Attachment B

Traffic Analyses

- B1: No Build Traffic Analysis
- B2: North Hamilton Crossing (NHX) Traffic Analysis Report

Attachment B1
No Build Traffic Analysis

2020 EXISTING INTERSECTION SYNCHRO RESULTS

HCM 6th Signalized Intersection Summary
3: N Monument St & Main St/High St

3/17/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1380	80	0	860	10	0	0	0	10	10	20
Future Volume (veh/h)	0	1380	80	0	860	10	0	0	0	10	10	20
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1811	1811				1767	1767	1767
Adj Flow Rate, veh/h	0	1438	83	0	896	10				10	10	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	4	4	0	6	6				9	9	9
Cap, veh/h	0	4401	254	0	3157	35				16	16	
Arrive On Green	0.00	0.91	0.91	0.00	0.91	0.91				0.02	0.02	0.00
Sat Flow, veh/h	0	5026	280	0	3576	39				862	862	1497
Grp Volume(v), veh/h	0	991	530	0	442	464				20	0	0
Grp Sat Flow(s),veh/h/ln	0	1675	1790	0	1721	1804				1724	0	1497
Q Serve(g_s), s	0.0	6.3	6.3	0.0	5.2	5.2				1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.3	6.3	0.0	5.2	5.2				1.8	0.0	0.0
Prop In Lane	0.00		0.16	0.00		0.02				0.50		1.00
Lane Grp Cap(c), veh/h	0	3034	1621	0	1558	1634				32	0	
V/C Ratio(X)	0.00	0.33	0.33	0.00	0.28	0.28				0.63	0.00	
Avail Cap(c_a), veh/h	0	3034	1621	0	1558	1634				262	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.96	0.96				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.0	1.0	0.0	0.9	0.9				77.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.5	0.0	0.4	0.4				18.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	2.1	2.4	0.0	1.9	2.0				1.8	0.0	0.0
Unsig. Movement Delay, s/veh												0.00
LnGrp Delay(d),s/veh	0.0	1.3	1.5	0.0	1.4	1.4				95.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				F	A	A
Approach Vol, veh/h		1521			906						41	A
Approach Delay, s/veh		1.4			1.4						46.6	
Approach LOS		A			A						D	

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	149.1				149.1		8.9					
Change Period (Y+Rc), s	6.0				6.0		6.0					
Max Green Setting (Gmax), s	122.0				122.0		24.0					
Max Q Clear Time (g_c+I1), s	8.3				7.2		3.8					
Green Ext Time (p_c), s	19.2				7.8		0.0					

Intersection Summary												
HCM 6th Ctrl Delay			2.1									
HCM 6th LOS			A									

Notes

Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1300	60	160	820	10	40	10	100	10	10	10
Future Volume (veh/h)	30	1300	60	160	820	10	40	10	100	10	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	30	1354	62	167	854	10	42	10	104	10	10	10
Peak Hour Factor	1.00	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	5	5	5	5	5	5	5	5	5
Cap, veh/h	506	2558	1141	322	2625	31	108	16	165	68	57	178
Arrive On Green	0.02	0.73	0.73	0.04	0.75	0.75	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1753	3497	1560	1739	3512	41	1359	138	1431	297	497	1547
Grp Volume(v), veh/h	30	1354	62	167	422	442	42	0	114	20	0	10
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1739	1735	1818	1359	0	1568	794	0	1547
Q Serve(g_s), s	0.7	26.8	1.8	3.8	12.8	12.8	4.8	0.0	11.0	0.1	0.0	0.9
Cycle Q Clear(g_c), s	0.7	26.8	1.8	3.8	12.8	12.8	15.8	0.0	11.0	11.1	0.0	0.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.91	0.50		1.00
Lane Grp Cap(c), veh/h	506	2558	1141	322	1297	1359	108	0	181	126	0	178
V/C Ratio(X)	0.06	0.53	0.05	0.52	0.33	0.33	0.39	0.00	0.63	0.16	0.00	0.06
Avail Cap(c_a), veh/h	543	2558	1141	474	1297	1359	166	0	248	189	0	245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	9.3	5.9	8.8	6.7	6.7	74.3	0.0	66.7	62.8	0.0	62.2
Incr Delay (d2), s/veh	0.0	0.7	0.1	1.2	0.6	0.6	2.3	0.0	3.6	0.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	15.5	1.1	2.8	8.4	8.7	3.2	0.0	8.2	1.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.2	10.1	6.0	10.0	7.3	7.3	76.6	0.0	70.3	63.4	0.0	62.4
LnGrp LOS	A	B	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1446			1031			156			30	
Approach Delay, s/veh		9.8			7.7			72.0			63.0	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	121.6		24.2	9.7	124.1		24.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	20.0	95.0		25.0	7.0	108.0		25.0				
Max Q Clear Time (g_c+I1), s	5.8	28.8		17.8	2.7	14.8		13.1				
Green Ext Time (p_c), s	0.4	17.6		0.4	0.0	7.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		13.2	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1360	30	70	960	10	10	10	30	20	20	20
Future Volume (veh/h)	20	1360	30	70	960	10	10	10	30	20	20	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1767	1767	1767	1781	1781	1781
Adj Flow Rate, veh/h	22	1478	33	76	1043	11	11	11	33	22	22	22
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, %	4	4	4	5	5	5	9	9	9	8	8	8
Cap, veh/h	463	2790	62	318	2844	30	86	23	68	85	47	47
Arrive On Green	0.02	0.80	0.80	0.03	0.81	0.81	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1753	3497	78	1739	3517	37	1287	389	1167	1298	817	817
Grp Volume(v), veh/h	22	738	773	76	514	540	11	0	44	22	0	44
Grp Sat Flow(s),veh/h/ln	1753	1749	1827	1739	1735	1819	1287	0	1556	1298	0	1634
Q Serve(g_s), s	0.4	23.3	23.4	1.2	12.7	12.7	1.3	0.0	4.3	2.6	0.0	4.1
Cycle Q Clear(g_c), s	0.4	23.3	23.4	1.2	12.7	12.7	5.4	0.0	4.3	7.0	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.75	1.00		0.50
Lane Grp Cap(c), veh/h	463	1395	1457	318	1403	1471	86	0	90	85	0	95
V/C Ratio(X)	0.05	0.53	0.53	0.24	0.37	0.37	0.13	0.00	0.49	0.26	0.00	0.47
Avail Cap(c_a), veh/h	507	1395	1457	364	1403	1471	232	0	266	232	0	279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.1	5.6	5.6	4.7	4.1	4.1	74.7	0.0	72.2	75.5	0.0	72.1
Incr Delay (d2), s/veh	0.0	1.2	1.1	0.4	0.7	0.7	0.7	0.0	4.1	1.6	0.0	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(95%),veh/ln	0.2	12.7	13.2	0.7	7.8	8.1	0.8	0.0	3.3	1.7	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.1	6.8	6.7	5.0	4.8	4.8	75.4	0.0	76.2	77.1	0.0	75.6
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1533			1130			55			66	
Approach Delay, s/veh		6.7			4.8			76.1			76.1	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	132.0		15.1	9.1	133.8		15.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	104.0		27.0	7.0	106.0		27.0				
Max Q Clear Time (g_c+I1), s	3.2	25.4		7.4	2.4	14.7		9.0				
Green Ext Time (p_c), s	0.1	19.8		0.2	0.0	9.9		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1380	20	30	1000	30	10	10	30	20	30	30
Future Volume (veh/h)	10	1380	20	30	1000	30	10	10	30	20	30	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	11	1453	21	32	1053	32	11	11	32	21	32	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	5	5	5	0	0	0	11	11	11
Cap, veh/h	441	2835	41	319	2801	85	74	26	76	90	48	48
Arrive On Green	0.01	0.80	0.80	0.02	0.81	0.81	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1753	3529	51	1739	3437	104	1359	429	1247	1266	797	797
Grp Volume(v), veh/h	11	719	755	32	531	554	11	0	43	21	0	64
Grp Sat Flow(s),veh/h/ln	1753	1749	1832	1739	1735	1807	1359	0	1676	1266	0	1594
Q Serve(g_s), s	0.2	22.0	22.1	0.5	13.1	13.1	1.3	0.0	4.0	2.6	0.0	6.3
Cycle Q Clear(g_c), s	0.2	22.0	22.1	0.5	13.1	13.1	7.6	0.0	4.0	6.6	0.0	6.3
Prop In Lane	1.00		0.03	1.00		0.06	1.00		0.74	1.00		0.50
Lane Grp Cap(c), veh/h	441	1405	1471	319	1413	1472	74	0	102	90	0	97
V/C Ratio(X)	0.02	0.51	0.51	0.10	0.38	0.38	0.15	0.00	0.42	0.23	0.00	0.66
Avail Cap(c_a), veh/h	497	1405	1471	354	1413	1472	195	0	251	204	0	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(I)	0.82	0.82	0.82	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.1	5.3	5.3	4.1	4.0	4.0	77.3	0.0	72.5	75.6	0.0	73.6
Incr Delay (d2), s/veh	0.0	1.1	1.1	0.1	0.6	0.6	0.9	0.0	2.8	1.3	0.0	7.5
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(95%),veh/ln	0.1	12.0	12.5	0.3	7.6	7.9	0.8	0.0	3.2	1.6	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.2	6.4	6.3	4.2	4.6	4.5	78.2	0.0	75.2	76.9	0.0	81.1
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	F
Approach Vol, veh/h		1485			1117			54			85	
Approach Delay, s/veh		6.3			4.5			75.8			80.1	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	134.5		15.7	7.9	136.4		15.7				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	111.0		24.0	7.0	111.0		24.0				
Max Q Clear Time (g_c+I1), s	2.5	24.1		9.6	2.2	15.1		8.6				
Green Ext Time (p_c), s	0.0	18.9		0.1	0.0	10.4		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1270	110	160	940	210	90	190	210	430	590	30
Future Volume (veh/h)	50	1270	110	160	940	210	90	190	210	430	590	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1811	1811	1811	1737	1737	1737	1826	1826	1826
Adj Flow Rate, veh/h	53	1351	117	170	1000	223	96	202	223	457	628	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	6	6	6	11	11	11	5	5	5
Cap, veh/h	241	1581	136	194	1796	1015	116	261	233	470	765	39
Arrive On Green	0.03	0.49	0.49	0.06	0.52	0.52	0.07	0.16	0.16	0.14	0.23	0.23
Sat Flow, veh/h	1739	3232	279	1725	3441	1535	1654	1650	1472	3374	3359	171
Grp Volume(v), veh/h	53	723	745	170	1000	223	96	202	223	457	324	336
Grp Sat Flow(s),veh/h/ln	1739	1735	1776	1725	1721	1535	1654	1650	1472	1687	1735	1795
Q Serve(g_s), s	2.4	57.7	58.4	7.6	30.9	9.1	9.1	18.6	23.7	21.3	28.0	28.1
Cycle Q Clear(g_c), s	2.4	57.7	58.4	7.6	30.9	9.1	9.1	18.6	23.7	21.3	28.0	28.1
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	241	848	868	194	1796	1015	116	261	233	470	395	409
V/C Ratio(X)	0.22	0.85	0.86	0.88	0.56	0.22	0.83	0.77	0.96	0.97	0.82	0.82
Avail Cap(c_a), veh/h	268	848	868	218	1796	1015	230	261	233	470	395	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.90	0.90	0.90	0.97	0.97	0.97	0.73	0.73	0.73
Uniform Delay (d), s/veh	21.3	35.4	35.5	34.3	25.4	10.6	72.6	63.8	66.0	67.7	58.0	58.0
Incr Delay (d2), s/veh	0.4	9.0	9.2	26.6	1.1	0.4	13.6	13.1	46.2	28.7	9.8	9.6
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(95%),veh/ln	1.9	34.4	35.5	7.9	18.5	5.7	7.6	13.5	17.4	15.7	18.5	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	44.4	44.7	60.9	26.6	11.1	86.2	76.9	112.1	96.4	67.7	67.5
LnGrp LOS	C	D	D	E	C	B	F	E	F	F	E	E
Approach Vol, veh/h		1521			1393			521			1117	
Approach Delay, s/veh		43.8			28.3			93.7			79.4	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	83.3	28.0	31.0	10.5	88.5	17.0	42.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	12.0	75.0	22.0	25.0	7.0	80.0	22.0	25.0
Max Q Clear Time (g_c+I1), s	9.6	60.4	23.3	25.7	4.4	32.9	11.1	30.1
Green Ext Time (p_c), s	0.1	9.2	0.0	0.0	0.0	10.1	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1810	40	30	1250	10	40	10	30	30	20	20
Future Volume (veh/h)	60	1810	40	30	1250	10	40	10	30	30	20	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1811	1811	1811	1870	1870	1870	1796	1796	1796
Adj Flow Rate, veh/h	62	1866	41	31	1289	10	41	10	31	31	21	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	7	7	7
Cap, veh/h	368	2995	66	203	2996	23	105	27	85	104	56	56
Arrive On Green	0.86	0.86	0.86	0.86	0.86	0.86	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	418	3499	77	228	3500	27	1365	402	1245	1312	824	824
Grp Volume(v), veh/h	62	929	978	31	634	665	41	0	41	31	0	42
Grp Sat Flow(s),veh/h/ln	418	1749	1827	228	1721	1806	1365	0	1646	1312	0	1648
Q Serve(g_s), s	6.3	25.8	26.2	7.7	13.3	13.3	4.7	0.0	3.8	3.7	0.0	3.9
Cycle Q Clear(g_c), s	19.5	25.8	26.2	33.9	13.3	13.3	8.5	0.0	3.8	7.4	0.0	3.9
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.76	1.00		0.50
Lane Grp Cap(c), veh/h	368	1497	1564	203	1473	1546	105	0	112	104	0	112
V/C Ratio(X)	0.17	0.62	0.63	0.15	0.43	0.43	0.39	0.00	0.37	0.30	0.00	0.37
Avail Cap(c_a), veh/h	368	1497	1564	203	1473	1546	237	0	271	230	0	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.25	0.25	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.8	3.5	3.5	8.8	2.6	2.6	74.5	0.0	70.4	73.9	0.0	70.4
Incr Delay (d2), s/veh	0.2	0.5	0.5	1.4	0.8	0.8	2.3	0.0	2.0	1.6	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	8.7	9.1	0.8	6.4	6.7	3.1	0.0	3.0	2.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	4.0	4.0	10.2	3.4	3.4	76.8	0.0	72.4	75.5	0.0	72.5
LnGrp LOS	A	A	A	B	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1969			1330			82			73	
Approach Delay, s/veh		4.0			3.5			74.6			73.8	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	141.3	16.7	141.3	16.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	120.0	26.0	120.0	26.0
Max Q Clear Time (g_c+I1), s	28.2	10.5	35.9	9.4
Green Ext Time (p_c), s	34.8	0.2	14.7	0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1840	30	20	1270	20	40
Future Volume (veh/h)	1840	30	20	1270	20	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	1897	31	21	1309	21	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	2764	45	165	2701	240	214
Arrive On Green	0.78	0.78	0.78	0.78	0.14	0.14
Sat Flow, veh/h	3614	57	224	3532	1725	1535
Grp Volume(v), veh/h	939	989	21	1309	21	41
Grp Sat Flow(s),veh/h/ln	1749	1830	224	1721	1725	1535
Q Serve(g_s), s	39.5	39.9	7.7	20.9	1.7	3.7
Cycle Q Clear(g_c), s	39.5	39.9	47.6	20.9	1.7	3.7
Prop In Lane		0.03	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1372	1437	165	2701	240	214
V/C Ratio(X)	0.68	0.69	0.13	0.48	0.09	0.19
Avail Cap(c_a), veh/h	1372	1437	165	2701	240	214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	7.9	8.0	19.1	5.9	59.3	60.1
Incr Delay (d2), s/veh	2.1	2.0	1.3	0.5	0.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.9	19.8	0.8	10.7	1.4	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	10.0	20.4	6.4	60.0	62.1
LnGrp LOS	B	A	C	A	E	E
Approach Vol, veh/h	1928			1330	62	
Approach Delay, s/veh	10.0			6.6	61.4	
Approach LOS	B			A	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		130.0		28.0		130.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		124.0		22.0		124.0
Max Q Clear Time (g_c+I1), s		41.9		5.7		49.6
Green Ext Time (p_c), s		31.2		0.1		15.9

