34	42	40	57
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	1061	170	124	2112	51	227	64	38	47	44	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	2451	761	334	2456	59	427	500	275	408	376	319
Arrive On Green	0.06	0.48	0.48	0.06	0.48	0.48	0.06	0.23	0.23	0.04	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	5129	124	1781	2213	1215	1781	1870	1585
Grp Volume(v), veh/h	130	1061	170	124	1401	762	227	50	52	47	44	63
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1848	1781	1777	1652	1781	1870	1585
Q Serve(g_s), s	3.3	12.3	5.6	3.1	32.8	32.9	5.7	2.0	2.2	1.9	1.7	3.0
Cycle Q Clear(g_c), s	3.3	12.3	5.6	3.1	32.8	32.9	5.7	2.0	2.2	1.9	1.7	3.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	202	2451	761	334	1630	885	427	402	373	408	376	319
V/C Ratio(X)	0.65	0.43	0.22	0.37	0.86	0.86	0.53	0.13	0.14	0.12	0.12	0.20
Avail Cap(c_a), veh/h	210	2451	761	416	1630	885	427	402	373	441	376	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	15.4	13.6	11.6	20.8	20.8	28.8	27.7	27.8	26.7	29.4	29.9
Incr Delay (d2), s/veh	6.3	0.6	0.7	0.7	6.1	10.8	1.3	0.6	0.8	0.1	0.6	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.6	4.6	2.1	1.2	13.4	15.8	1.6	0.9	1.0	0.8	0.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.3	15.9	14.3	12.3	26.9	31.6	30.1	28.4	28.6	26.9	30.0	31.3
LnGrp LOS	C	B	B	B	C	C	C	C	C	C	C	C
Approach Vol, veh/h	1361				2287			329			154	
Approach Delay, s/veh	16.7				27.7			29.6			29.6	
Approach LOS	B				C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.5	47.7	10.2	22.6	9.6	47.6	8.0	24.8				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.1	39.1	5.7	18.1	5.5	42.7	5.1	18.7				
Max Q Clear Time (g_c+l1), s	5.1	14.3	7.7	5.0	5.3	34.9	3.9	4.2				
Green Ext Time (p_c), s	0.1	9.1	0.0	0.3	0.0	6.8	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay				24.3								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	990	64	0	2104	0	39
Future Vol, veh/h	990	64	0	2104	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1076	70	0	2287	0	42

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach EB WB NB

HCM Control Delay, s 0 0 14.6

HCM LOS B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	417	-	-	-
HCM Lane V/C Ratio	0.102	-	-	-
HCM Control Delay (s)	14.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection

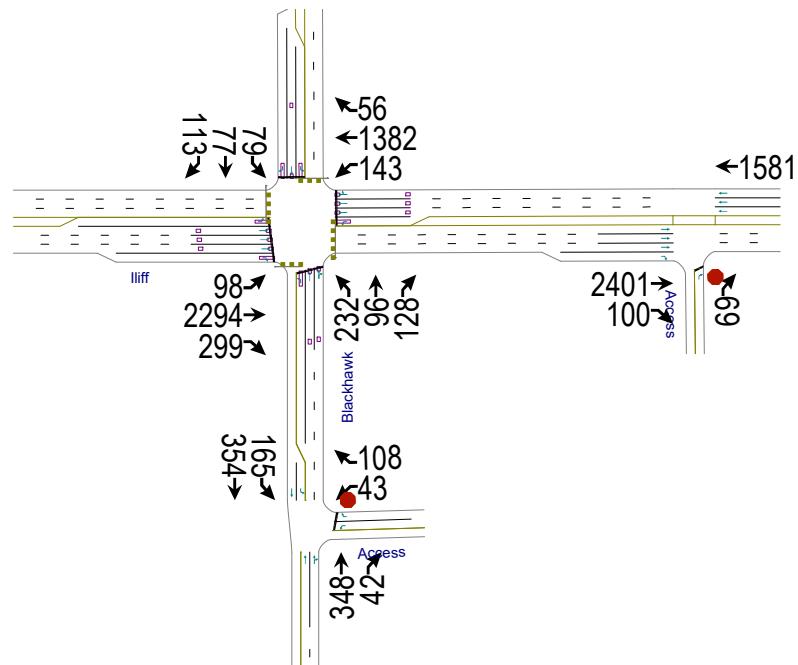
Int Delay, s/veh 2.1

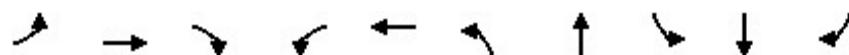
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↓↑		↑	↑
Traffic Vol, veh/h	14	72	231	29	62	249
Future Vol, veh/h	14	72	231	29	62	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	78	251	32	67	271

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	672	142	0	0	283
Stage 1	267	-	-	-	-
Stage 2	405	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	405	880	-	-	1278
Stage 1	754	-	-	-	-
Stage 2	673	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	384	880	-	-	1278
Mov Cap-2 Maneuver	384	-	-	-	-
Stage 1	754	-	-	-	-
Stage 2	638	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	384	880	1278	-
HCM Lane V/C Ratio	-	-	0.04	0.089	0.053	-
HCM Control Delay (s)	-	-	14.8	9.5	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0.2	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	106	2493	325	155	1563	252	243	85	83	123
v/c Ratio	0.45	1.01	0.36	0.84	0.64	0.70	0.29	0.26	0.22	0.29
Control Delay	15.4	44.6	4.9	52.8	19.8	39.8	14.4	25.4	32.0	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	44.6	4.9	52.8	19.8	39.8	14.4	25.4	32.0	7.6
Queue Length 50th (ft)	24	~511	22	37	246	115	25	35	40	0
Queue Length 95th (ft)	53	#646	70	#151	306	#204	58	70	80	42
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	261	2469	896	185	2432	362	827	325	374	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	0.41	1.01	0.36	0.84	0.64	0.70	0.29	0.26	0.22	0.29