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	30	10	100	10	460	10	150	1140	10
Future Volume (veh/h)	10	10	10	30	10	100	10	460	10	150	1140	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1856	1856	1856	1722	1722	1722	1841	1841	1841
Adj Flow Rate, veh/h	11	11	11	32	11	105	11	484	11	158	1200	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	3	3	3	12	12	12	4	4	4
Cap, veh/h	118	70	70	127	37	133	367	2416	55	738	2923	27
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.74	0.74	0.74	0.04	0.82	0.82
Sat Flow, veh/h	1226	824	824	937	438	1572	425	3271	74	1753	3551	33
Grp Volume(v), veh/h	11	0	22	43	0	105	11	242	253	158	591	620
Grp Sat Flow(s),veh/h/ln	1226	0	1648	1375	0	1572	425	1636	1709	1753	1749	1835
Q Serve(g_s), s	1.1	0.0	1.6	2.7	0.0	8.5	0.9	5.9	5.9	2.7	11.7	11.7
Cycle Q Clear(g_c), s	5.5	0.0	1.6	4.3	0.0	8.5	1.7	5.9	5.9	2.7	11.7	11.7
Prop In Lane	1.00		0.50	0.74		1.00	1.00		0.04	1.00		0.02
Lane Grp Cap(c), veh/h	118	0	139	164	0	133	367	1209	1262	738	1440	1511
V/C Ratio(X)	0.09	0.00	0.16	0.26	0.00	0.79	0.03	0.20	0.20	0.21	0.41	0.41
Avail Cap(c_a), veh/h	278	0	355	358	0	339	367	1209	1262	765	1440	1511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.1	0.0	55.2	56.6	0.0	58.4	4.8	5.2	5.2	3.4	3.1	3.1
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.8	0.0	10.0	0.1	0.4	0.4	0.1	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	1.3	2.5	0.0	6.8	0.2	3.4	3.6	1.4	5.9	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	0.0	55.8	57.5	0.0	68.4	4.9	5.6	5.6	3.5	3.9	3.9
LnGrp LOS	E	A	E	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		33			148			506			1369	
Approach Delay, s/veh		57.0			65.2			5.5			3.9	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.0	102.0		17.0		113.0		17.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	7.0	77.0		28.0		90.0		28.0				
Max Q Clear Time (g_c+I1), s	4.7	7.9		7.5		13.7		10.5				
Green Ext Time (p_c), s	0.1	3.4		0.1		10.9		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	1430	190	170	920	40	130	260	90	70	370	240
Future Volume (veh/h)	260	1430	190	170	920	40	130	260	90	70	370	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1811	1811	1811	1841	1841	1841
Adj Flow Rate, veh/h	271	1490	198	177	958	42	135	271	94	73	385	250
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	5	6	6	6	4	4	4
Cap, veh/h	662	2054	998	223	1603	715	177	396	134	112	479	520
Arrive On Green	0.20	0.59	0.59	0.07	0.46	0.46	0.05	0.16	0.16	0.03	0.14	0.14
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	3346	2523	855	3401	3497	1560
Grp Volume(v), veh/h	271	1490	198	177	958	42	135	183	182	73	385	250
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1673	1721	1657	1700	1749	1560
Q Serve(g_s), s	11.1	48.5	8.2	8.2	32.4	1.9	6.3	15.8	16.5	3.4	16.9	2.7
Cycle Q Clear(g_c), s	11.1	48.5	8.2	8.2	32.4	1.9	6.3	15.8	16.5	3.4	16.9	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	662	2054	998	223	1603	715	177	270	260	112	479	520
V/C Ratio(X)	0.41	0.73	0.20	0.79	0.60	0.06	0.76	0.68	0.70	0.65	0.80	0.48
Avail Cap(c_a), veh/h	662	2054	998	363	1603	715	233	348	336	237	708	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.76	0.76	0.76	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	55.5	23.0	11.4	72.7	31.6	15.0	73.8	62.8	63.1	75.5	66.1	24.3
Incr Delay (d2), s/veh	0.3	1.5	0.3	4.8	1.3	0.1	10.2	3.5	4.4	6.1	4.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	25.6	5.2	6.4	19.2	1.6	5.3	11.6	11.7	2.8	12.3	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	24.5	11.7	77.5	32.8	15.1	84.0	66.3	67.5	81.6	70.2	25.0
LnGrp LOS	E	C	B	E	C	B	F	E	E	F	E	C
Approach Vol, veh/h		1959			1177			500			708	
Approach Delay, s/veh		27.5			38.9			71.5			55.4	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	99.6	11.2	30.8	37.0	79.0	14.4	27.6
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	17.0	74.0	11.0	32.0	18.0	73.0	11.0	32.0
Max Q Clear Time (g_c+I1), s	10.2	50.5	5.4	18.5	13.1	34.4	8.3	18.9
Green Ext Time (p_c), s	0.3	13.2	0.1	1.7	0.4	8.3	0.1	2.8

Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1410	80	40	1040	70	40	140	40	100	120	50
Future Volume (veh/h)	100	1410	80	40	1040	70	40	140	40	100	120	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1796	1796	1796	1811	1811	1811
Adj Flow Rate, veh/h	111	1567	89	44	1156	78	44	156	44	111	133	56
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	5	5	5	7	7	7	6	6	6
Cap, veh/h	298	2066	921	192	2015	899	204	191	162	207	263	223
Arrive On Green	0.04	0.59	0.59	0.03	0.58	0.58	0.03	0.11	0.11	0.07	0.15	0.15
Sat Flow, veh/h	1753	3497	1560	1739	3469	1547	1711	1796	1522	1725	1811	1535
Grp Volume(v), veh/h	111	1567	89	44	1156	78	44	156	44	111	133	56
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1739	1735	1547	1711	1796	1522	1725	1811	1535
Q Serve(g_s), s	3.1	39.9	3.0	1.2	25.1	2.7	2.7	10.2	3.2	6.7	8.1	3.9
Cycle Q Clear(g_c), s	3.1	39.9	3.0	1.2	25.1	2.7	2.7	10.2	3.2	6.7	8.1	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	2066	921	192	2015	899	204	191	162	207	263	223
V/C Ratio(X)	0.37	0.76	0.10	0.23	0.57	0.09	0.22	0.82	0.27	0.54	0.51	0.25
Avail Cap(c_a), veh/h	357	2066	921	266	2015	899	277	509	431	214	513	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	18.2	10.7	16.6	15.8	11.1	45.8	52.5	49.4	43.4	47.3	45.5
Incr Delay (d2), s/veh	0.4	1.5	0.1	0.6	1.2	0.2	0.5	8.3	0.9	2.5	1.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	20.1	1.9	0.8	14.9	1.8	2.2	8.8	2.3	5.5	6.9	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	19.7	10.8	17.2	17.0	11.3	46.3	60.8	50.3	45.8	48.8	46.1
LnGrp LOS	B	B	B	B	B	B	D	E	D	D	D	D
Approach Vol, veh/h		1767			1278			244			300	
Approach Delay, s/veh		18.8			16.7			56.3			47.2	
Approach LOS		B			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	76.9	14.5	18.7	11.0	75.7	9.8	23.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	44.0	9.0	34.0	9.0	44.0	9.0	34.0
Max Q Clear Time (g_c+I1), s	3.2	41.9	8.7	12.2	5.1	27.1	4.7	10.1
Green Ext Time (p_c), s	0.0	1.8	0.0	0.5	0.1	7.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	50	130	20	20	10	80	460	20	10	530	50
Future Volume (veh/h)	70	50	130	20	20	10	80	460	20	10	530	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	75	54	140	22	22	11	86	495	22	11	570	54
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	3	3	3	5	5	5	5	5	5
Cap, veh/h	190	68	176	91	62	31	599	2599	115	648	2213	209
Arrive On Green	0.05	0.15	0.15	0.05	0.05	0.05	0.03	0.77	0.77	0.69	0.69	0.69
Sat Flow, veh/h	1795	464	1204	1179	1167	584	1739	3383	150	863	3203	303
Grp Volume(v), veh/h	75	0	194	22	0	33	86	253	264	11	308	316
Grp Sat Flow(s),veh/h/ln	1795	0	1668	1179	0	1751	1739	1735	1799	863	1735	1771
Q Serve(g_s), s	5.4	0.0	15.7	2.6	0.0	2.5	1.9	5.6	5.6	0.6	9.3	9.4
Cycle Q Clear(g_c), s	5.4	0.0	15.7	5.3	0.0	2.5	1.9	5.6	5.6	0.6	9.3	9.4
Prop In Lane	1.00		0.72	1.00		0.33	1.00		0.08	1.00		0.17
Lane Grp Cap(c), veh/h	190	0	244	91	0	93	599	1332	1382	648	1198	1224
V/C Ratio(X)	0.40	0.00	0.80	0.24	0.00	0.35	0.14	0.19	0.19	0.02	0.26	0.26
Avail Cap(c_a), veh/h	190	0	453	239	0	313	626	1332	1382	648	1198	1224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	0.0	57.8	66.6	0.0	63.9	5.5	4.4	4.4	6.8	8.1	8.1
Incr Delay (d2), s/veh	1.3	0.0	5.8	1.3	0.0	2.3	0.1	0.2	0.2	0.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	0.0	11.5	1.5	0.0	2.2	1.2	3.3	3.4	0.2	6.3	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	0.0	63.6	67.9	0.0	66.2	5.6	4.6	4.6	6.8	8.7	8.7
LnGrp LOS	E	A	E	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		269			55			603			635	
Approach Delay, s/veh		62.1			66.9			4.8			8.6	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		113.5		26.5	10.8	102.7	13.0	13.5				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		90.0		38.0	7.0	77.0	7.0	25.0				
Max Q Clear Time (g_c+I1), s		7.6		17.7	3.9	11.4	7.4	7.3				
Green Ext Time (p_c), s		1.5		1.1	0.0	2.0	0.0	0.2				

Intersection Summary												
HCM 6th Ctrl Delay			18.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	450	20	70	540	70	20	60	50	70	90	20
Future Volume (veh/h)	20	450	20	70	540	70	20	60	50	70	90	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	22	489	22	76	587	76	22	65	54	76	98	22
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, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	560	2265	102	659	2121	274	162	133	110	159	210	47
Arrive On Green	0.02	0.67	0.67	0.04	0.69	0.69	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1739	3381	152	1739	3090	399	1262	937	778	1273	1479	332
Grp Volume(v), veh/h	22	250	261	76	329	334	22	0	119	76	0	120
Grp Sat Flow(s),veh/h/ln	1739	1735	1799	1739	1735	1754	1262	0	1715	1273	0	1811
Q Serve(g_s), s	0.5	6.7	6.7	1.6	8.8	8.8	2.0	0.0	7.7	7.0	0.0	7.3
Cycle Q Clear(g_c), s	0.5	6.7	6.7	1.6	8.8	8.8	9.3	0.0	7.7	14.7	0.0	7.3
Prop In Lane	1.00		0.08	1.00		0.23	1.00		0.45	1.00		0.18
Lane Grp Cap(c), veh/h	560	1162	1205	659	1191	1204	162	0	243	159	0	257
V/C Ratio(X)	0.04	0.22	0.22	0.12	0.28	0.28	0.14	0.00	0.49	0.48	0.00	0.47
Avail Cap(c_a), veh/h	623	1162	1205	694	1191	1204	204	0	300	201	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.0	7.6	7.7	5.6	7.3	7.3	51.6	0.0	47.5	54.3	0.0	47.3
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.1	0.6	0.6	0.4	0.0	1.5	2.2	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	4.4	4.6	1.0	5.7	5.8	1.2	0.0	6.2	4.3	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.0	8.1	8.1	5.6	7.9	7.9	52.0	0.0	49.0	56.5	0.0	48.6
LnGrp LOS	A	A	A	A	A	A	D	A	D	E	A	D
Approach Vol, veh/h		533			739			141			196	
Approach Delay, s/veh		8.0			7.6			49.5			51.7	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	86.4		23.0	8.6	88.4		23.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	74.0		21.0	7.0	74.0		21.0				
Max Q Clear Time (g_c+I1), s	3.6	8.7		11.3	2.5	10.8		16.7				
Green Ext Time (p_c), s	0.0	3.3		0.4	0.0	4.5		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		16.8
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1360	20	20	1020	30	10	30	50	50	10	120
Future Volume (veh/h)	170	1360	20	20	1020	30	10	30	50	50	10	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	177	1417	21	21	1062	31	10	31	52	52	10	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	449	2539	38	308	2411	1075	43	61	89	160	26	247
Arrive On Green	0.06	0.72	0.72	0.03	0.69	0.69	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1753	3528	52	1753	3497	1560	91	640	927	1077	272	1585
Grp Volume(v), veh/h	177	702	736	21	1062	31	93	0	0	62	0	125
Grp Sat Flow(s),veh/h/ln	1753	1749	1831	1753	1749	1560	1659	0	0	1349	0	1585
Q Serve(g_s), s	3.3	21.8	21.9	0.4	15.7	0.7	0.9	0.0	0.0	0.0	0.0	8.4
Cycle Q Clear(g_c), s	3.3	21.8	21.9	0.4	15.7	0.7	6.1	0.0	0.0	5.1	0.0	8.4
Prop In Lane	1.00		0.03	1.00		1.00	0.11		0.56	0.84		1.00
Lane Grp Cap(c), veh/h	449	1259	1318	308	2411	1075	193	0	0	186	0	247
V/C Ratio(X)	0.39	0.56	0.56	0.07	0.44	0.03	0.48	0.00	0.00	0.33	0.00	0.51
Avail Cap(c_a), veh/h	857	1259	1318	770	2411	1075	457	0	0	411	0	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.7	7.6	7.6	6.2	8.0	5.7	50.2	0.0	0.0	49.7	0.0	44.9
Incr Delay (d2), s/veh	0.6	1.8	1.7	0.1	0.6	0.0	1.9	0.0	0.0	1.0	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	11.1	11.5	0.2	8.6	0.4	4.9	0.0	0.0	3.2	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	9.4	9.3	6.3	8.6	5.8	52.1	0.0	0.0	50.8	0.0	46.5
LnGrp LOS	A	A	A	A	A	A	D	A	A	D	A	D
Approach Vol, veh/h		1615			1114			93			187	
Approach Delay, s/veh		9.0			8.5			52.1			47.9	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	89.5		17.1	13.0	86.0		17.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	34.0	80.0		30.0	34.0	80.0		30.0				
Max Q Clear Time (g_c+I1), s	2.4	23.9		8.1	5.3	17.7		10.4				
Green Ext Time (p_c), s	0.0	12.4		0.5	0.5	8.7		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		12.6
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	770	20	0	0	340	220	10	0	510	50
Future Volume (veh/h)	20	0	770	20	0	0	340	220	10	0	510	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1900	1693	1693	1693	0	1811	1811
Adj Flow Rate, veh/h	22	0	565	22	0	0	370	239	11	0	554	54
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, %	3	3	3	0	0	0	14	14	14	0	6	6
Cap, veh/h	501	574	743	331	588	0	497	933	43	0	1152	112
Arrive On Green	0.31	0.00	0.31	0.31	0.00	0.00	0.16	0.58	0.58	0.00	0.36	0.36
Sat Flow, veh/h	1406	1856	1572	859	1900	0	1612	1605	74	0	3259	308
Grp Volume(v), veh/h	22	0	565	22	0	0	370	0	250	0	300	308
Grp Sat Flow(s),veh/h/ln	1406	1856	1572	859	1900	0	1612	0	1679	0	1721	1756
Q Serve(g_s), s	1.2	0.0	32.5	2.0	0.0	0.0	14.9	0.0	8.1	0.0	14.8	14.9
Cycle Q Clear(g_c), s	1.2	0.0	32.5	2.0	0.0	0.0	14.9	0.0	8.1	0.0	14.8	14.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.04	0.00		0.18
Lane Grp Cap(c), veh/h	501	574	743	331	588	0	497	0	976	0	626	638
V/C Ratio(X)	0.04	0.00	0.76	0.07	0.00	0.00	0.75	0.00	0.26	0.00	0.48	0.48
Avail Cap(c_a), veh/h	501	574	743	331	588	0	732	0	1267	0	673	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.00	0.55	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	23.9	26.9	0.0	0.0	17.4	0.0	11.3	0.0	27.0	27.0
Incr Delay (d2), s/veh	0.1	0.0	4.1	0.4	0.0	0.0	2.3	0.0	0.1	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	17.0	0.8	0.0	0.0	9.3	0.0	5.2	0.0	10.1	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	0.0	27.9	27.3	0.0	0.0	19.7	0.0	11.5	0.0	27.6	27.6
LnGrp LOS	C	A	C	C	A	A	B	A	B	A	C	C
Approach Vol, veh/h		587			22			620			608	
Approach Delay, s/veh		27.9			27.3			16.4			27.6	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		70.0		40.0	24.0	46.0		40.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		83.0		15.0	34.0	43.0		15.0				
Max Q Clear Time (g_c+I1), s		10.1		34.5	16.9	16.9		4.0				
Green Ext Time (p_c), s		1.6		0.0	1.1	3.8		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		23.9
HCM 6th LOS		C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	20	30	60	20	410	20	150	1020	10
Future Volume (veh/h)	10	20	10	20	30	60	20	410	20	150	1020	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1707	1707	1707	1841	1841	1841
Adj Flow Rate, veh/h	12	23	12	23	35	70	23	477	23	174	1186	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	3	3	3	13	13	13	4	4	4
Cap, veh/h	163	298	139	119	182	301	180	1616	78	455	1468	15
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.02	0.51	0.51	0.41	0.41	0.41
Sat Flow, veh/h	318	880	411	198	538	888	1626	3150	152	884	3547	36
Grp Volume(v), veh/h	47	0	0	128	0	0	23	245	255	174	585	613
Grp Sat Flow(s),veh/h/ln	1609	0	0	1624	0	0	1626	1622	1680	884	1749	1834
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.0	7.1	11.6	23.8	23.9
Cycle Q Clear(g_c), s	1.5	0.0	0.0	4.4	0.0	0.0	0.6	7.0	7.1	11.6	23.8	23.9
Prop In Lane	0.26		0.26	0.18		0.55	1.00		0.09	1.00		0.02
Lane Grp Cap(c), veh/h	601	0	0	603	0	0	180	832	862	455	724	759
V/C Ratio(X)	0.08	0.00	0.00	0.21	0.00	0.00	0.13	0.29	0.30	0.38	0.81	0.81
Avail Cap(c_a), veh/h	612	0	0	603	0	0	260	832	862	455	724	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.74	0.74	0.74	0.90	0.90	0.90
Uniform Delay (d), s/veh	18.2	0.0	0.0	19.1	0.0	0.0	16.2	11.3	11.3	17.3	20.9	20.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.7	0.6	2.2	8.6	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	0.0	3.1	0.0	0.0	0.4	4.4	4.5	4.4	15.6	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	0.0	0.0	19.3	0.0	0.0	16.4	12.0	12.0	19.5	29.5	29.1
LnGrp LOS	B	A	A	B	A	A	B	B	B	B	C	C
Approach Vol, veh/h		47			128			523			1372	
Approach Delay, s/veh		18.2			19.3			12.2			28.0	
Approach LOS		B			B			B			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.5		33.5	8.0	39.5		33.5				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		41.0		28.0	6.0	29.0		27.0				
Max Q Clear Time (g_c+I1), s		9.1		3.5	2.6	25.9		6.4				
Green Ext Time (p_c), s		3.1		0.2	0.0	2.3		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		23.3
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	40	30	40	20	430	70	20	730	30
Future Volume (veh/h)	10	20	10	40	30	40	20	430	70	20	730	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1767	1767	1767	1811	1811	1811
Adj Flow Rate, veh/h	11	22	11	44	33	44	22	473	77	22	802	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	1	1	1	9	9	9	6	6	6
Cap, veh/h	455	364	182	494	223	297	341	1578	255	469	1837	76
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1343	1195	597	1387	733	977	621	2892	468	830	3368	139
Grp Volume(v), veh/h	11	0	33	44	0	77	22	273	277	22	410	425
Grp Sat Flow(s),veh/h/ln	1343	0	1792	1387	0	1709	621	1678	1682	830	1721	1786
Q Serve(g_s), s	0.5	0.0	1.0	1.9	0.0	2.6	1.8	7.1	7.2	1.2	11.4	11.4
Cycle Q Clear(g_c), s	3.1	0.0	1.0	2.9	0.0	2.6	13.1	7.1	7.2	8.3	11.4	11.4
Prop In Lane	1.00		0.33	1.00		0.57	1.00		0.28	1.00		0.08
Lane Grp Cap(c), veh/h	455	0	546	494	0	521	341	915	918	469	939	974
V/C Ratio(X)	0.02	0.00	0.06	0.09	0.00	0.15	0.06	0.30	0.30	0.05	0.44	0.44
Avail Cap(c_a), veh/h	533	0	650	575	0	620	341	915	918	469	939	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.20	0.20	0.20
Uniform Delay (d), s/veh	21.4	0.0	19.7	20.7	0.0	20.3	14.8	9.9	9.9	12.2	10.8	10.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.1	0.4	0.8	0.8	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.8	1.1	0.0	1.9	0.5	4.5	4.5	0.4	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	0.0	19.8	20.8	0.0	20.4	15.1	10.7	10.7	12.2	11.1	11.1
LnGrp LOS	C	A	B	C	A	C	B	B	B	B	B	B
Approach Vol, veh/h		44			121			572			857	
Approach Delay, s/veh		20.2			20.5			10.9			11.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		49.6		30.4		49.6		30.4				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		39.0		29.0		39.0		29.0				
Max Q Clear Time (g_c+I1), s		15.1		5.1		13.4		4.9				
Green Ext Time (p_c), s		3.6		0.1		5.7		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			12.0									
HCM 6th LOS			B									

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	1060	40	0	230	10	20	400	10	60	240	10
Future Volume (veh/h)	20	1060	40	0	230	10	20	400	10	60	240	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	0	1811	1811	1781	1781	1781	1856	1856	1856
Adj Flow Rate, veh/h	29	1536	58	0	333	14	29	580	14	87	348	14
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	4	4	4	0	6	6	8	8	8	3	3	3
Cap, veh/h	696	1249	47	0	1223	51	68	727	18	88	381	15
Arrive On Green	0.71	0.71	0.71	0.00	0.71	0.71	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1017	1762	67	0	1725	73	971	3378	81	817	1771	71
Grp Volume(v), veh/h	29	0	1594	0	0	347	29	290	304	87	0	362
Grp Sat Flow(s),veh/h/ln	1017	0	1829	0	0	1798	971	1692	1767	817	0	1843
Q Serve(g_s), s	1.7	0.0	112.0	0.0	0.0	11.0	3.7	25.7	25.7	8.3	0.0	30.3
Cycle Q Clear(g_c), s	12.7	0.0	112.0	0.0	0.0	11.0	34.0	25.7	25.7	34.0	0.0	30.3
Prop In Lane	1.00		0.04	0.00		0.04	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	696	0	1296	0	0	1275	68	364	380	88	0	397
V/C Ratio(X)	0.04	0.00	1.23	0.00	0.00	0.27	0.43	0.80	0.80	0.98	0.00	0.91
Avail Cap(c_a), veh/h	696	0	1296	0	0	1275	68	364	380	88	0	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.46	0.00	0.46
Uniform Delay (d), s/veh	10.6	0.0	23.0	0.0	0.0	8.3	77.6	58.7	58.8	77.0	0.0	60.6
Incr Delay (d2), s/veh	0.1	0.0	110.3	0.0	0.0	0.5	4.1	11.8	11.4	60.4	0.0	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	118.6	0.0	0.0	8.0	2.3	18.1	18.7	7.6	0.0	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	0.0	133.3	0.0	0.0	8.8	81.7	70.5	70.2	137.3	0.0	74.5
LnGrp LOS	B	A	F	A	A	A	F	E	E	F	A	E
Approach Vol, veh/h		1623			347			623			449	
Approach Delay, s/veh		131.1			8.8			70.9			86.7	
Approach LOS		F			A			E			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		118.0		40.0		118.0		40.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		112.0		34.0		112.0		34.0				
Max Q Clear Time (g_c+I1), s		114.0		36.0		13.0		36.0				
Green Ext Time (p_c), s		0.0		0.0		2.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			98.3									
HCM 6th LOS			F									

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	590	40	180	250	0	0	300	20
Future Volume (veh/h)	0	0	0	10	590	40	180	250	0	0	300	20
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1811	1811	1811	1781	1781	0	0	1856	1856
Adj Flow Rate, veh/h				13	776	53	237	329	0	0	395	26
Peak Hour Factor				0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %				6	6	6	8	8	0	0	3	3
Cap, veh/h				24	1501	108	313	755	0	0	448	380
Arrive On Green				0.46	0.46	0.46	0.12	0.42	0.00	0.00	0.24	0.24
Sat Flow, veh/h				53	3288	236	1697	1781	0	0	1856	1572
Grp Volume(v), veh/h				445	0	397	237	329	0	0	395	26
Grp Sat Flow(s),veh/h/ln				1808	0	1769	1697	1781	0	0	1856	1572
Q Serve(g_s), s				17.8	0.0	15.7	10.0	13.1	0.0	0.0	20.5	1.3
Cycle Q Clear(g_c), s				17.8	0.0	15.7	10.0	13.1	0.0	0.0	20.5	1.3
Prop In Lane				0.03		0.13	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				825	0	807	313	755	0	0	448	380
V/C Ratio(X)				0.54	0.00	0.49	0.76	0.44	0.00	0.00	0.88	0.07
Avail Cap(c_a), veh/h				825	0	807	360	944	0	0	594	503
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.51	0.51	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.6	0.0	19.0	25.2	20.4	0.0	0.0	36.5	29.2
Incr Delay (d2), s/veh				2.5	0.0	2.1	4.1	0.2	0.0	0.0	11.6	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				12.5	0.0	11.1	6.8	8.2	0.0	0.0	15.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				22.1	0.0	21.2	29.4	20.6	0.0	0.0	48.1	29.3
LnGrp LOS				C	A	C	C	C	A	A	D	C
Approach Vol, veh/h					842			566			421	
Approach Delay, s/veh					21.7			24.3			47.0	
Approach LOS					C			C			D	

Timer - Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				48.4		51.6	18.2	30.2				
Change Period (Y+Rc), s				6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s				53.0		35.0	15.0	32.0				
Max Q Clear Time (g_c+I1), s				15.1		19.8	12.0	22.5				
Green Ext Time (p_c), s				2.3		2.5	0.2	1.7				

Intersection Summary												
HCM 6th Ctrl Delay			28.3									
HCM 6th LOS			C									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	60	330	210	40	760	220
Future Volume (veh/h)	60	330	210	40	760	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1722	1722	1856	1856
Adj Flow Rate, veh/h	61	337	214	41	776	224
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	12	12	3	3
Cap, veh/h	295	738	493	94	867	1323
Arrive On Green	0.17	0.17	0.35	0.35	0.30	0.71
Sat Flow, veh/h	1767	1572	1405	269	1767	1856
Grp Volume(v), veh/h	61	337	0	255	776	224
Grp Sat Flow(s),veh/h/ln	1767	1572	0	1674	1767	1856
Q Serve(g_s), s	3.0	14.5	0.0	11.7	25.6	3.9
Cycle Q Clear(g_c), s	3.0	14.5	0.0	11.7	25.6	3.9
Prop In Lane	1.00	1.00		0.16	1.00	
Lane Grp Cap(c), veh/h	295	738	0	587	867	1323
V/C Ratio(X)	0.21	0.46	0.00	0.43	0.90	0.17
Avail Cap(c_a), veh/h	318	758	0	587	1075	1323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.00	1.00	0.58	0.58
Uniform Delay (d), s/veh	35.9	17.9	0.0	24.9	12.5	4.7
Incr Delay (d2), s/veh	0.2	0.3	0.0	2.3	5.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	8.2	0.0	8.5	13.4	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.2	18.3	0.0	27.2	17.7	4.9
LnGrp LOS	D	B	A	C	B	A
Approach Vol, veh/h	398		255			1000
Approach Delay, s/veh	21.0		27.2			14.8
Approach LOS	C		C			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	36.2	41.1			77.3	22.7
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0
Max Green Setting (Gmax), s	42.0	22.0			70.0	18.0
Max Q Clear Time (g_c+I1), s	27.6	13.7			5.9	16.5
Green Ext Time (p_c), s	2.6	0.9			1.4	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	270	160	380	710	10
Future Volume (veh/h)	0	270	160	380	710	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1722	1722	1856	1856
Adj Flow Rate, veh/h	0	276	163	388	724	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	5	12	12	3	3
Cap, veh/h	0	306	352	1174	1027	14
Arrive On Green	0.00	0.20	0.06	0.68	0.56	0.56
Sat Flow, veh/h	0	1543	1640	1722	1826	25
Grp Volume(v), veh/h	0	277	163	388	0	734
Grp Sat Flow(s),veh/h/ln	0	1548	1640	1722	0	1851
Q Serve(g_s), s	0.0	17.5	4.0	9.3	0.0	28.8
Cycle Q Clear(g_c), s	0.0	17.5	4.0	9.3	0.0	28.8
Prop In Lane	0.00	1.00	1.00			0.01
Lane Grp Cap(c), veh/h	0	307	352	1174	0	1041
V/C Ratio(X)	0.00	0.90	0.46	0.33	0.00	0.71
Avail Cap(c_a), veh/h	0	372	370	1174	0	1041
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.91	0.91	0.00	1.00
Uniform Delay (d), s/veh	0.0	39.1	13.4	6.5	0.0	15.9
Incr Delay (d2), s/veh	0.0	21.7	0.9	0.7	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	13.0	2.4	5.6	0.0	17.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	60.8	14.3	7.2	0.0	19.9
LnGrp LOS	A	E	B	A	A	B
Approach Vol, veh/h	277			551	734	
Approach Delay, s/veh	60.8			9.3	19.9	
Approach LOS	E			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		74.2		25.8	11.9	62.2
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		64.0		24.0	7.0	51.0
Max Q Clear Time (g_c+I1), s		11.3		19.5	6.0	30.8
Green Ext Time (p_c), s		2.6		0.4	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	6.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	120	240	40	120	470
Future Vol, veh/h	80	120	240	40	120	470
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	11	11	2	2
Mvmt Flow	100	150	300	50	150	588