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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	96	2249	293	140	1355	55	227	94	125	77	75	111
Future Volume (veh/h)	96	2249	293	140	1355	55	227	94	125	77	75	111
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	2493	325	155	1502	61	252	104	139	85	83	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	2479	770	181	2469	100	374	365	325	320	376	319
Arrive On Green	0.05	0.49	0.49	0.06	0.49	0.49	0.06	0.21	0.21	0.05	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	5033	204	1781	1777	1585	1781	1870	1585
Grp Volume(v), veh/h	106	2493	325	155	1016	547	252	104	139	85	83	123
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1834	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	2.6	43.7	11.9	3.9	19.5	19.5	5.1	4.4	6.9	3.4	3.3	6.0
Cycle Q Clear(g_c), s	2.6	43.7	11.9	3.9	19.5	19.5	5.1	4.4	6.9	3.4	3.3	6.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	2479	770	181	1670	900	374	365	325	320	376	319
V/C Ratio(X)	0.40	1.01	0.42	0.86	0.61	0.61	0.67	0.29	0.43	0.27	0.22	0.39
Avail Cap(c_a), veh/h	348	2479	770	181	1670	900	374	365	325	327	376	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	23.1	15.0	20.9	16.6	16.6	31.4	30.2	31.2	26.6	30.1	31.1
Incr Delay (d2), s/veh	1.0	19.4	1.7	31.1	1.7	3.1	4.7	2.0	4.1	0.4	1.3	3.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.0	20.5	4.4	3.0	7.5	8.5	3.1	2.1	3.0	1.4	1.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.2	42.6	16.7	52.0	18.3	19.7	36.1	32.1	35.2	27.0	31.4	34.6
LnGrp LOS	B	F	B	D	B	B	D	C	D	C	C	C
Approach Vol, veh/h		2924				1718			495			291
Approach Delay, s/veh		38.7				21.8			35.0			31.5
Approach LOS		D				C			D			C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.6	48.2	9.6	22.6	9.1	48.7	9.2	23.0				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	43.7	5.1	18.1	9.0	39.8	5.1	18.1				
Max Q Clear Time (g_c+l1), s	5.9	45.7	7.1	8.0	4.6	21.5	5.4	8.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.1	10.6	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			32.6									
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 1.1

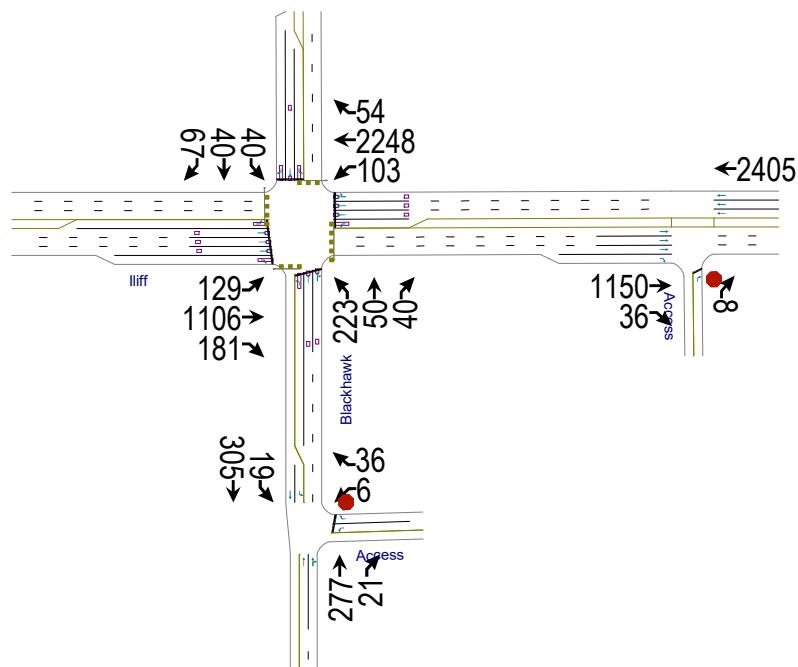
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	2401	100	0	1581	0	69
Future Vol, veh/h	2401	100	0	1581	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2610	109	0	1718	0	75

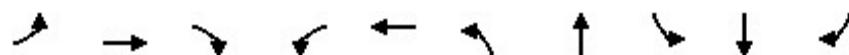
Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	65.9
HCM LOS		F	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	129	-	-	-
HCM Lane V/C Ratio	0.581	-	-	-
HCM Control Delay (s)	65.9	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	2.9	-	-	-

Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↓		↑	↑
Traffic Vol, veh/h	43	108	348	42	165	354
Future Vol, veh/h	43	108	348	42	165	354
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	117	378	46	179	385
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1144	212	0	0	424	0
Stage 1	401	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	207	794	-	-	1133	-
Stage 1	646	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	174	794	-	-	1133	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	16.8	0		2.8		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	174	794	1133	-
HCM Lane V/C Ratio	-	-	0.269	0.148	0.158	-
HCM Control Delay (s)	-	-	33.1	10.3	8.8	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	1	0.5	0.6	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	140	1202	196	112	2502	242	98	44	44	73
v/c Ratio	0.73	0.43	0.21	0.38	0.92	0.67	0.13	0.16	0.16	0.21
Control Delay	44.4	17.1	2.4	11.8	32.1	47.4	23.7	34.4	46.0	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	17.1	2.4	11.8	32.1	47.4	23.7	34.4	46.0	1.3
Queue Length 50th (ft)	54	195	0	30	629	158	18	25	30	0
Queue Length 95th (ft)	#145	237	35	52	711	240	42	56	66	0
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	202	2764	950	317	2726	361	734	269	281	354
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	0.69	0.43	0.21	0.35	0.92	0.67	0.13	0.16	0.16	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	109	937	153	87	1905	46	189	42	34	34	34	57
Future Volume (veh/h)	109	937	153	87	1905	46	189	42	34	34	34	57
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	140	1202	196	112	2443	59	242	54	44	44	44	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	2904	902	305	2880	69	382	404	296	313	282	239
Arrive On Green	0.05	0.57	0.57	0.04	0.56	0.56	0.09	0.21	0.21	0.03	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	1781	5129	123	1781	1957	1433	1781	1870	1585
Grp Volume(v), veh/h	140	1202	196	112	1618	884	242	48	50	44	44	73
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1848	1781	1777	1612	1781	1870	1585
Q Serve(g_s), s	4.0	15.9	7.3	3.2	47.7	48.2	10.5	2.7	3.0	2.5	2.5	4.9
Cycle Q Clear(g_c), s	4.0	15.9	7.3	3.2	47.7	48.2	10.5	2.7	3.0	2.5	2.5	4.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	170	2904	902	305	1911	1038	382	367	333	313	282	239
V/C Ratio(X)	0.82	0.41	0.22	0.37	0.85	0.85	0.63	0.13	0.15	0.14	0.16	0.31
Avail Cap(c_a), veh/h	222	2904	902	369	1911	1038	382	367	333	331	282	239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	14.6	12.7	11.4	22.0	22.1	39.8	38.9	39.0	41.1	44.3	45.4
Incr Delay (d2), s/veh	17.0	0.4	0.6	0.7	4.9	8.8	3.4	0.7	0.9	0.2	1.2	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.0	6.1	2.7	1.3	19.4	22.4	1.7	1.3	1.3	1.1	1.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.3	15.0	13.3	12.1	26.8	30.9	43.2	39.6	39.9	41.3	45.5	48.6
LnGrp LOS	D	B	B	B	C	C	D	D	D	D	D	D
Approach Vol, veh/h	1538				2614			340			161	
Approach Delay, s/veh	17.5				27.6			42.2			45.8	
Approach LOS	B				C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.6	72.8	15.0	22.6	10.5	71.9	8.3	29.3				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	63.9	10.5	18.1	9.5	63.9	5.1	23.5				
Max Q Clear Time (g_c+l1), s	5.2	17.9	12.5	6.9	6.0	50.2	4.5	5.0				
Green Ext Time (p_c), s	0.1	13.0	0.0	0.3	0.1	12.1	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay				25.9								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	1150	36	0	2405	0	8
Future Vol, veh/h	1150	36	0	2405	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1250	39	0	2614	0	9