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1213	325	0	0	300	0
Stage 1	325	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	201	716	-	-	1261	-
Stage 1	732	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	165	716	-	-	1261	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	732	-	-	-	-	-
Stage 2	331	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.1	0	1.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	165	716	1261	-
HCM Lane V/C Ratio	-	-	0.606	0.209	0.119	-
HCM Control Delay (s)	-	-	55.7	11.4	8.2	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %tile Q(veh)	-	-	3.3	0.8	0.4	-

Intersection	
Int Delay, s/veh	11.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	440	310	50	150	50
Future Vol, veh/h	20	440	310	50	150	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	10	10	23	23
Mvmt Flow	26	579	408	66	197	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1079	197	197	0	-	0
Stage 1	197	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.2	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.29	-	-	-
Pot Cap-1 Maneuver	242	844	1329	-	-	0
Stage 1	836	-	-	-	-	0
Stage 2	405	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	165	844	1329	-	-	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	405	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.6	7.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1329	-	165	844	-
HCM Lane V/C Ratio	0.307	-	0.159	0.686	-
HCM Control Delay (s)	8.9	0	30.9	18	-
HCM Lane LOS	A	A	D	C	-
HCM 95th %tile Q(veh)	1.3	-	0.6	5.6	-

HCM 6th Signalized Intersection Summary
3: N Monument St & Main St/High St

3/17/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1190	60	0	1580	10	0	0	0	10	20	100
Future Volume (veh/h)	0	1190	60	0	1580	10	0	0	0	10	20	100
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1900	1900	1900
Adj Flow Rate, veh/h	0	1214	61	0	1612	10				10	20	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	0	2	2				0	0	0
Cap, veh/h	0	4491	226	0	3266	20				14	29	
Arrive On Green	0.00	0.90	0.90	0.00	0.90	0.90				0.02	0.02	0.00
Sat Flow, veh/h	0	5148	250	0	3714	22				623	1246	1610
Grp Volume(v), veh/h	0	830	445	0	791	831				30	0	0
Grp Sat Flow(s),veh/h/ln	0	1702	1825	0	1777	1866				1869	0	1610
Q Serve(g_s), s	0.0	5.1	5.1	0.0	12.6	12.6				2.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	5.1	5.1	0.0	12.6	12.6				2.6	0.0	0.0
Prop In Lane	0.00		0.14	0.00		0.01				0.33		1.00
Lane Grp Cap(c), veh/h	0	3070	1646	0	1603	1683				43	0	
V/C Ratio(X)	0.00	0.27	0.27	0.00	0.49	0.49				0.70	0.00	
Avail Cap(c_a), veh/h	0	3070	1646	0	1603	1683				350	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.80	0.80				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.0	1.0	0.0	1.4	1.4				77.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.4	0.0	0.9	0.8				18.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.8	2.1	0.0	5.0	5.2				2.6	0.0	0.0
Unsig. Movement Delay, s/veh												0.00
LnGrp Delay(d),s/veh	0.0	1.2	1.4	0.0	2.3	2.2				96.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				F	A	A
Approach Vol, veh/h		1275			1622						132	A
Approach Delay, s/veh		1.3			2.2						21.8	
Approach LOS		A			A						C	

Timer - Assigned Phs	2				6		8					
Phs Duration (G+Y+Rc), s	150.3				150.3		9.7					
Change Period (Y+Rc), s	6.0				6.0		6.0					
Max Green Setting (Gmax), s	118.0				118.0		30.0					
Max Q Clear Time (g_c+I1), s	7.1				14.6		4.6					
Green Ext Time (p_c), s	13.7				24.0		0.1					

Intersection Summary	
HCM 6th Ctrl Delay	2.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1080	90	150	1460	20	110	30	120	10	40	20
Future Volume (veh/h)	30	1080	90	150	1460	20	110	30	120	10	40	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	30	1091	91	152	1475	20	111	30	121	10	40	20
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	3	3	3
Cap, veh/h	251	2375	1059	366	2481	34	174	59	236	59	218	281
Arrive On Green	0.02	0.67	0.67	0.04	0.69	0.69	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1795	3618	49	1353	327	1320	181	1221	1572
Grp Volume(v), veh/h	30	1091	91	152	730	765	111	0	151	50	0	20
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1795	1791	1876	1353	0	1648	1401	0	1572
Q Serve(g_s), s	0.8	23.5	3.2	4.3	34.6	34.7	12.9	0.0	13.3	0.2	0.0	1.7
Cycle Q Clear(g_c), s	0.8	23.5	3.2	4.3	34.6	34.7	26.3	0.0	13.3	13.4	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.80	0.20		1.00
Lane Grp Cap(c), veh/h	251	2375	1059	366	1228	1286	174	0	295	278	0	281
V/C Ratio(X)	0.12	0.46	0.09	0.41	0.59	0.60	0.64	0.00	0.51	0.18	0.00	0.07
Avail Cap(c_a), veh/h	288	2375	1059	406	1228	1286	194	0	319	303	0	305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.75	0.75	0.75	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	12.7	9.3	10.0	13.3	13.4	71.3	0.0	59.4	55.5	0.0	54.6
Incr Delay (d2), s/veh	0.2	0.6	0.2	0.6	1.6	1.5	5.8	0.0	1.4	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	14.7	2.2	3.2	19.9	20.7	8.4	0.0	9.7	3.2	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	13.3	9.5	10.5	14.9	14.9	77.2	0.0	60.8	55.8	0.0	54.7
LnGrp LOS	B	B	A	B	B	B	E	A	E	E	A	D
Approach Vol, veh/h		1212			1647			262			70	
Approach Delay, s/veh		13.0			14.5			67.7			55.5	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	112.9		34.6	9.7	115.7		34.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	10.0	101.0		31.0	7.0	104.0		31.0				
Max Q Clear Time (g_c+I1), s	6.3	25.5		28.3	2.8	36.7		15.4				
Green Ext Time (p_c), s	0.1	12.4		0.3	0.0	18.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		19.2	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1170	20	80	1540	20	50	20	70	30	40	40
Future Volume (veh/h)	20	1170	20	80	1540	20	50	20	70	30	40	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	21	1219	21	83	1604	21	52	21	73	31	42	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	231	2527	44	349	2581	34	186	55	193	175	130	130
Arrive On Green	0.02	0.71	0.71	0.03	0.72	0.72	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3575	62	1781	3592	47	1324	370	1284	1312	865	865
Grp Volume(v), veh/h	21	606	634	83	793	832	52	0	94	31	0	84
Grp Sat Flow(s),veh/h/ln	1781	1777	1859	1781	1777	1862	1324	0	1654	1312	0	1730
Q Serve(g_s), s	0.5	24.2	24.3	2.1	36.3	36.4	5.8	0.0	8.2	3.5	0.0	6.9
Cycle Q Clear(g_c), s	0.5	24.2	24.3	2.1	36.3	36.4	12.8	0.0	8.2	11.7	0.0	6.9
Prop In Lane	1.00		0.03	1.00		0.03	1.00		0.78	1.00		0.50
Lane Grp Cap(c), veh/h	231	1256	1315	349	1277	1338	186	0	248	175	0	259
V/C Ratio(X)	0.09	0.48	0.48	0.24	0.62	0.62	0.28	0.00	0.38	0.18	0.00	0.32
Avail Cap(c_a), veh/h	275	1256	1315	383	1277	1338	219	0	289	207	0	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.1	10.4	10.4	8.0	11.4	11.5	66.5	0.0	61.3	66.5	0.0	60.8
Incr Delay (d2), s/veh	0.1	1.2	1.1	0.3	1.7	1.6	0.8	0.0	1.0	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	14.8	15.4	1.4	20.1	21.0	3.7	0.0	6.4	2.2	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	11.6	11.6	8.3	13.1	13.1	67.3	0.0	62.2	67.0	0.0	61.5
LnGrp LOS	B	B	B	A	B	B	E	A	E	E	A	E
Approach Vol, veh/h		1261			1708			146			115	
Approach Delay, s/veh		11.6			12.9			64.0			63.0	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	119.1		30.0	9.0	121.0		30.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	106.0		28.0	7.0	107.0		28.0				
Max Q Clear Time (g_c+I1), s	4.1	26.3		14.8	2.5	38.4		13.7				
Green Ext Time (p_c), s	0.1	13.1		0.5	0.0	22.6		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1220	20	30	1570	40	40	50	80	20	30	30
Future Volume (veh/h)	30	1220	20	30	1570	40	40	50	80	20	30	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	31	1271	21	31	1635	42	42	52	83	21	31	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	1	1	1
Cap, veh/h	247	2703	45	352	2675	69	145	70	112	83	94	94
Arrive On Green	0.02	0.76	0.76	0.02	0.76	0.76	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1781	3577	59	1781	3540	91	1330	644	1027	1264	865	865
Grp Volume(v), veh/h	31	631	661	31	819	858	42	0	135	21	0	62
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1777	1854	1330	0	1671	1264	0	1730
Q Serve(g_s), s	0.6	21.5	21.6	0.6	33.4	33.7	4.8	0.0	12.5	2.6	0.0	5.3
Cycle Q Clear(g_c), s	0.6	21.5	21.6	0.6	33.4	33.7	10.1	0.0	12.5	15.2	0.0	5.3
Prop In Lane	1.00		0.03	1.00		0.05	1.00		0.61	1.00		0.50
Lane Grp Cap(c), veh/h	247	1342	1405	352	1342	1401	145	0	181	83	0	188
V/C Ratio(X)	0.13	0.47	0.47	0.09	0.61	0.61	0.29	0.00	0.74	0.25	0.00	0.33
Avail Cap(c_a), veh/h	284	1342	1405	388	1342	1401	234	0	292	167	0	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.36	0.36	0.36	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	7.4	7.4	5.5	8.9	8.9	70.6	0.0	69.2	76.5	0.0	65.9
Incr Delay (d2), s/veh	0.2	1.0	1.0	0.0	0.8	0.7	1.1	0.0	5.9	1.6	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	12.8	13.3	0.4	16.3	17.0	3.1	0.0	9.7	1.6	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.1	8.4	8.4	5.6	9.6	9.6	71.7	0.0	75.1	78.1	0.0	67.0
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1323			1708			177			83	
Approach Delay, s/veh		8.4			9.6			74.3			69.8	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	126.9		23.4	9.7	126.9		23.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	107.0		28.0	7.0	107.0		28.0				
Max Q Clear Time (g_c+I1), s	2.6	23.6		14.5	2.6	35.7		17.2				
Green Ext Time (p_c), s	0.0	14.2		0.7	0.0	24.6		0.2				

Intersection Summary		
HCM 6th Ctrl Delay	14.1	
HCM 6th LOS	B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1150	110	210	1450	470	140	480	230	380	370	50
Future Volume (veh/h)	60	1150	110	210	1450	470	140	480	230	380	370	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1885	1885	1885	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	64	1223	117	223	1543	500	149	511	245	404	394	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	1	1	1	3	3	3	6	6	6
Cap, veh/h	123	1414	135	245	1782	1009	171	434	207	449	686	92
Arrive On Green	0.03	0.44	0.44	0.09	0.50	0.50	0.10	0.19	0.19	0.13	0.22	0.22
Sat Flow, veh/h	1753	3226	308	1795	3582	1598	1767	2314	1105	3346	3051	408
Grp Volume(v), veh/h	64	662	678	223	1543	500	149	389	367	404	221	226
Grp Sat Flow(s),veh/h/ln	1753	1749	1785	1795	1791	1598	1767	1763	1657	1673	1721	1738
Q Serve(g_s), s	3.2	54.7	55.1	12.1	60.9	26.8	13.3	30.0	30.0	19.0	18.3	18.5
Cycle Q Clear(g_c), s	3.2	54.7	55.1	12.1	60.9	26.8	13.3	30.0	30.0	19.0	18.3	18.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.67	1.00		0.23
Lane Grp Cap(c), veh/h	123	766	782	245	1782	1009	171	331	311	449	387	391
V/C Ratio(X)	0.52	0.86	0.87	0.91	0.87	0.50	0.87	1.18	1.18	0.90	0.57	0.58
Avail Cap(c_a), veh/h	145	766	782	297	1782	1009	265	331	311	502	387	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.61	0.61	0.61	0.96	0.96	0.96	0.91	0.91	0.91
Uniform Delay (d), s/veh	35.3	40.6	40.7	40.6	35.5	15.8	71.2	65.0	65.0	68.2	55.2	55.3
Incr Delay (d2), s/veh	3.0	11.0	11.0	18.8	3.8	1.1	16.5	105.5	109.2	16.6	1.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	33.9	34.7	14.4	33.7	14.0	11.0	33.5	32.2	13.9	12.6	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	51.6	51.7	59.4	39.2	16.9	87.7	170.5	174.2	84.7	57.0	57.2
LnGrp LOS	D	D	D	E	D	B	F	F	F	F	E	E
Approach Vol, veh/h		1404			2266			905			851	
Approach Delay, s/veh		51.0			36.3			158.4			70.2	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.4	76.1	27.5	36.0	10.9	85.6	21.5	42.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	19.0	63.0	24.0	30.0	7.0	75.0	24.0	30.0
Max Q Clear Time (g_c+I1), s	14.1	57.1	21.0	32.0	5.2	62.9	15.3	20.5
Green Ext Time (p_c), s	0.3	4.1	0.5	0.0	0.0	9.2	0.2	1.8

Intersection Summary	
HCM 6th Ctrl Delay	65.8
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1680	30	40	1990	20	50	30	40	20	30	90
Future Volume (veh/h)	50	1680	30	40	1990	20	50	30	40	20	30	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1900	1900	1900	1870	1870	1870
Adj Flow Rate, veh/h	53	1768	32	42	2095	21	53	32	42	21	32	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	2	2	2
Cap, veh/h	144	2846	51	201	2873	29	116	95	125	163	53	158
Arrive On Green	0.80	0.80	0.80	0.80	0.80	0.80	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	192	3571	64	262	3605	36	1284	745	978	1326	415	1233
Grp Volume(v), veh/h	53	878	922	42	1031	1085	53	0	74	21	0	127
Grp Sat Flow(s),veh/h/ln	192	1777	1859	262	1777	1864	1284	0	1724	1326	0	1648
Q Serve(g_s), s	29.6	31.7	32.0	12.3	44.9	45.3	6.5	0.0	6.3	2.3	0.0	11.6
Cycle Q Clear(g_c), s	74.9	31.7	32.0	44.3	44.9	45.3	18.2	0.0	6.3	8.6	0.0	11.6
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.57	1.00		0.75
Lane Grp Cap(c), veh/h	144	1416	1481	201	1416	1485	116	0	221	163	0	211
V/C Ratio(X)	0.37	0.62	0.62	0.21	0.73	0.73	0.46	0.00	0.34	0.13	0.00	0.60
Avail Cap(c_a), veh/h	144	1416	1481	201	1416	1485	192	0	323	242	0	309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.21	0.21	0.21	0.60	0.60	0.60	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	6.5	6.5	15.5	7.9	7.9	74.5	0.0	63.6	67.5	0.0	65.9
Incr Delay (d2), s/veh	1.5	0.4	0.4	1.4	2.0	1.9	2.8	0.0	0.9	0.4	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	12.8	13.5	1.5	20.3	21.2	4.1	0.0	5.1	1.5	0.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	7.0	7.0	16.9	9.9	9.8	77.3	0.0	64.4	67.8	0.0	68.6
LnGrp LOS	C	A	A	B	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1853			2158			127			148	
Approach Delay, s/veh		7.6			10.0			69.8			68.5	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	133.5	26.5	133.5	26.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	118.0	30.0	118.0	30.0
Max Q Clear Time (g_c+I1), s	76.9	20.2	47.3	13.6
Green Ext Time (p_c), s	23.9	0.3	40.3	0.7

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1700	40	50	1980	70	80
Future Volume (veh/h)	1700	40	50	1980	70	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1856	1856	1856	1856
Adj Flow Rate, veh/h	1753	41	52	2041	72	82
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	3	3	3	3
Cap, veh/h	2707	63	188	2732	265	236
Arrive On Green	0.77	0.77	0.77	0.77	0.15	0.15
Sat Flow, veh/h	3585	81	261	3618	1767	1572
Grp Volume(v), veh/h	875	919	52	2041	72	82
Grp Sat Flow(s),veh/h/ln	1749	1826	261	1763	1767	1572
Q Serve(g_s), s	36.1	36.5	18.0	49.5	5.8	7.5
Cycle Q Clear(g_c), s	36.1	36.5	54.5	49.5	5.8	7.5
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1355	1415	188	2732	265	236
V/C Ratio(X)	0.65	0.65	0.28	0.75	0.27	0.35
Avail Cap(c_a), veh/h	1355	1415	188	2732	265	236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.30	0.30	1.00	1.00
Uniform Delay (d), s/veh	8.1	8.2	20.5	9.6	60.3	61.0
Incr Delay (d2), s/veh	1.8	1.7	1.1	0.6	2.5	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.8	18.6	2.1	20.6	5.1	5.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.9	9.9	21.6	10.2	62.8	65.0
LnGrp LOS	A	A	C	B	E	E
Approach Vol, veh/h	1794			2093	154	
Approach Delay, s/veh	9.9			10.5	64.0	
Approach LOS	A			B	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		130.0		30.0		130.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		124.0		24.0		124.0
Max Q Clear Time (g_c+I1), s		38.5		9.5		56.5
Green Ext Time (p_c), s		26.0		0.4		37.9

Intersection Summary		
HCM 6th Ctrl Delay		12.3
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	20	20	40	40	250	20	1120	30	150	800	20
Future Volume (veh/h)	40	20	20	40	40	250	20	1120	30	150	800	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	41	21	21	41	41	258	21	1155	31	155	825	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	0	0	0	3	3	3	5	5	5
Cap, veh/h	206	154	154	174	161	293	460	2170	58	344	2481	63
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.62	0.62	0.62	0.05	0.72	0.72
Sat Flow, veh/h	1063	844	844	710	883	1610	646	3507	94	1739	3457	88
Grp Volume(v), veh/h	41	0	42	82	0	258	21	580	606	155	414	432
Grp Sat Flow(s),veh/h/ln	1063	0	1689	1593	0	1610	646	1763	1839	1739	1735	1810
Q Serve(g_s), s	4.2	0.0	2.5	2.9	0.0	18.7	1.5	22.5	22.5	3.7	10.6	10.6
Cycle Q Clear(g_c), s	9.6	0.0	2.5	5.4	0.0	18.7	1.5	22.5	22.5	3.7	10.6	10.6
Prop In Lane	1.00		0.50	0.50		1.00	1.00		0.05	1.00		0.05
Lane Grp Cap(c), veh/h	206	0	308	335	0	293	460	1091	1138	344	1245	1299
V/C Ratio(X)	0.20	0.00	0.14	0.24	0.00	0.88	0.05	0.53	0.53	0.45	0.33	0.33
Avail Cap(c_a), veh/h	313	0	478	497	0	456	460	1091	1138	447	1245	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	0.0	41.2	42.3	0.0	47.8	9.0	13.0	13.0	10.3	6.3	6.3
Incr Delay (d2), s/veh	0.5	0.0	0.2	0.4	0.0	11.7	0.2	1.7	1.6	0.9	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	0.0	1.9	3.9	0.0	13.3	0.4	13.4	13.9	2.4	6.6	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	0.0	41.4	42.7	0.0	59.5	9.2	14.7	14.6	11.2	7.0	7.0
LnGrp LOS	D	A	D	D	A	E	A	B	B	B	A	A
Approach Vol, veh/h		83			340			1207			1001	
Approach Delay, s/veh		44.1			55.5			14.5			7.6	
Approach LOS		D			E			B			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	11.9	80.3		27.9		92.1		27.9				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	13.0	55.0		34.0		74.0		34.0				
Max Q Clear Time (g_c+I1), s	5.7	24.5		11.6		12.6		20.7				
Green Ext Time (p_c), s	0.2	9.5		0.3		6.2		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	1290	180	240	1500	100	260	510	100	90	410	270
Future Volume (veh/h)	310	1290	180	240	1500	100	260	510	100	90	410	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	316	1316	184	245	1531	102	265	520	102	92	418	276
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	743	1881	981	296	1421	634	310	581	113	134	512	567
Arrive On Green	0.21	0.53	0.53	0.09	0.40	0.40	0.09	0.20	0.20	0.04	0.15	0.15
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	2964	579	3428	3526	1572
Grp Volume(v), veh/h	316	1316	184	245	1531	102	265	311	311	92	418	276
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1766	1714	1763	1572
Q Serve(g_s), s	12.6	44.3	8.0	11.2	64.0	5.3	12.1	27.3	27.5	4.2	18.4	4.3
Cycle Q Clear(g_c), s	12.6	44.3	8.0	11.2	64.0	5.3	12.1	27.3	27.5	4.2	18.4	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	743	1881	981	296	1421	634	310	348	346	134	512	567
V/C Ratio(X)	0.43	0.70	0.19	0.83	1.08	0.16	0.85	0.89	0.90	0.69	0.82	0.49
Avail Cap(c_a), veh/h	743	1881	981	497	1421	634	367	389	386	300	705	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.51	0.51	0.51	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	54.3	28.2	13.1	72.0	48.0	20.2	71.8	62.7	62.8	75.9	66.3	20.1
Incr Delay (d2), s/veh	0.3	1.6	0.3	3.1	42.1	0.3	15.6	20.7	21.8	5.8	5.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	25.1	5.3	7.7	45.8	4.5	10.1	20.5	20.6	3.6	13.3	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	29.7	13.4	75.0	90.1	20.5	87.4	83.4	84.6	81.7	71.3	20.8
LnGrp LOS	D	C	B	E	F	C	F	F	F	F	E	C
Approach Vol, veh/h		1816			1878			887			786	
Approach Delay, s/veh		32.4			84.4			85.0			54.8	
Approach LOS		C			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	90.7	12.3	37.3	40.4	70.0	20.4	29.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	64.0	14.0	35.0	23.0	64.0	17.0	32.0
Max Q Clear Time (g_c+I1), s	13.2	46.3	6.2	29.5	14.6	66.0	14.1	20.4
Green Ext Time (p_c), s	0.6	9.7	0.1	1.8	0.7	0.0	0.3	2.9

Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1400	50	110	1720	140	70	120	80	180	130	50
Future Volume (veh/h)	30	1400	50	110	1720	140	70	120	80	180	130	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	31	1443	52	113	1773	144	72	124	82	186	134	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	165	2145	957	251	2212	986	176	161	137	186	177	150
Arrive On Green	0.03	0.61	0.61	0.04	0.63	0.63	0.05	0.09	0.09	0.06	0.10	0.10
Sat Flow, veh/h	1753	3497	1560	1767	3526	1572	1753	1841	1560	1739	1826	1547
Grp Volume(v), veh/h	31	1443	52	113	1773	144	72	124	82	186	134	52
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1767	1763	1572	1753	1841	1560	1739	1826	1547
Q Serve(g_s), s	0.8	32.6	1.6	2.8	45.2	4.5	4.4	7.9	6.1	7.0	8.6	3.8
Cycle Q Clear(g_c), s	0.8	32.6	1.6	2.8	45.2	4.5	4.4	7.9	6.1	7.0	8.6	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	2145	957	251	2212	986	176	161	137	186	177	150
V/C Ratio(X)	0.19	0.67	0.05	0.45	0.80	0.15	0.41	0.77	0.60	1.00	0.76	0.35
Avail Cap(c_a), veh/h	205	2145	957	268	2212	986	192	552	468	186	548	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	15.3	9.3	14.2	16.8	9.2	46.9	53.6	52.7	52.2	52.8	50.6
Incr Delay (d2), s/veh	0.3	1.0	0.1	1.3	3.2	0.3	1.5	7.5	4.2	65.5	6.4	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(95%),veh/ln	0.6	16.6	1.0	2.0	24.5	2.9	3.7	7.2	4.6	9.6	7.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	16.2	9.3	15.5	19.9	9.5	48.4	61.1	56.9	117.7	59.2	52.0
LnGrp LOS	B	B	A	B	B	A	D	E	E	F	E	D
Approach Vol, veh/h		1526			2030			278			372	
Approach Delay, s/veh		16.0			19.0			56.6			87.4	
Approach LOS		B			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	79.6	13.0	16.5	9.2	81.3	11.9	17.6
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	6.0	47.0	7.0	36.0	6.0	47.0	7.0	36.0
Max Q Clear Time (g_c+I1), s	4.8	34.6	9.0	9.9	2.8	47.2	6.4	10.6
Green Ext Time (p_c), s	0.0	8.0	0.0	0.6	0.0	0.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	40	120	50	110	10	180	690	50	10	600	100
Future Volume (veh/h)	50	40	120	50	110	10	180	690	50	10	600	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	42	126	53	116	11	189	726	53	11	632	105
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	137	67	202	135	143	14	549	2525	184	510	2016	334
Arrive On Green	0.04	0.16	0.16	0.08	0.08	0.08	0.05	0.75	0.75	0.66	0.66	0.66
Sat Flow, veh/h	1795	415	1246	1227	1695	161	1781	3358	245	693	3050	506
Grp Volume(v), veh/h	53	0	168	53	0	127	189	384	395	11	368	369
Grp Sat Flow(s),veh/h/ln	1795	0	1661	1227	0	1856	1781	1777	1826	693	1777	1779
Q Serve(g_s), s	3.7	0.0	13.2	5.9	0.0	9.4	4.6	9.6	9.6	0.8	12.4	12.4
Cycle Q Clear(g_c), s	3.7	0.0	13.2	8.1	0.0	9.4	4.6	9.6	9.6	0.8	12.4	12.4
Prop In Lane	1.00		0.75	1.00		0.09	1.00		0.13	1.00		0.28
Lane Grp Cap(c), veh/h	137	0	270	135	0	156	549	1336	1373	510	1174	1176
V/C Ratio(X)	0.39	0.00	0.62	0.39	0.00	0.81	0.34	0.29	0.29	0.02	0.31	0.31
Avail Cap(c_a), veh/h	150	0	344	181	0	225	578	1336	1373	510	1174	1176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	0.0	54.6	63.5	0.0	63.0	7.0	5.5	5.5	8.2	10.1	10.2
Incr Delay (d2), s/veh	1.8	0.0	2.3	1.8	0.0	13.6	0.2	0.3	0.3	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	0.0	9.7	3.5	0.0	8.8	3.0	5.7	5.8	0.2	8.5	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	0.0	57.0	65.4	0.0	76.6	7.2	5.8	5.8	8.3	10.8	10.9
LnGrp LOS	E	A	E	E	A	E	A	A	A	A	B	B
Approach Vol, veh/h		221			180			968			748	
Approach Delay, s/veh		56.8			73.3			6.1			10.8	
Approach LOS		E			E			A			B	

Timer - Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	111.2	28.8	12.7	98.5	11.0	17.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	99.0	29.0	9.0	84.0	6.0	17.0
Max Q Clear Time (g_c+I1), s	11.6	15.2	6.6	14.4	5.7	11.4
Green Ext Time (p_c), s	2.4	0.8	0.1	2.4	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	690	20	80	630	150	20	130	90	100	50	20
Future Volume (veh/h)	30	690	20	80	630	150	20	130	90	100	50	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	32	726	21	84	663	158	21	137	95	105	53	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	451	2172	63	498	1787	425	280	206	143	149	257	102
Arrive On Green	0.03	0.61	0.61	0.04	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1795	3555	103	1795	2870	683	1326	1029	713	1158	1285	509
Grp Volume(v), veh/h	32	366	381	84	413	408	21	0	232	105	0	74
Grp Sat Flow(s),veh/h/ln	1795	1791	1867	1795	1791	1762	1326	0	1742	1158	0	1794
Q Serve(g_s), s	0.8	12.0	12.0	2.1	13.6	13.6	1.6	0.0	14.8	9.2	0.0	4.1
Cycle Q Clear(g_c), s	0.8	12.0	12.0	2.1	13.6	13.6	5.7	0.0	14.8	24.0	0.0	4.1
Prop In Lane	1.00		0.06	1.00		0.39	1.00		0.41	1.00		0.28
Lane Grp Cap(c), veh/h	451	1094	1140	498	1115	1097	280	0	348	149	0	359
V/C Ratio(X)	0.07	0.33	0.33	0.17	0.37	0.37	0.08	0.00	0.67	0.70	0.00	0.21
Avail Cap(c_a), veh/h	507	1094	1140	533	1115	1097	280	0	348	149	0	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	11.4	11.4	8.4	11.1	11.1	42.4	0.0	44.3	56.1	0.0	40.1
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.2	0.9	1.0	0.1	0.0	4.8	13.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	8.4	8.6	1.4	9.0	8.9	1.0	0.0	11.2	6.8	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.7	12.2	12.2	8.5	12.1	12.1	42.6	0.0	49.1	70.0	0.0	40.3
LnGrp LOS	A	B	B	A	B	B	D	A	D	E	A	D
Approach Vol, veh/h		779			905			253			179	
Approach Delay, s/veh		12.1			11.7			48.5			57.7	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	79.3		30.0	9.3	80.7		30.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	71.0		24.0	7.0	71.0		24.0				
Max Q Clear Time (g_c+I1), s	4.1	14.0		16.8	2.8	15.6		26.0				
Green Ext Time (p_c), s	0.0	5.2		0.8	0.0	5.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	20.2	
HCM 6th LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	1300	30	50	1510	40	20	50	30	30	60	440
Future Volume (veh/h)	330	1300	30	50	1510	40	20	50	30	30	60	440
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	340	1340	31	52	1557	41	21	52	31	31	62	454
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	367	2271	53	288	1890	843	73	175	93	129	243	557
Arrive On Green	0.15	0.64	0.64	0.04	0.53	0.53	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	3550	82	1781	3554	1585	224	876	467	485	1221	1598
Grp Volume(v), veh/h	340	670	701	52	1557	41	104	0	0	93	0	454
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1585	1567	0	0	1706	0	1598
Q Serve(g_s), s	19.7	32.8	32.9	1.9	54.9	1.9	0.0	0.0	0.0	0.0	0.0	30.0
Cycle Q Clear(g_c), s	19.7	32.8	32.9	1.9	54.9	1.9	7.4	0.0	0.0	6.3	0.0	30.0
Prop In Lane	1.00		0.04	1.00		1.00	0.20		0.30	0.33		1.00
Lane Grp Cap(c), veh/h	367	1137	1187	288	1890	843	341	0	0	372	0	557
V/C Ratio(X)	0.93	0.59	0.59	0.18	0.82	0.05	0.30	0.00	0.00	0.25	0.00	0.82
Avail Cap(c_a), veh/h	503	1137	1187	511	1890	843	341	0	0	372	0	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.3	15.7	15.7	15.2	29.4	16.9	51.2	0.0	0.0	50.7	0.0	44.6
Incr Delay (d2), s/veh	19.3	2.2	2.2	0.3	4.2	0.1	0.5	0.0	0.0	0.3	0.0	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.9	18.7	19.4	1.4	30.8	1.2	6.2	0.0	0.0	5.5	0.0	23.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	17.9	17.9	15.5	33.6	17.0	51.7	0.0	0.0	51.1	0.0	53.7
LnGrp LOS	E	B	B	B	C	B	D	A	A	D	A	D
Approach Vol, veh/h		1711			1650			104			547	
Approach Delay, s/veh		27.0			32.6			51.7			53.3	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	102.2		36.0	28.4	86.0		36.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	25.0	89.0		30.0	34.0	80.0		30.0				
Max Q Clear Time (g_c+I1), s	3.9	34.9		9.4	21.7	56.9		32.0				
Green Ext Time (p_c), s	0.1	11.3		0.6	0.8	11.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		33.5
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	620	10	10	10	750	650	10	0	340	60
Future Volume (veh/h)	20	0	620	10	10	10	750	650	10	0	340	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1900	1900	1900	1856	1856	1856	0	1826	1826
Adj Flow Rate, veh/h	21	0	447	11	11	11	798	691	11	0	362	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	0	0	0	3	3	3	0	5	5
Cap, veh/h	224	234	584	187	111	111	870	1391	22	0	1363	239
Arrive On Green	0.13	0.00	0.13	0.13	0.13	0.13	0.25	0.76	0.76	0.00	0.46	0.46
Sat Flow, veh/h	1368	1841	1560	958	872	872	1767	1821	29	0	3042	517
Grp Volume(v), veh/h	21	0	447	11	0	22	798	0	702	0	211	215
Grp Sat Flow(s),veh/h/ln	1368	1841	1560	958	0	1743	1767	0	1850	0	1735	1733
Q Serve(g_s), s	1.5	0.0	14.0	1.1	0.0	1.2	24.7	0.0	15.9	0.0	8.2	8.4
Cycle Q Clear(g_c), s	2.7	0.0	14.0	1.1	0.0	1.2	24.7	0.0	15.9	0.0	8.2	8.4
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.02	0.00		0.30
Lane Grp Cap(c), veh/h	224	234	584	187	0	222	870	0	1413	0	801	800
V/C Ratio(X)	0.09	0.00	0.77	0.06	0.00	0.10	0.92	0.00	0.50	0.00	0.26	0.27
Avail Cap(c_a), veh/h	224	234	584	187	0	222	883	0	1413	0	801	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.45	0.00	0.45	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	0.0	30.2	42.4	0.0	42.4	10.3	0.0	5.0	0.0	18.1	18.2
Incr Delay (d2), s/veh	0.1	0.0	2.8	0.1	0.0	0.2	14.1	0.0	1.3	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	14.4	0.5	0.0	1.0	16.4	0.0	8.8	0.0	6.1	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	0.0	32.9	42.5	0.0	42.6	24.4	0.0	6.2	0.0	18.9	19.0
LnGrp LOS	D	A	C	D	A	D	C	A	A	A	B	B
Approach Vol, veh/h		468			33			1500			426	
Approach Delay, s/veh		33.4			42.6			15.9			19.0	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	2	4	5	6	8
Phs Duration (G+Y+Rc), s	90.0	20.0	33.2	56.8	20.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	84.0	14.0	28.0	50.0	14.0
Max Q Clear Time (g_c+I1), s	17.9	16.0	26.7	10.4	3.2
Green Ext Time (p_c), s	5.7	0.0	0.5	2.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