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.92
Pot Cap-1 Maneuver	-	0	-	367
Stage 1	-	0	-	0
Stage 2	-	0	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	367
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB WB NB

HCM Control Delay, s	0	0	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	367	-	-	-
HCM Lane V/C Ratio	0.024	-	-	-
HCM Control Delay (s)	15	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection

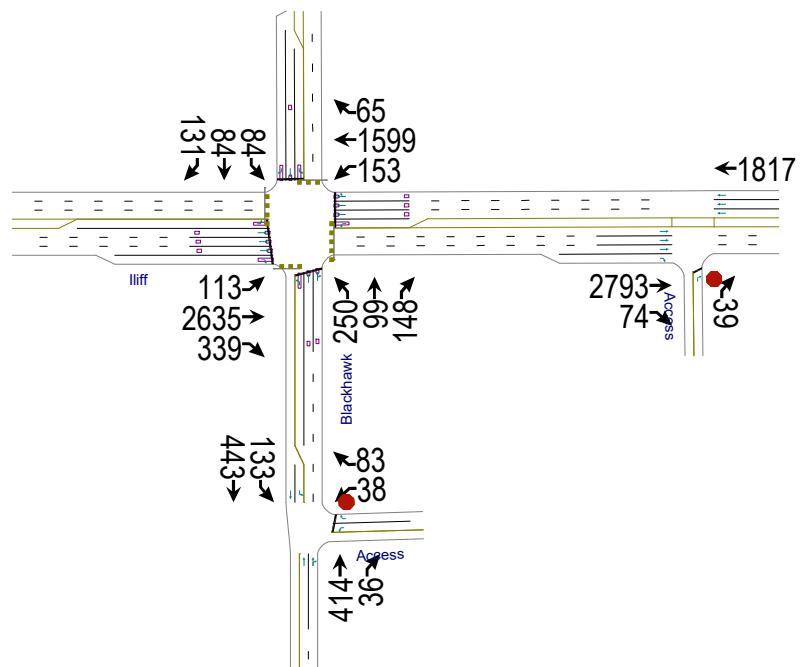
Int Delay, s/veh 0.9

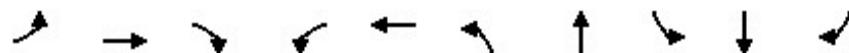
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↑↓		↖	↑
Traffic Vol, veh/h	6	36	277	21	19	305
Future Vol, veh/h	6	36	277	21	19	305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	39	301	23	21	332

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	687	162	0	0	324
Stage 1	313	-	-	-	-
Stage 2	374	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	396	855	-	-	1234
Stage 1	715	-	-	-	-
Stage 2	695	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	389	855	-	-	1234
Mov Cap-2 Maneuver	389	-	-	-	-
Stage 1	715	-	-	-	-
Stage 2	683	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	389	855	1234	-
HCM Lane V/C Ratio	-	-	0.017	0.046	0.017	-
HCM Control Delay (s)	-	-	14.4	9.4	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.1	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	123	2864	368	167	1809	272	268	91	91	142
v/c Ratio	0.58	0.99	0.37	0.95	0.65	0.89	0.42	0.38	0.33	0.40
Control Delay	26.5	41.5	6.5	86.6	20.3	72.1	21.7	40.4	49.3	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	41.5	6.5	86.6	20.3	72.1	21.7	40.4	49.3	12.1
Queue Length 50th (ft)	32	767	53	79	339	186	42	56	64	4
Queue Length 95th (ft)	92	#927	110	#225	415	#351	84	101	116	62
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	254	2881	991	175	2794	307	643	243	279	353
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	0.48	0.99	0.37	0.95	0.65	0.89	0.42	0.37	0.33	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	96	2233	287	130	1355	55	212	84	125	71	71	111
Future Volume (veh/h)	96	2233	287	130	1355	55	212	84	125	71	71	111
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	2864	368	167	1738	71	272	108	160	91	91	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	2893	898	175	2943	120	305	289	258	237	281	238
Arrive On Green	0.05	0.57	0.57	0.06	0.58	0.58	0.07	0.16	0.16	0.06	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	1781	5032	205	1781	1777	1585	1781	1870	1585
Grp Volume(v), veh/h	123	2864	368	167	1175	634	272	108	160	91	91	142
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1833	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	3.4	66.4	15.7	7.1	26.3	26.3	8.3	6.5	11.3	5.1	5.2	10.0
Cycle Q Clear(g_c), s	3.4	66.4	15.7	7.1	26.3	26.3	8.3	6.5	11.3	5.1	5.2	10.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	2893	898	175	1991	1072	305	289	258	237	281	238
V/C Ratio(X)	0.52	0.99	0.41	0.95	0.59	0.59	0.89	0.37	0.62	0.38	0.32	0.60
Avail Cap(c_a), veh/h	339	2893	898	175	1991	1072	305	289	258	242	281	238
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	25.7	14.7	38.4	15.8	15.8	47.1	44.8	46.8	40.2	45.6	47.6
Incr Delay (d2), s/veh	1.8	14.5	1.4	54.4	1.3	2.4	26.0	3.7	10.7	1.0	3.0	10.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.4	29.0	5.9	7.6	10.2	11.3	6.4	3.2	5.2	2.3	2.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.0	40.2	16.1	92.8	17.1	18.2	73.1	48.5	57.5	41.3	48.6	58.2
LnGrp LOS	B	D	B	F	B	B	E	D	E	D	D	E
Approach Vol, veh/h		3355			1976			540			324	
Approach Delay, s/veh		36.6			23.8			63.6			50.8	
Approach LOS		D			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	12.2	72.5	12.8	22.5	10.0	74.7	11.3	24.0				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.7	68.0	8.3	18.0	12.4	63.3	7.1	19.2				
Max Q Clear Time (g_c+l1), s	9.1	68.4	10.3	12.0	5.4	28.3	7.1	13.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.2	18.4	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				35.6								
HCM 6th LOS				D								