User approved changes to right turn type.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	620	60	0	510	10	80	540	10	60	250	10
Future Volume (veh/h)	20	620	60	0	510	10	80	540	10	60	250	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	22	667	65	0	548	11	86	581	11	65	269	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	0	2	2	1	1	1	4	4	4
Cap, veh/h	485	1074	105	0	1169	23	186	863	16	148	421	17
Arrive On Green	0.64	0.64	0.64	0.00	0.64	0.64	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	850	1677	163	0	1827	37	1108	3596	68	812	1756	72
Grp Volume(v), veh/h	22	0	732	0	0	559	86	289	303	65	0	280
Grp Sat Flow(s),veh/h/ln	850	0	1841	0	0	1864	1108	1791	1873	812	0	1828
Q Serve(g_s), s	1.4	0.0	23.8	0.0	0.0	15.4	7.6	14.6	14.7	7.9	0.0	13.7
Cycle Q Clear(g_c), s	16.8	0.0	23.8	0.0	0.0	15.4	21.3	14.6	14.7	22.5	0.0	13.7
Prop In Lane	1.00		0.09	0.00		0.02	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	485	0	1178	0	0	1193	186	430	450	148	0	439
V/C Ratio(X)	0.05	0.00	0.62	0.00	0.00	0.47	0.46	0.67	0.67	0.44	0.00	0.64
Avail Cap(c_a), veh/h	485	0	1178	0	0	1193	186	430	450	148	0	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.47	0.00	0.47
Uniform Delay (d), s/veh	13.6	0.0	10.8	0.0	0.0	9.3	43.7	34.4	34.4	44.7	0.0	34.1
Incr Delay (d2), s/veh	0.2	0.0	2.5	0.0	0.0	1.3	1.8	4.1	3.9	1.0	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	14.8	0.0	0.0	10.4	3.9	11.1	11.5	2.9	0.0	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	0.0	13.2	0.0	0.0	10.6	45.5	38.5	38.4	45.6	0.0	35.6
LnGrp LOS	B	A	B	A	A	B	D	D	D	D	A	D
Approach Vol, veh/h		754			559			678			345	
Approach Delay, s/veh		13.2			10.6			39.3			37.5	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	70.0	30.0	70.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	64.0	24.0	64.0	24.0
Max Q Clear Time (g_c+I1), s	25.8	23.3	17.4	24.5
Green Ext Time (p_c), s	6.9	0.3	4.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	30	20	40	90	200	50	940	20	110	740	10
Future Volume (veh/h)	30	30	20	40	90	200	50	940	20	110	740	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	30	30	20	40	91	202	51	949	20	111	747	10
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	3	3	3	5	5	5
Cap, veh/h	142	136	72	80	118	227	428	2208	47	366	1781	24
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.63	0.63	0.51	0.51	0.51
Sat Flow, veh/h	356	606	321	131	526	1012	1767	3531	74	566	3505	47
Grp Volume(v), veh/h	80	0	0	333	0	0	51	474	495	111	370	387
Grp Sat Flow(s),veh/h/ln	1283	0	0	1668	0	0	1767	1763	1842	566	1735	1817
Q Serve(g_s), s	0.0	0.0	0.0	9.3	0.0	0.0	1.0	11.0	11.0	10.0	10.7	10.7
Cycle Q Clear(g_c), s	2.9	0.0	0.0	15.4	0.0	0.0	1.0	11.0	11.0	11.6	10.7	10.7
Prop In Lane	0.37		0.25	0.12		0.61	1.00		0.04	1.00		0.03
Lane Grp Cap(c), veh/h	350	0	0	425	0	0	428	1103	1152	366	881	923
V/C Ratio(X)	0.23	0.00	0.00	0.78	0.00	0.00	0.12	0.43	0.43	0.30	0.42	0.42
Avail Cap(c_a), veh/h	387	0	0	467	0	0	486	1103	1152	366	881	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.36	0.36	0.36	0.94	0.94	0.94
Uniform Delay (d), s/veh	25.2	0.0	0.0	30.0	0.0	0.0	8.5	7.7	7.7	13.1	12.3	12.3
Incr Delay (d2), s/veh	0.3	0.0	0.0	7.8	0.0	0.0	0.0	0.4	0.4	2.0	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	0.0	0.0	11.3	0.0	0.0	0.6	5.4	5.6	2.4	7.2	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	0.0	37.8	0.0	0.0	8.5	8.1	8.1	15.0	13.7	13.6
LnGrp LOS	C	A	A	D	A	A	A	A	A	B	B	B
Approach Vol, veh/h		80			333			1020			868	
Approach Delay, s/veh		25.5			37.8			8.1			13.8	
Approach LOS		C			D			A			B	

Timer - Assigned Phs	2	4	5	6	8
Phs Duration (G+Y+Rc), s	56.0	24.0	9.4	46.7	24.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	48.0	20.0	6.0	36.0	20.0
Max Q Clear Time (g_c+I1), s	13.0	4.9	3.0	13.6	17.4
Green Ext Time (p_c), s	7.1	0.3	0.0	6.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	50	30	70	60	50	30	710	70	20	580	30
Future Volume (veh/h)	50	50	30	70	60	50	30	710	70	20	580	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	55	55	33	77	66	55	33	780	77	22	637	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	3	3	3	5	5	5
Cap, veh/h	181	150	90	209	129	107	584	2319	229	483	2401	124
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.72	0.72	0.72	0.72	0.72	0.72
Sat Flow, veh/h	1291	1112	667	1330	958	798	761	3241	320	629	3356	174
Grp Volume(v), veh/h	55	0	88	77	0	121	33	424	433	22	329	341
Grp Sat Flow(s),veh/h/ln	1291	0	1780	1330	0	1756	761	1763	1798	629	1735	1795
Q Serve(g_s), s	3.3	0.0	3.6	4.5	0.0	5.1	1.3	7.2	7.2	1.1	5.3	5.3
Cycle Q Clear(g_c), s	8.4	0.0	3.6	8.1	0.0	5.1	6.6	7.2	7.2	8.3	5.3	5.3
Prop In Lane	1.00		0.38	1.00		0.45	1.00		0.18	1.00		0.10
Lane Grp Cap(c), veh/h	181	0	239	209	0	236	584	1261	1287	483	1241	1284
V/C Ratio(X)	0.30	0.00	0.37	0.37	0.00	0.51	0.06	0.34	0.34	0.05	0.27	0.27
Avail Cap(c_a), veh/h	298	0	400	329	0	395	584	1261	1287	483	1241	1284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	36.1	0.0	31.5	35.2	0.0	32.2	5.2	4.3	4.3	5.8	4.0	4.0
Incr Delay (d2), s/veh	0.9	0.0	0.9	1.1	0.0	1.7	0.2	0.7	0.7	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	2.9	2.7	0.0	4.1	0.3	3.7	3.7	0.2	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	0.0	32.5	36.3	0.0	33.9	5.3	5.0	5.0	5.9	4.3	4.3
LnGrp LOS	D	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		143			198			890			692	
Approach Delay, s/veh		34.2			34.8			5.0			4.4	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.2		16.8		63.2		16.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		50.0		18.0		50.0		18.0				
Max Q Clear Time (g_c+I1), s		9.2		10.4		10.3		10.1				
Green Ext Time (p_c), s		6.5		0.3		4.7		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	70	750	390	40	610	220
Future Volume (veh/h)	70	750	390	40	610	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1841	1841
Adj Flow Rate, veh/h	71	612	398	41	622	224
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	1	1	4	4
Cap, veh/h	287	794	550	57	782	1339
Arrive On Green	0.16	0.16	0.33	0.33	0.35	0.73
Sat Flow, veh/h	1753	1560	1681	173	1753	1841
Grp Volume(v), veh/h	71	612	0	439	622	224
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1854	1753	1841
Q Serve(g_s), s	3.9	18.0	0.0	23.0	22.4	4.2
Cycle Q Clear(g_c), s	3.9	18.0	0.0	23.0	22.4	4.2
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	287	794	0	607	782	1339
V/C Ratio(X)	0.25	0.77	0.00	0.72	0.80	0.17
Avail Cap(c_a), veh/h	287	794	0	607	782	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	21.8	0.0	32.6	16.9	4.7
Incr Delay (d2), s/veh	2.1	7.1	0.0	7.3	8.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	19.6	0.0	16.8	12.4	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.1	28.9	0.0	39.9	25.1	4.9
LnGrp LOS	D	C	A	D	C	A
Approach Vol, veh/h	683		439			846
Approach Delay, s/veh	30.3		39.9			19.8
Approach LOS	C		D			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	44.0	42.0			86.0	24.0
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0
Max Green Setting (Gmax), s	38.0	36.0			80.0	18.0
Max Q Clear Time (g_c+I1), s	24.4	25.0			6.2	20.0
Green Ext Time (p_c), s	1.9	2.0			1.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	250	340	800	580	30
Future Volume (veh/h)	0	250	340	800	580	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1841	1841
Adj Flow Rate, veh/h	0	266	362	851	617	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	4	4
Cap, veh/h	0	300	484	1324	939	49
Arrive On Green	0.00	0.19	0.11	0.70	0.54	0.54
Sat Flow, veh/h	0	1593	1795	1885	1735	90
Grp Volume(v), veh/h	0	267	362	851	0	649
Grp Sat Flow(s),veh/h/ln	0	1599	1795	1885	0	1825
Q Serve(g_s), s	0.0	17.9	9.3	26.9	0.0	27.9
Cycle Q Clear(g_c), s	0.0	17.9	9.3	26.9	0.0	27.9
Prop In Lane	0.00	1.00	1.00			0.05
Lane Grp Cap(c), veh/h	0	302	484	1324	0	988
V/C Ratio(X)	0.00	0.89	0.75	0.64	0.00	0.66
Avail Cap(c_a), veh/h	0	625	537	1324	0	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.47	0.47	0.00	1.00
Uniform Delay (d), s/veh	0.0	43.5	15.2	8.9	0.0	18.0
Incr Delay (d2), s/veh	0.0	8.6	2.5	1.1	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	12.2	6.0	13.2	0.0	17.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	52.0	17.7	10.0	0.0	21.4
LnGrp LOS	A	D	B	B	A	C
Approach Vol, veh/h	267			1213	649	
Approach Delay, s/veh	52.0			12.3	21.4	
Approach LOS	D			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		83.2		26.8	17.7	65.5
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		55.0		43.0	15.0	34.0
Max Q Clear Time (g_c+I1), s		28.9		19.9	11.3	29.9
Green Ext Time (p_c), s		6.9		0.9	0.4	1.6

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	40	1000	120	280	290	0	0	280	30
Future Volume (veh/h)	0	0	0	40	1000	120	280	290	0	0	280	30
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1885	1885	0	0	1841	1841
Adj Flow Rate, veh/h				44	1111	133	311	322	0	0	311	33
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	1	1	0	0	4	4
Cap, veh/h				57	1490	188	378	766	0	0	355	301
Arrive On Green				0.47	0.47	0.47	0.15	0.41	0.00	0.00	0.19	0.19
Sat Flow, veh/h				120	3147	397	1795	1885	0	0	1841	1560
Grp Volume(v), veh/h				685	0	603	311	322	0	0	311	33
Grp Sat Flow(s),veh/h/ln				1864	0	1799	1795	1885	0	0	1841	1560
Q Serve(g_s), s				30.5	0.0	26.6	13.3	12.2	0.0	0.0	16.4	1.7
Cycle Q Clear(g_c), s				30.5	0.0	26.6	13.3	12.2	0.0	0.0	16.4	1.7
Prop In Lane				0.06		0.22	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				883	0	852	378	766	0	0	355	301
V/C Ratio(X)				0.78	0.00	0.71	0.82	0.42	0.00	0.00	0.88	0.11
Avail Cap(c_a), veh/h				883	0	852	389	867	0	0	442	374
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.59	0.59	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				21.9	0.0	20.8	26.4	21.2	0.0	0.0	39.2	33.3
Incr Delay (d2), s/veh				6.6	0.0	4.9	8.1	0.2	0.0	0.0	15.1	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				20.8	0.0	17.7	9.7	8.3	0.0	0.0	13.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.5	0.0	25.8	34.5	21.5	0.0	0.0	54.3	33.4
LnGrp LOS				C	A	C	C	C	A	A	D	C
Approach Vol, veh/h					1288			633			344	
Approach Delay, s/veh					27.2			27.9			52.3	
Approach LOS					C			C			D	