Intersection

Int Delay, s/veh 0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	2793	74	0	1817	0	39
Future Vol, veh/h	2793	74	0	1817	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3036	80	0	1975	0	42

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

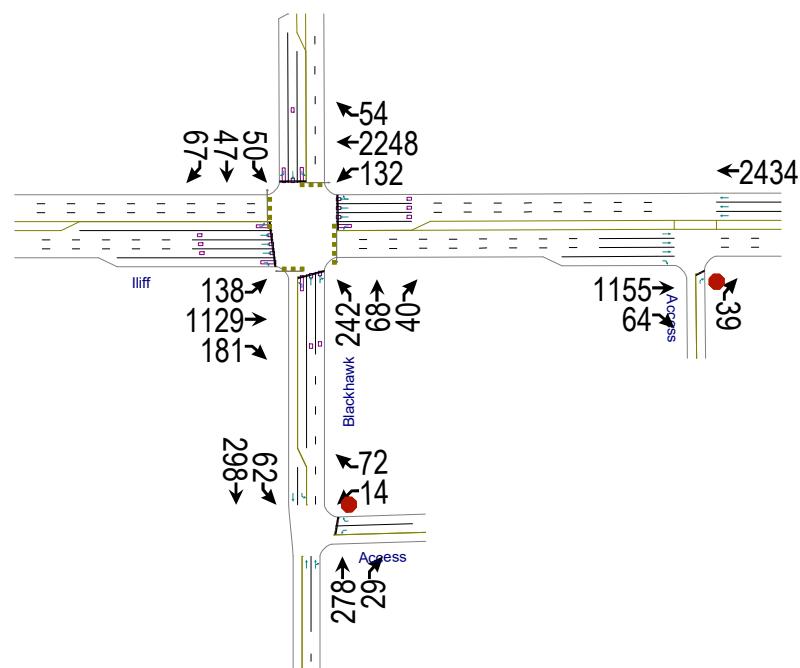
Approach EB WB NB

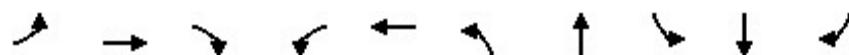
HCM Control Delay, s 0 0 73.9

HCM LOS F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	92	-	-	-
HCM Lane V/C Ratio	0.461	-	-	-
HCM Control Delay (s)	73.9	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	1.9	-	-	-

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↓		↑	↑
Traffic Vol, veh/h	38	83	414	36	133	443
Future Vol, veh/h	38	83	414	36	133	443
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	90	450	39	145	482
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1242	245	0	0	489	0
Stage 1	470	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	179	756	-	-	1072	-
Stage 1	596	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	155	756	-	-	1072	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	18.6	0		2.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	155	756	1072	-
HCM Lane V/C Ratio	-	-	0.266	0.119	0.135	-
HCM Control Delay (s)	-	-	36.5	10.4	8.9	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1	0.4	0.5	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	150	1227	196	144	2502	263	118	54	51	73
v/c Ratio	0.77	0.45	0.21	0.48	0.92	0.73	0.16	0.20	0.18	0.21
Control Delay	49.5	18.0	2.6	13.6	32.5	51.0	26.0	35.0	46.4	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	18.0	2.6	13.6	32.5	51.0	26.0	35.0	46.4	1.3
Queue Length 50th (ft)	62	204	0	39	629	174	25	31	35	0
Queue Length 95th (ft)	#167	254	36	65	711	#269	52	65	73	0
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	202	2718	937	345	2717	360	733	271	281	354
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	0.74	0.45	0.21	0.42	0.92	0.73	0.16	0.20	0.18	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	117	957	153	112	1905	46	205	58	34	42	40	57
Future Volume (veh/h)	117	957	153	112	1905	46	205	58	34	42	40	57
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	1227	196	144	2443	59	263	74	44	54	51	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	2857	887	311	2854	69	377	449	247	315	282	239
Arrive On Green	0.06	0.56	0.56	0.05	0.56	0.56	0.09	0.20	0.20	0.04	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	1781	5129	123	1781	2210	1218	1781	1870	1585
Grp Volume(v), veh/h	150	1227	196	144	1618	884	263	58	60	54	51	73
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1848	1781	1777	1651	1781	1870	1585
Q Serve(g_s), s	4.6	16.7	7.5	4.1	48.2	48.8	10.5	3.2	3.6	3.1	2.9	4.9
Cycle Q Clear(g_c), s	4.6	16.7	7.5	4.1	48.2	48.8	10.5	3.2	3.6	3.1	2.9	4.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	178	2857	887	311	1894	1028	377	361	335	315	282	239
V/C Ratio(X)	0.84	0.43	0.22	0.46	0.85	0.86	0.70	0.16	0.18	0.17	0.18	0.31
Avail Cap(c_a), veh/h	221	2857	887	398	1894	1028	377	361	335	334	282	239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	15.3	13.3	11.8	22.5	22.6	41.0	39.4	39.5	41.0	44.5	45.4
Incr Delay (d2), s/veh	20.9	0.5	0.6	1.1	5.2	9.3	5.6	1.0	1.2	0.3	1.4	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.4	6.5	2.8	1.7	19.7	22.8	2.7	1.5	1.6	1.4	1.4	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.5	15.8	13.9	12.9	27.7	31.9	46.6	40.4	40.7	41.3	45.9	48.6
LnGrp LOS	D	B	B	B	C	C	D	D	D	D	D	D
Approach Vol, veh/h	1573				2646			381			178	
Approach Delay, s/veh	18.8				28.3			44.7			45.6	
Approach LOS	B				C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	10.7	71.7	15.0	22.6	11.1	71.3	8.7	28.9				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.1	61.3	10.5	18.1	9.5	63.9	5.5	23.1				
Max Q Clear Time (g_c+l1), s	6.1	18.7	12.5	6.9	6.6	50.8	5.1	5.6				
Green Ext Time (p_c), s	0.2	13.2	0.0	0.3	0.1	11.7	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay				27.1								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	1155	64	0	2434	0	39
Future Vol, veh/h	1155	64	0	2434	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1255	70	0	2646	0	42

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	-	628
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.92
Pot Cap-1 Maneuver	-	0	-	365
Stage 1	-	0	-	0
Stage 2	-	0	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	365
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB WB NB

HCM Control Delay, s	0	0	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	365	-	-	-
HCM Lane V/C Ratio	0.116	-	-	-
HCM Control Delay (s)	16.2	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection

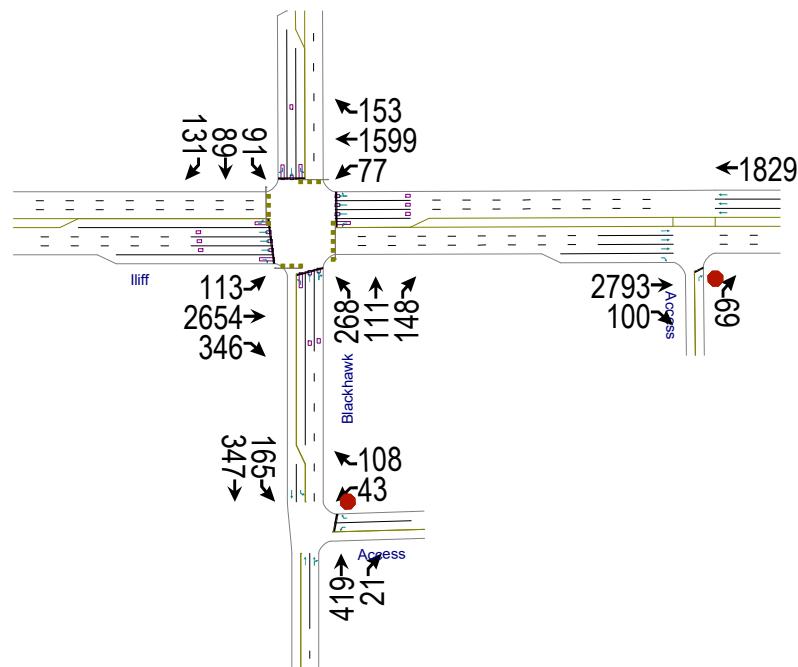
Int Delay, s/veh 1.9

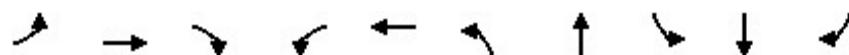
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑↑		↑	↑
Traffic Vol, veh/h	14	72	278	29	62	298
Future Vol, veh/h	14	72	278	29	62	298
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	78	302	32	67	324

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	776	167	0	0	334
Stage 1	318	-	-	-	-
Stage 2	458	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	350	849	-	-	1224
Stage 1	711	-	-	-	-
Stage 2	636	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	331	849	-	-	1224
Mov Cap-2 Maneuver	331	-	-	-	-
Stage 1	711	-	-	-	-
Stage 2	601	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	331	849	1224	-
HCM Lane V/C Ratio	-	-	0.046	0.092	0.055	-
HCM Control Delay (s)	-	-	16.4	9.7	8.1	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0.2	-





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	123	2885	376	83	1905	291	281	99	96	142
v/c Ratio	0.61	0.99	0.37	0.61	0.70	0.89	0.45	0.38	0.34	0.40
Control Delay	32.6	38.8	6.2	36.2	22.4	70.3	27.8	38.8	49.7	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	38.8	6.2	36.2	22.4	70.3	27.8	38.8	49.7	12.1
Queue Length 50th (ft)	41	763	52	21	379	197	57	59	68	4
Queue Length 95th (ft)	104	#925	109	#84	464	#372	102	107	121	62
Internal Link Dist (ft)		303			444		327		203	
Turn Bay Length (ft)	250		200	100		225		175		250
Base Capacity (vph)	243	2928	1007	135	2713	327	626	265	279	353
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	0.51	0.99	0.37	0.61	0.70	0.89	0.45	0.37	0.34	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑	↑↑↑	↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (veh/h)	96	2249	293	65	1355	130	227	94	125	77	75	111
Future Volume (veh/h)	96	2249	293	65	1355	130	227	94	125	77	75	111
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No			No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	2885	376	83	1738	167	291	121	160	99	96	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	2954	917	131	2710	260	326	305	272	255	281	238
Arrive On Green	0.05	0.58	0.58	0.04	0.57	0.57	0.08	0.17	0.17	0.06	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	1781	4739	454	1781	1777	1585	1781	1870	1585
Grp Volume(v), veh/h	123	2885	376	83	1247	658	291	121	160	99	96	142
Grp Sat Flow(s), veh/h/ln	1781	1702	1585	1781	1702	1789	1781	1777	1585	1781	1870	1585
Q Serve(g_s), s	3.4	65.7	15.7	2.3	29.7	29.9	9.9	7.3	11.2	5.6	5.5	10.0
Cycle Q Clear(g_c), s	3.4	65.7	15.7	2.3	29.7	29.9	9.9	7.3	11.2	5.6	5.5	10.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	2954	917	131	1947	1023	326	305	272	255	281	238
V/C Ratio(X)	0.57	0.98	0.41	0.63	0.64	0.64	0.89	0.40	0.59	0.39	0.34	0.60
Avail Cap(c_a), veh/h	322	2954	917	136	1947	1023	326	305	272	278	281	238
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	24.5	14.0	29.1	17.3	17.4	45.8	44.2	45.8	39.9	45.7	47.6
Incr Delay (d2), s/veh	2.3	12.0	1.4	8.7	1.6	3.1	25.2	3.8	9.0	1.0	3.3	10.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.5	28.0	5.8	1.7	11.6	12.7	6.2	3.5	5.1	2.5	2.8	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.5	36.5	15.3	37.8	19.0	20.5	71.1	48.0	54.8	40.9	49.0	58.2
LnGrp LOS	B	D	B	D	B	C	E	D	D	D	D	E
Approach Vol, veh/h	3384				1988			572			337	
Approach Delay, s/veh	33.5				20.3			61.7			50.5	
Approach LOS	C				C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R _c), s	9.2	73.9	14.4	22.5	10.0	73.1	11.8	25.1				
Change Period (Y+R _c), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	69.1	9.9	18.0	12.5	61.6	8.9	19.0				
Max Q Clear Time (g_c+l1), s	4.3	67.7	11.9	12.0	5.4	31.9	7.6	13.2				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.5	0.2	18.0	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay				32.8								
HCM 6th LOS				C								