Timer - Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				46.6		53.4	21.4	25.3				
Change Period (Y+Rc), s				6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s				46.0		42.0	16.0	24.0				
Max Q Clear Time (g_c+I1), s				14.2		32.5	15.3	18.4				
Green Ext Time (p_c), s				2.2		3.5	0.1	0.9				

Intersection Summary		
HCM 6th Ctrl Delay	31.2	
HCM 6th LOS	C	

Intersection	
Int Delay, s/veh	7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	200	480	130	210	360
Future Vol, veh/h	70	200	480	130	210	360
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	206	495	134	216	371

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1365	562	0	0	495	0
Stage 1	562	-	-	-	-	-
Stage 2	803	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	162	526	-	-	1069	-
Stage 1	571	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	121	526	-	-	1069	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	329	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.5	0	3.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	121	526	1069	-
HCM Lane V/C Ratio	-	-	0.596	0.392	0.203	-
HCM Control Delay (s)	-	-	71.3	16.2	9.2	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	3	1.8	0.8	-

Intersection	
Int Delay, s/veh	8.8

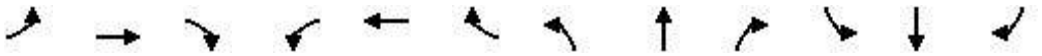
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	430	480	200	140	70
Future Vol, veh/h	20	430	480	200	140	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	6	6
Mvmt Flow	22	467	522	217	152	76

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1413	152	152	0	-	0
Stage 1	152	-	-	-	-	-
Stage 2	1261	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.12	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.218	-	-	-
Pot Cap-1 Maneuver	153	897	1429	-	-	0
Stage 1	878	-	-	-	-	0
Stage 2	268	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	90	897	1429	-	-	-
Mov Cap-2 Maneuver	90	-	-	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	268	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.3	6.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1429	-	90	897	-
HCM Lane V/C Ratio	0.365	-	0.242	0.521	-
HCM Control Delay (s)	9	0	57.3	13.3	-
HCM Lane LOS	A	A	F	B	-
HCM 95th %tile Q(veh)	1.7	-	0.9	3.1	-

2030 NO-BUILD INTERSECTION SYNCHRO RESULTS



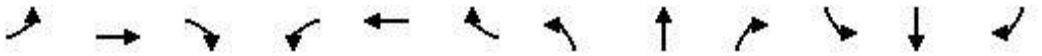
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1790	100	0	1120	10	0	0	0	10	10	30
Future Volume (veh/h)	0	1790	100	0	1120	10	0	0	0	10	10	30
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1811	1811				1767	1767	1767
Adj Flow Rate, veh/h	0	1865	104	0	1167	10				10	10	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	4	4	0	6	6				9	9	9
Cap, veh/h	0	4411	245	0	3166	27				16	16	
Arrive On Green	0.00	0.91	0.91	0.00	0.91	0.91				0.02	0.02	0.00
Sat Flow, veh/h	0	5037	271	0	3587	30				862	862	1497
Grp Volume(v), veh/h	0	1281	688	0	574	603				20	0	0
Grp Sat Flow(s),veh/h/ln	0	1675	1792	0	1721	1806				1724	0	1497
Q Serve(g_s), s	0.0	9.2	9.3	0.0	7.5	7.5				1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.2	9.3	0.0	7.5	7.5				1.8	0.0	0.0
Prop In Lane	0.00		0.15	0.00		0.02				0.50		1.00
Lane Grp Cap(c), veh/h	0	3034	1623	0	1558	1635				32	0	
V/C Ratio(X)	0.00	0.42	0.42	0.00	0.37	0.37				0.63	0.00	
Avail Cap(c_a), veh/h	0	3034	1623	0	1558	1635				240	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.91	0.91				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.1	1.1	0.0	1.1	1.1				77.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.8	0.0	0.6	0.6				18.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	3.1	3.7	0.0	2.8	2.9				1.8	0.0	0.0
Unsig. Movement Delay, s/veh												0.00
LnGrp Delay(d),s/veh	0.0	1.6	2.0	0.0	1.7	1.6				95.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				F	A	A
Approach Vol, veh/h		1969			1177						51	A
Approach Delay, s/veh		1.7			1.7						37.5	
Approach LOS		A			A						D	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		149.1				149.1		8.9				
Change Period (Y+Rc), s		6.0				6.0		6.0				
Max Green Setting (Gmax), s		124.0				124.0		22.0				
Max Q Clear Time (g_c+I1), s		11.3				9.5		3.8				
Green Ext Time (p_c), s		34.4				12.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		2.3
HCM 6th LOS		A

Notes

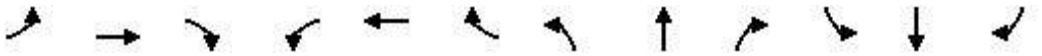
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1680	80	210	1060	10	50	10	130	10	10	20
Future Volume (veh/h)	40	1680	80	210	1060	10	50	10	130	10	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	40	1750	83	219	1104	10	52	10	135	10	10	21
Peak Hour Factor	1.00	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	5	5	5	5	5	5	5	5	5
Cap, veh/h	387	2399	1070	243	2539	23	113	15	203	72	60	215
Arrive On Green	0.03	0.69	0.69	0.06	0.72	0.72	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1753	3497	1560	1739	3523	32	1346	108	1456	268	434	1547
Grp Volume(v), veh/h	40	1750	83	219	544	570	52	0	145	20	0	21
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1739	1735	1820	1346	0	1564	703	0	1547
Q Serve(g_s), s	1.1	49.7	2.8	7.1	20.1	20.1	6.0	0.0	13.9	0.2	0.0	1.9
Cycle Q Clear(g_c), s	1.1	49.7	2.8	7.1	20.1	20.1	20.1	0.0	13.9	14.1	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.93	0.50		1.00
Lane Grp Cap(c), veh/h	387	2399	1070	243	1250	1312	113	0	218	132	0	215
V/C Ratio(X)	0.10	0.73	0.08	0.90	0.43	0.43	0.46	0.00	0.67	0.15	0.00	0.10
Avail Cap(c_a), veh/h	396	2399	1070	391	1250	1312	113	0	218	132	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	15.6	8.2	34.3	9.0	9.0	74.1	0.0	64.5	59.6	0.0	59.3
Incr Delay (d2), s/veh	0.1	1.8	0.1	13.8	1.0	0.9	2.9	0.0	7.5	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	27.1	1.8	14.5	12.2	12.7	4.0	0.0	10.1	1.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	17.4	8.4	48.1	9.9	9.9	77.0	0.0	72.0	60.2	0.0	59.5
LnGrp LOS	A	B	A	D	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1873			1333			197			41	
Approach Delay, s/veh		16.8			16.2			73.3			59.8	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	114.4		28.0	10.1	119.9		28.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	23.0	95.0		22.0	5.0	113.0		22.0				
Max Q Clear Time (g_c+I1), s	9.1	51.7		22.1	3.1	22.1		16.1				
Green Ext Time (p_c), s	0.5	23.9		0.0	0.0	10.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		20.3	
HCM 6th LOS		C	



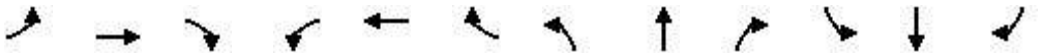
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1750	40	80	1240	10	10	10	40	20	20	30
Future Volume (veh/h)	30	1750	40	80	1240	10	10	10	40	20	20	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1767	1767	1767	1781	1781	1781
Adj Flow Rate, veh/h	33	1902	43	87	1348	11	11	11	43	22	22	33
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, %	4	4	4	5	5	5	9	9	9	8	8	8
Cap, veh/h	353	2765	62	219	2813	23	85	20	79	85	41	62
Arrive On Green	0.02	0.79	0.79	0.03	0.80	0.80	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1753	3496	79	1739	3527	29	1274	315	1230	1286	643	965
Grp Volume(v), veh/h	33	948	997	87	663	696	11	0	54	22	0	55
Grp Sat Flow(s),veh/h/ln	1753	1749	1827	1739	1735	1821	1274	0	1545	1286	0	1608
Q Serve(g_s), s	0.6	39.1	39.7	1.5	19.8	19.8	1.3	0.0	5.4	2.7	0.0	5.2
Cycle Q Clear(g_c), s	0.6	39.1	39.7	1.5	19.8	19.8	6.6	0.0	5.4	8.0	0.0	5.2
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.80	1.00		0.60
Lane Grp Cap(c), veh/h	353	1383	1445	219	1384	1452	85	0	99	85	0	103
V/C Ratio(X)	0.09	0.69	0.69	0.40	0.48	0.48	0.13	0.00	0.54	0.26	0.00	0.53
Avail Cap(c_a), veh/h	366	1383	1445	264	1384	1452	148	0	176	148	0	183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.0	7.5	7.6	10.9	5.2	5.2	74.8	0.0	71.7	75.6	0.0	71.6
Incr Delay (d2), s/veh	0.1	1.5	1.5	1.0	1.0	1.0	0.7	0.0	4.6	1.6	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	18.6	19.6	2.3	11.1	11.6	0.8	0.0	4.1	1.7	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.0	9.1	9.1	11.9	6.3	6.2	75.5	0.0	76.2	77.2	0.0	75.8
LnGrp LOS	A	A	A	B	A	A	E	A	E	E	A	E
Approach Vol, veh/h		1978			1446			65			77	
Approach Delay, s/veh		9.0			6.6			76.1			76.2	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	131.0		16.2	9.8	132.0		16.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	113.0		18.0	5.0	117.0		18.0				
Max Q Clear Time (g_c+I1), s	3.5	41.7		8.6	2.6	21.8		10.0				
Green Ext Time (p_c), s	0.1	34.8		0.1	0.0	15.9		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			10.7									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
4: S 3rd St/N 3rd St & High St

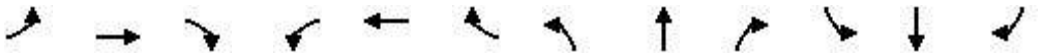
07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1780	20	40	1290	40	10	10	30	20	30	30
Future Volume (veh/h)	10	1780	20	40	1290	40	10	10	30	20	30	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	11	1874	21	42	1358	42	11	11	32	21	32	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	5	5	5	0	0	0	11	11	11
Cap, veh/h	329	2837	32	225	2800	87	74	26	75	90	48	48
Arrive On Green	0.01	0.80	0.80	0.03	0.82	0.82	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1753	3543	40	1739	3435	106	1359	429	1247	1266	797	797
Grp Volume(v), veh/h	11	923	972	42	685	715	11	0	43	21	0	64
Grp Sat Flow(s),veh/h/ln	1753	1749	1834	1739	1735	1807	1359	0	1676	1266	0	1594
Q Serve(g_s), s	0.2	35.7	35.9	0.7	19.3	19.4	1.3	0.0	4.0	2.6	0.0	6.3
Cycle Q Clear(g_c), s	0.2	35.7	35.9	0.7	19.3	19.4	7.6	0.0	4.0	6.6	0.0	6.3
Prop In Lane	1.00		0.02	1.00		0.06	1.00		0.74	1.00		0.50
Lane Grp Cap(c), veh/h	329	1400	1468	225	1414	1473	74	0	101	90	0	96
V/C Ratio(X)	0.03	0.66	0.66	0.19	0.48	0.49	0.15	0.00	0.43	0.23	0.00	0.67
Avail Cap(c_a), veh/h	363	1400	1468	244	1414	1473	153	0	199	164	0	189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.55	0.55	0.55	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.8	6.7	6.8	7.4	4.5	4.5	77.3	0.0	72.5	75.7	0.0	73.6
Incr Delay (d2), s/veh	0.0	1.6	1.5	0.2	0.7	0.6	0.9	0.0	2.8	1.3	0.0	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	17.4	18.2	0.7	9.6	10.0	0.8	0.0	3.2	1.6	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	8.3	8.3	7.6	5.2	5.2	78.2	0.0	75.3	77.0	0.0	81.3
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	F
Approach Vol, veh/h		1906			1442			54			85	
Approach Delay, s/veh		8.2			5.2			75.9			80.2	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	134.1		15.7	7.9	136.4		15.7				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	117.0		19.0	5.0	118.0		19.0				
Max Q Clear Time (g_c+I1), s	2.7	37.9		9.6	2.2	21.4		8.6				
Green Ext Time (p_c), s	0.0	34.0		0.1	0.0	17.1		0.2				

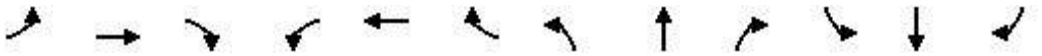
Intersection Summary			
HCM 6th Ctrl Delay		9.8	
HCM 6th LOS		A	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1620	130	190	1200	270	110	230	250	520	730	60
Future Volume (veh/h)	80	1620	130	190	1200	270	110	230	250	520	730	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1811	1811	1811	1737	1737	1737	1826	1826	1826
Adj Flow Rate, veh/h	85	1723	138	202	1277	287	117	245	266	553	777	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	6	6	6	11	11	11	5	5	5
Cap, veh/h	187	1649	131	144	1816	1024	105	240	214	470	719	59
Arrive On Green	0.04	0.51	0.51	0.06	0.53	0.53	0.06	0.15	0.15	0.14	0.22	0.22
Sat Flow, veh/h	1739	3256	258	1725	3441	1535	1654	1650	1472	3374	3245	267
Grp Volume(v), veh/h	85	909	952	202	1277	287	117	245	266	553	415	426
Grp Sat Flow(s),veh/h/ln	1739	1735	1779	1725	1721	1535	1654	1650	1472	1687	1735	1778
Q Serve(g_s), s	3.7	80.0	80.0	9.0	44.0	12.1	10.0	23.0	23.0	22.0	35.0	35.0
Cycle Q Clear(g_c), s	3.7	80.0	80.0	9.0	44.0	12.1	10.0	23.0	23.0	22.0	35.0	35.0
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	187	878	901	144	1816	1024	105	240	214	470	384	394
V/C Ratio(X)	0.45	1.03	1.06	1.40	0.70	0.28	1.12	1.02	1.24	1.18	1.08	1.08
Avail Cap(c_a), veh/h	225	878	901	144	1816	1024	105	240	214	470	384	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.82	0.82	0.82	0.96	0.96	0.96	0.19	0.19	0.19
Uniform Delay (d), s/veh	24.5	39.0	39.0	51.2	28.0	10.8	74.0	67.5	67.5	68.0	61.5	61.5
Incr Delay (d2), s/veh	1.2	34.6	41.5	212.6	1.9	0.6	121.3	62.1	140.6	84.3	45.7	45.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	52.6	56.8	17.9	24.7	7.3	12.7	20.0	25.9	19.3	24.7	25.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	73.6	80.5	263.8	29.9	11.3	195.3	129.6	208.1	152.3	107.2	107.3
LnGrp LOS	C	F	F	F	C	B	F	F	F	F	F	F
Approach Vol, veh/h		1946			1766			628			1394	
Approach Delay, s/veh		74.9			53.7			175.1			125.1	
Approach LOS		E			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	86.0	28.0	29.0	11.6	89.4	16.0	41.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	80.0	22.0	23.0	9.0	80.0	10.0	35.0
Max Q Clear Time (g_c+I1), s	11.0	82.0	24.0	25.0	5.7	46.0	12.0	37.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	91.5
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	2260	50	30	1580	10	50	10	30	30	20	30
Future Volume (veh/h)	80	2260	50	30	1580	10	50	10	30	30	20	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1811	1811	1811	1870	1870	1870	1796	1796	1796
Adj Flow Rate, veh/h	82	2330	52	31	1629	10	52	10	31	31	21	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	7	7	7
Cap, veh/h	258	2946	66	120	2953	18	115	33	102	122	54	79
Arrive On Green	0.84	0.84	0.84	0.84	0.84	0.84	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	301	3498	78	143	3506	22	1352	402	1245	1312	655	967
Grp Volume(v), veh/h	82	1160	1222	31	799	840	52	0	41	31	0	52
Grp Sat Flow(s),veh/h/ln	301	1749	1827	143	1721	1807	1352	0	1646	1312	0	1622
Q Serve(g_s), s	17.4	49.1	50.3	20.8	21.6	21.6	6.0	0.0	3.7	3.6	0.0	4.8
Cycle Q Clear(g_c), s	39.0	49.1	50.3	71.1	21.6	21.6	10.8	0.0	3.7	7.3	0.0	4.8
Prop In Lane	1.00		0.04	1.00		0.01	1.00		0.76	1.00		0.60
Lane Grp Cap(c), veh/h	258	1473	1539	120	1449	1522	115	0	135	122	0	133
V/C Ratio(X)	0.32	0.79	0.79	0.26	0.55	0.55	0.45	0.00	0.30	0.25	0.00	0.39
Avail Cap(c_a), veh/h	258	1473	1539	120	1449	1522	159	0	188	164	0	185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.4	5.8	5.9	22.8	3.7	3.7	73.9	0.0	68.3	71.8	0.0	68.8
Incr Delay (d2), s/veh	0.3	0.4	0.4	3.9	1.2	1.1	2.8	0.0	1.3	1.1	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	15.2	16.1	1.5	9.7	10.1	4.0	0.0	2.9	2.3	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	6.2	6.3	26.7	4.8	4.8	76.7	0.0	69.6	72.8	0.0	70.7
LnGrp LOS	A	A	A	C	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2464			1670			93			83	
Approach Delay, s/veh		6.4			5.2			73.6			71.5	
Approach LOS		A			A			E			E	