Intersection

Int Delay, s/veh 1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↑↑	↑↑	↗	
Traffic Vol, veh/h	2793	100	0	1829	0	69
Future Vol, veh/h	2793	100	0	1829	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3036	109	0	1988	0	75

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	-	0	-
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	129.4

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	92	-	-	-
HCM Lane V/C Ratio	0.815	-	-	-
HCM Control Delay (s)	129.4	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	4.3	-	-	-

Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↑↓		↖	↑
Traffic Vol, veh/h	43	108	419	42	165	347
Future Vol, veh/h	43	108	419	42	165	347
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	117	455	23	179	377
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1202	239	0	0	478	0
Stage 1	467	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	190	763	-	-	1082	-
Stage 1	598	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	159	763	-	-	1082	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	18.1	0		2.9		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	159	763	1082	-
HCM Lane V/C Ratio	-	-	0.294	0.154	0.166	-
HCM Control Delay (s)	-	-	36.8	10.6	9	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1.2	0.5	0.6	-



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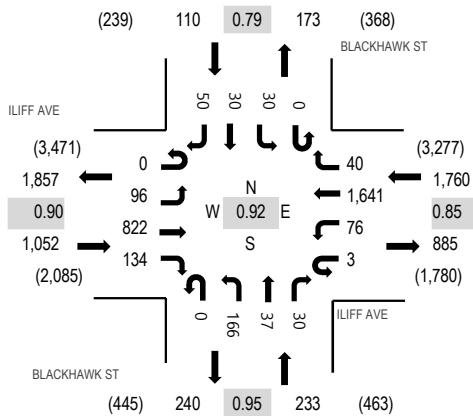
Location: 1 BLACKHAWK ST & ILIFF AVE AM

Date: Wednesday, September 2, 2020

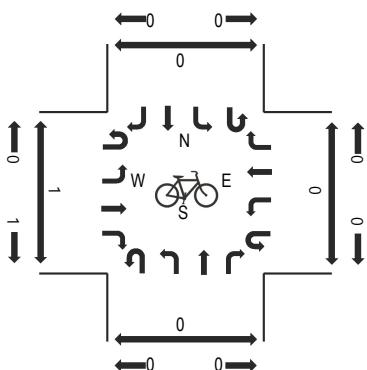
Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

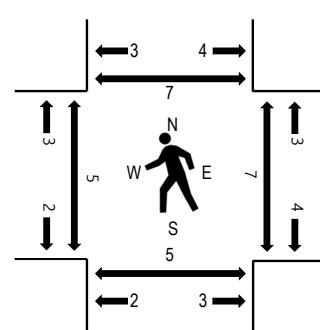
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	ILIFF AVE Eastbound				ILIFF AVE Westbound				BLACKHAWK ST Northbound				BLACKHAWK ST Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		West	East	South	North	
7:00 AM	0	15	187	18	0	8	349	13	0	40	8	14	0	5	4	11	672	3,099	1	3	2	0
7:15 AM	1	13	195	24	3	17	388	14	0	44	10	10	0	10	6	17	752	3,148	1	0	2	0
7:30 AM	0	21	211	20	0	15	496	8	0	47	5	6	0	7	10	12	858	3,155	1	0	1	0
7:45 AM	0	21	229	41	0	17	414	9	0	39	13	6	0	8	5	15	817	3,032	0	2	0	0
8:00 AM	0	28	211	38	1	22	327	7	0	40	10	9	0	6	8	14	721	2,965	3	2	4	7
8:15 AM	0	26	171	35	2	22	404	16	0	40	9	9	0	9	7	9	759		1	3	0	0
8:30 AM	0	35	202	42	1	19	341	11	0	30	8	11	0	7	7	21	735		4	0	3	1
8:45 AM	2	31	228	40	3	12	314	24	0	31	13	11	0	8	8	25	750		3	0	0	0
Count Total	3	190	1,634	258	10	132	3,033	102	0	311	76	76	0	60	55	124	6,064		14	10	12	8
Peak Hour	0	96	822	134	3	76	1,641	40	0	166	37	30	0	30	30	50	3,155		5	7	5	7



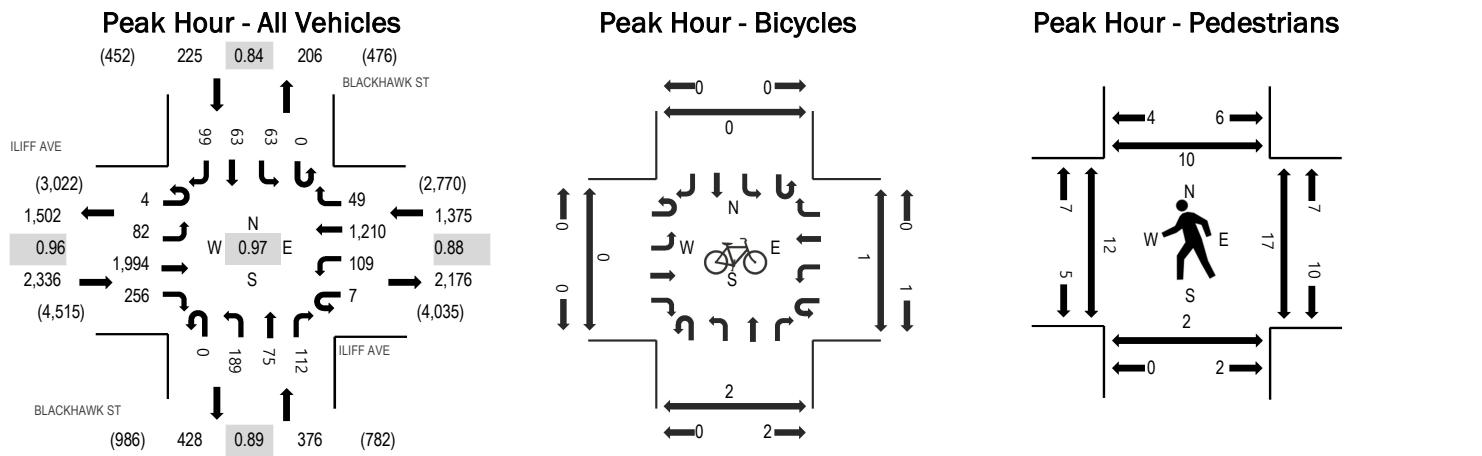
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Location: 1 BLACKHAWK ST & ILIFF AVE PM

Date: Wednesday, September 2, 2020

Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	ILIFF AVE Eastbound				ILIFF AVE Westbound				BLACKHAWK ST Northbound				BLACKHAWK ST Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North	
4:00 PM	1	20	507	61	1	27	290	9	0	42	18	22	0	17	13	31	1,059	4,312	0	3	0	0
4:15 PM	2	17	529	63	1	20	345	13	0	44	12	29	0	11	9	15	1,110	4,257	0	6	0	3
4:30 PM	1	21	498	74	3	31	275	16	0	61	18	31	0	14	22	28	1,093	4,187	6	1	0	3
4:45 PM	0	24	460	58	2	31	300	11	0	42	27	30	0	21	19	25	1,050	4,228	6	7	2	4
5:00 PM	0	22	406	91	0	26	276	14	0	45	23	26	0	17	17	41	1,004	4,207	3	4	2	1
5:15 PM	1	28	353	111	1	44	331	22	0	54	29	17	0	10	19	20	1,040	5	3	0	1	
5:30 PM	1	21	482	105	1	31	300	17	0	59	30	26	0	16	14	31	1,134	1	2	0	0	
5:45 PM	0	24	464	70	0	21	294	17	0	50	23	24	0	16	9	17	1,029	1	1	2	1	
Count Total	6	177	3,699	633	9	231	2,411	119	0	397	180	205	0	122	122	208	8,519	22	27	6	13	
Peak Hour	4	82	1,994	256	7	109	1,210	49	0	189	75	112	0	63	63	99	4,312	12	17	2	10	

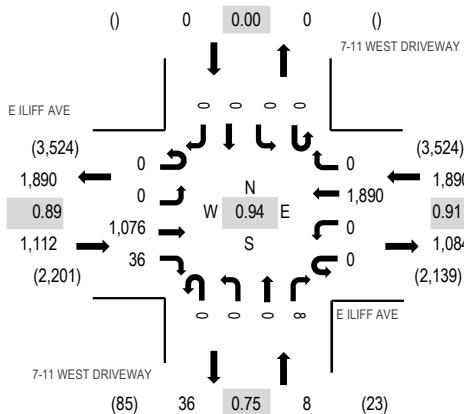
Location: 1 7-11 WEST DRIVEWAY & E ILLIFF AVE AM

Date: Tuesday, May 4, 2021

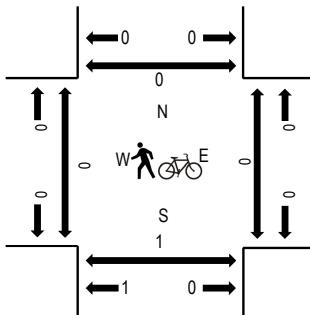
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E ILLIFF AVE Eastbound				E ILLIFF AVE Westbound				7-11 WEST DRIVEWAY Northbound				7-11 WEST DRIVEWAY Southbound				Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North
7:00 AM	0	0	248	16	0	0	421	0	0	0	0	2	0	0	0	0	687	3,000	0	0	0
7:15 AM	0	0	270	10	0	0	519	0	0	0	0	3	0	0	0	0	802	3,010	0	0	0
7:30 AM	0	0	229	10	0	0	484	0	0	0	0	0	0	0	0	0	723	2,928	0	0	0
7:45 AM	0	0	310	8	0	0	467	0	0	0	0	3	0	0	0	0	788	2,876	0	0	1
8:00 AM	0	0	267	8	0	0	420	0	0	0	0	2	0	0	0	0	697	2,748	0	0	0
8:15 AM	0	0	285	13	0	0	418	0	0	0	0	4	0	0	0	0	720	0	0	0	0
8:30 AM	0	0	236	9	0	0	421	0	0	0	0	5	0	0	0	0	671	0	0	1	0
8:45 AM	0	0	271	11	0	0	374	0	0	0	0	4	0	0	0	0	660	0	0	0	0
Count Total	0	0	2,116	85	0	0	3,524	0	0	0	0	23	0	0	0	0	5,748	0	0	2	0
Peak Hour	0	0	1,076	36	0	0	1,890	0	0	0	0	8	0	0	0	0	3,010	0	0	1	0

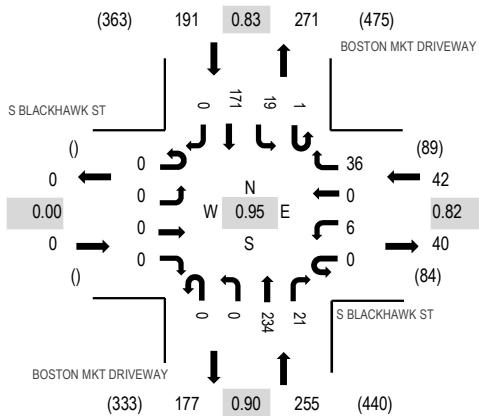
Location: 2 BOSTON MKT DRIVEWAY & S BLACKHAWK ST AM

Date: Tuesday, May 4, 2021

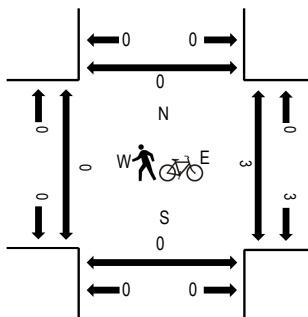
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	S BLACKHAWK ST Eastbound				S BLACKHAWK ST Westbound				BOSTON MKT DRIVEWAY Northbound				BOSTON MKT DRIVEWAY Southbound				Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		West	East	South	North	
7:00 AM	0	0	0	0	0	4	0	5	0	0	38	2	0	6	22	0	77	415	0	0	0	0
7:15 AM	0	0	0	0	0	3	0	8	0	0	49	6	0	5	36	0	107	452	0	0	1	0
7:30 AM	0	0	0	0	0	1	0	10	0	0	43	5	1	7	36	0	103	472	0	0	1	0
7:45 AM	0	0	0	0	0	2	0	12	0	0	53	8	0	3	50	0	128	488	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	9	0	0	53	4	1	6	40	0	114	477	0	0	0	0
8:15 AM	0	0	0	0	0	2	0	9	0	0	68	3	0	7	38	0	127	0	1	0	0	
8:30 AM	0	0	0	0	0	1	0	6	0	0	60	6	0	3	43	0	119	0	1	0	0	
8:45 AM	0	0	0	0	0	7	0	9	0	0	41	1	0	12	47	0	117	0	0	0	0	
Count Total	0	0	0	0	0	21	0	68	0	0	405	35	2	49	312	0	892	0	2	2	0	
Peak Hour	0	0	0	0	0	6	0	36	0	0	234	21	1	19	171	0	488	0	2	0	0	

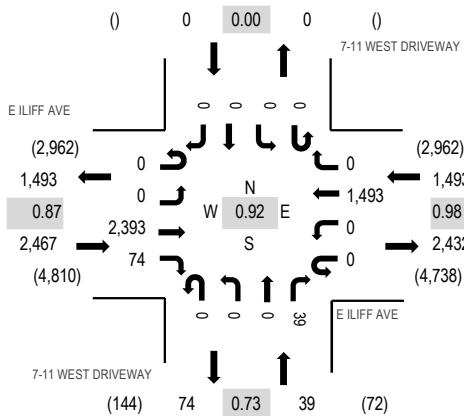
Location: 1 7-11 WEST DRIVEWAY & E ILLIFF AVE PM

Date: Tuesday, May 4, 2021

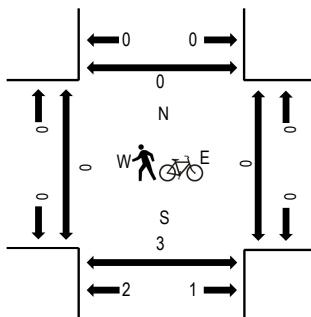
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E ILLIFF AVE Eastbound				E ILLIFF AVE Westbound				7-11 WEST DRIVEWAY Northbound				7-11 WEST DRIVEWAY Southbound				Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	West	East	South	North
4:00 PM	0	0	585	20	0	0	360	0	0	0	0	8	0	0	0	0	973	3,906	0	0	0
4:15 PM	0	0	553	15	0	0	381	0	0	0	0	9	0	0	0	0	958	3,855	0	0	0
4:30 PM	0	0	577	16	0	0	393	0	0	0	0	10	0	0	0	0	996	3,980	0	0	1
4:45 PM	0	0	551	19	0	0	395	0	0	0	0	14	0	0	0	0	979	3,999	0	0	1
5:00 PM	0	0	513	17	0	0	387	0	0	0	0	5	0	0	0	0	922	3,938	0	0	1
5:15 PM	0	0	692	18	0	0	362	0	0	0	0	11	0	0	0	0	1,083	0	0	0	0
5:30 PM	0	0	637	20	0	0	349	0	0	0	0	9	0	0	0	0	1,015	0	0	0	0
5:45 PM	0	0	558	19	0	0	335	0	0	0	0	6	0	0	0	0	918	0	0	1	0
Count Total	0	0	4,666	144	0	0	2,962	0	0	0	0	72	0	0	0	0	7,844	0	0	4	0
Peak Hour	0	0	2,393	74	0	0	1,493	0	0	0	0	39	0	0	0	0	3,999	0	0	2	0

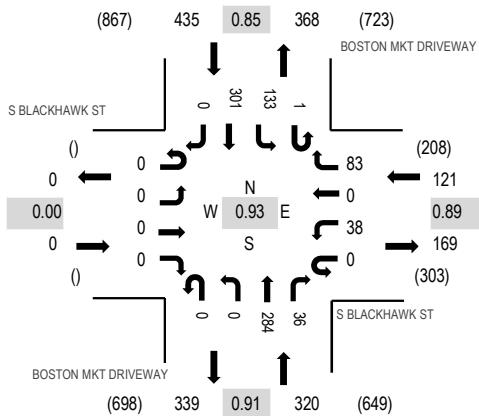
Location: 2 BOSTON MKT DRIVEWAY & S BLACKHAWK ST PM

Date: Tuesday, May 4, 2021

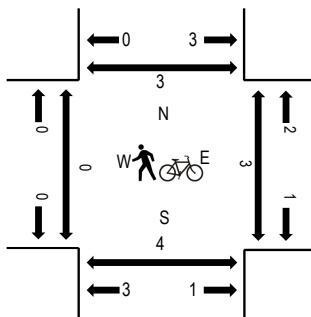
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:45 PM - 06:00 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	S BLACKHAWK ST				S BLACKHAWK ST				BOSTON MKT DRIVEWAY				BOSTON MKT DRIVEWAY				Rolling Hour	Pedestrian Crossings				
	Eastbound				Westbound				Northbound				Southbound					West	East	South	North	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total					
4:00 PM	0	0	0	0	0	4	0	14	0	0	83	7	0	19	86	0	213	848	0	0	1	0
4:15 PM	0	0	0	0	0	9	0	15	0	0	73	10	0	27	68	0	202	853	0	0	0	0
4:30 PM	0	0	0	0	0	5	0	14	0	0	69	9	0	29	99	0	225	863	0	0	0	0
4:45 PM	0	0	0	0	0	7	0	19	0	0	68	10	0	23	81	0	208	848	0	1	2	0
5:00 PM	0	0	0	0	0	11	0	23	0	0	70	5	1	31	77	0	218	876	0	2	1	1
5:15 PM	0	0	0	0	0	11	0	20	0	0	82	7	0	33	59	0	212	853	0	0	3	0
5:30 PM	0	0	0	0	0	7	0	22	0	0	65	13	0	27	76	0	210	853	0	0	0	2
5:45 PM	0	0	0	0	0	9	0	18	0	0	67	11	0	42	89	0	236	853	0	0	0	0
Count Total	0	0	0	0	0	63	0	145	0	0	577	72	1	231	635	0	1,724	0	3	7	3	
Peak Hour	0	0	0	0	0	38	0	83	0	0	284	36	1	133	301	0	876	0	2	4	3	