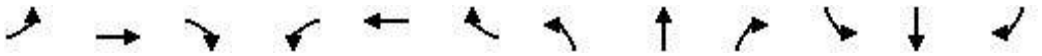
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		139.1		18.9		139.1		18.9				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		128.0		18.0		128.0		18.0				
Max Q Clear Time (g_c+I1), s		52.3		12.8		73.1		9.3				
Green Ext Time (p_c), s		55.4		0.1		22.8		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2280	40	20	1590	30	50
Future Volume (veh/h)	2280	40	20	1590	30	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	2351	41	21	1639	31	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	2738	48	92	2679	251	223
Arrive On Green	0.78	0.78	0.78	0.78	0.15	0.15
Sat Flow, veh/h	3609	61	142	3532	1725	1535
Grp Volume(v), veh/h	1165	1227	21	1639	31	52
Grp Sat Flow(s),veh/h/ln	1749	1830	142	1721	1725	1535
Q Serve(g_s), s	69.9	71.2	18.5	31.8	2.5	4.7
Cycle Q Clear(g_c), s	69.9	71.2	89.7	31.8	2.5	4.7
Prop In Lane		0.03	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1361	1424	92	2679	251	223
V/C Ratio(X)	0.86	0.86	0.23	0.61	0.12	0.23
Avail Cap(c_a), veh/h	1361	1424	92	2679	251	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.60	0.60	1.00	1.00
Uniform Delay (d), s/veh	11.6	11.8	41.9	7.4	58.7	59.7
Incr Delay (d2), s/veh	3.9	3.9	3.4	0.6	1.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	30.5	32.3	1.3	14.7	2.1	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.5	15.7	45.3	8.0	59.7	62.1
LnGrp LOS	B	B	D	A	E	E
Approach Vol, veh/h	2392			1660	83	
Approach Delay, s/veh	15.6			8.5	61.2	
Approach LOS	B			A	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		129.0		29.0		129.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		123.0		23.0		123.0
Max Q Clear Time (g_c+I1), s		73.2		6.7		91.7
Green Ext Time (p_c), s		38.0		0.2		17.8

Intersection Summary			
HCM 6th Ctrl Delay		13.7	
HCM 6th LOS		B	



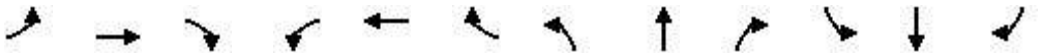
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1790	220	200	1140	50	160	320	110	100	480	310
Future Volume (veh/h)	320	1790	220	200	1140	50	160	320	110	100	480	310
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1811	1811	1811	1841	1841	1841
Adj Flow Rate, veh/h	333	1865	229	208	1188	52	167	333	115	104	500	323
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	5	6	6	6	4	4	4
Cap, veh/h	576	1976	970	235	1625	725	191	420	142	144	531	504
Arrive On Green	0.17	0.57	0.57	0.07	0.47	0.47	0.06	0.17	0.17	0.04	0.15	0.15
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	3346	2521	856	3401	3497	1560
Grp Volume(v), veh/h	333	1865	229	208	1188	52	167	225	223	104	500	323
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1673	1721	1657	1700	1749	1560
Q Serve(g_s), s	14.3	79.1	10.2	9.7	43.7	2.3	7.8	19.9	20.4	4.8	22.4	3.9
Cycle Q Clear(g_c), s	14.3	79.1	10.2	9.7	43.7	2.3	7.8	19.9	20.4	4.8	22.4	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	576	1976	970	235	1625	725	191	286	276	144	531	504
V/C Ratio(X)	0.58	0.94	0.24	0.89	0.73	0.07	0.88	0.79	0.81	0.72	0.94	0.64
Avail Cap(c_a), veh/h	576	1976	970	235	1625	725	191	286	276	151	531	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.37	0.63	0.63	0.63	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	60.3	31.6	12.9	72.9	34.0	14.0	73.9	63.2	63.4	74.7	66.3	26.4
Incr Delay (d2), s/veh	0.5	4.8	0.2	21.6	1.9	0.1	33.6	13.6	16.1	13.8	24.0	2.6
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(95%),veh/ln	8.7	38.9	5.5	7.8	24.3	2.0	7.6	14.9	15.0	4.3	17.1	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	36.4	13.1	94.5	35.8	14.1	107.5	76.8	79.5	88.6	90.3	29.0
LnGrp LOS	E	D	B	F	D	B	F	E	E	F	F	C
Approach Vol, veh/h		2427			1448			615			927	
Approach Delay, s/veh		37.6			43.5			86.1			68.7	
Approach LOS		D			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	96.0	12.7	32.3	33.0	80.0	15.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	90.0	7.0	26.0	27.0	74.0	9.0	24.0
Max Q Clear Time (g_c+I1), s	11.7	81.1	6.8	22.4	16.3	45.7	9.8	24.4
Green Ext Time (p_c), s	0.0	7.6	0.0	0.9	0.9	10.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
9: S Fair Ave/N Fair Ave & High St

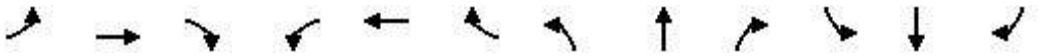
07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1790	90	50	1290	80	40	160	50	130	150	60
Future Volume (veh/h)	120	1790	90	50	1290	80	40	160	50	130	150	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1796	1796	1796	1811	1811	1811
Adj Flow Rate, veh/h	133	1989	100	56	1433	89	44	178	56	144	167	67
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	5	5	5	7	7	7	6	6	6
Cap, veh/h	246	2123	947	138	2067	922	155	209	177	153	228	193
Arrive On Green	0.05	0.61	0.61	0.04	0.60	0.60	0.03	0.12	0.12	0.04	0.13	0.13
Sat Flow, veh/h	1753	3497	1560	1739	3469	1547	1711	1796	1522	1725	1811	1535
Grp Volume(v), veh/h	133	1989	100	56	1433	89	44	178	56	144	167	67
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1739	1735	1547	1711	1796	1522	1725	1811	1535
Q Serve(g_s), s	3.5	62.2	3.2	1.5	34.1	3.0	2.7	11.7	4.1	5.0	10.7	4.8
Cycle Q Clear(g_c), s	3.5	62.2	3.2	1.5	34.1	3.0	2.7	11.7	4.1	5.0	10.7	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	2123	947	138	2067	922	155	209	177	153	228	193
V/C Ratio(X)	0.54	0.94	0.11	0.40	0.69	0.10	0.28	0.85	0.32	0.94	0.73	0.35
Avail Cap(c_a), veh/h	311	2123	947	150	2067	922	172	269	228	153	272	230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	21.5	9.9	28.1	16.7	10.4	45.1	52.0	48.7	51.6	50.5	48.0
Incr Delay (d2), s/veh	0.4	2.6	0.1	1.9	1.9	0.2	1.0	18.4	1.0	55.6	8.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	27.7	2.0	1.8	19.2	1.9	2.2	10.5	2.9	7.8	9.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	24.1	10.0	30.0	18.6	10.6	46.1	70.4	49.7	107.3	58.6	49.0
LnGrp LOS	B	C	A	C	B	B	D	E	D	F	E	D
Approach Vol, veh/h		2222			1578			278			378	
Approach Delay, s/veh		23.1			18.6			62.4			75.4	
Approach LOS		C			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	78.8	11.0	19.9	11.6	77.5	9.8	21.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	5.0	68.0	5.0	18.0	10.0	63.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	64.2	7.0	13.7	5.5	36.1	4.7	12.7
Green Ext Time (p_c), s	0.0	3.5	0.0	0.3	0.1	13.0	0.0	0.3

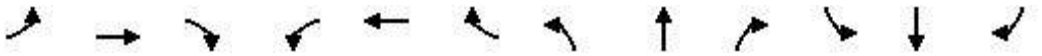
Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	1730	20	20	1260	30	10	30	60	70	10	150
Future Volume (veh/h)	220	1730	20	20	1260	30	10	30	60	70	10	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	229	1802	21	21	1312	31	10	31	62	73	10	156
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	335	2490	29	191	2358	1052	25	55	83	97	11	337
Arrive On Green	0.06	0.70	0.70	0.03	0.67	0.67	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1753	3541	41	1753	3497	1560	0	348	526	347	68	1585
Grp Volume(v), veh/h	229	889	934	21	1312	31	103	0	0	83	0	156
Grp Sat Flow(s),veh/h/ln	1753	1749	1833	1753	1749	1560	873	0	0	415	0	1585
Q Serve(g_s), s	6.4	48.8	49.1	0.6	31.1	1.1	0.0	0.0	0.0	0.0	0.0	13.7
Cycle Q Clear(g_c), s	6.4	48.8	49.1	0.6	31.1	1.1	25.0	0.0	0.0	25.0	0.0	13.7
Prop In Lane	1.00		0.02	1.00		1.00	0.10		0.60	0.88		1.00
Lane Grp Cap(c), veh/h	335	1230	1289	191	2358	1052	162	0	0	108	0	337
V/C Ratio(X)	0.68	0.72	0.72	0.11	0.56	0.03	0.64	0.00	0.00	0.77	0.00	0.46
Avail Cap(c_a), veh/h	490	1230	1289	222	2358	1052	162	0	0	108	0	337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	14.2	14.3	14.0	13.5	8.6	60.7	0.0	0.0	69.4	0.0	54.7
Incr Delay (d2), s/veh	2.5	3.7	3.6	0.3	1.0	0.1	8.0	0.0	0.0	28.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	25.1	26.2	0.4	17.0	0.6	7.5	0.0	0.0	7.7	0.0	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	17.9	17.9	14.2	14.5	8.7	68.7	0.0	0.0	97.7	0.0	55.7
LnGrp LOS	B	B	B	B	B	A	E	A	A	F	A	E
Approach Vol, veh/h		2052			1364			103			239	
Approach Delay, s/veh		17.7			14.3			68.7			70.3	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	118.0		31.0	14.9	113.4		31.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	112.0		25.0	23.0	96.0		25.0				
Max Q Clear Time (g_c+I1), s	2.6	51.1		27.0	8.4	33.1		27.0				
Green Ext Time (p_c), s	0.0	21.0		0.0	0.5	12.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		21.2	
HCM 6th LOS		C	



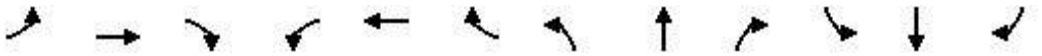
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	10	1000	20	0	0	440	280	10	0	610	60
Future Volume (veh/h)	40	10	1000	20	0	0	440	280	10	0	610	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1900	1693	1693	1693	0	1811	1811
Adj Flow Rate, veh/h	43	11	815	22	0	0	478	304	11	0	663	65
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, %	3	3	3	0	0	0	14	14	14	0	6	6
Cap, veh/h	443	498	743	243	510	0	523	1011	37	0	1151	113
Arrive On Green	0.27	0.27	0.27	0.27	0.00	0.00	0.20	0.62	0.62	0.00	0.36	0.36
Sat Flow, veh/h	1406	1856	1572	674	1900	0	1612	1623	59	0	3256	310
Grp Volume(v), veh/h	43	11	815	22	0	0	478	0	315	0	360	368
Grp Sat Flow(s),veh/h/ln	1406	1856	1572	674	1900	0	1612	0	1682	0	1721	1755
Q Serve(g_s), s	2.5	0.5	29.5	2.7	0.0	0.0	19.2	0.0	9.6	0.0	18.5	18.6
Cycle Q Clear(g_c), s	2.5	0.5	29.5	3.2	0.0	0.0	19.2	0.0	9.6	0.0	18.5	18.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.03	0.00		0.18
Lane Grp Cap(c), veh/h	443	498	743	243	510	0	523	0	1047	0	626	638
V/C Ratio(X)	0.10	0.02	1.10	0.09	0.00	0.00	0.91	0.00	0.30	0.00	0.58	0.58
Avail Cap(c_a), veh/h	443	498	743	243	510	0	692	0	1376	0	782	798
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	29.6	29.0	30.8	0.0	0.0	18.5	0.0	9.6	0.0	28.2	28.2
Incr Delay (d2), s/veh	0.1	0.0	48.1	0.7	0.0	0.0	13.8	0.0	0.2	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.4	34.9	0.9	0.0	0.0	13.2	0.0	5.9	0.0	12.1	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	29.6	77.1	31.6	0.0	0.0	32.3	0.0	9.8	0.0	29.0	29.0
LnGrp LOS	C	C	F	C	A	A	C	A	A	A	C	C
Approach Vol, veh/h		869			22			793			728	
Approach Delay, s/veh		74.2			31.6			23.4			29.0	
Approach LOS		E			C			C			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.5		35.5	28.5	46.0		35.5				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		90.0		8.0	34.0	50.0		8.0				
Max Q Clear Time (g_c+I1), s		11.6		31.5	21.2	20.6		5.2				
Green Ext Time (p_c), s		2.0		0.0	1.3	4.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			43.5									
HCM 6th LOS			D									

Notes

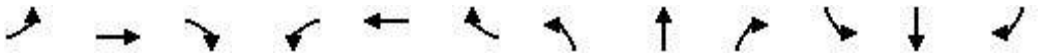
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	40	10	120	10	600	10	190	1430	10
Future Volume (veh/h)	10	10	10	40	10	120	10	600	10	190	1430	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1856	1856	1856	1722	1722	1722	1841	1841	1841
Adj Flow Rate, veh/h	11	11	11	42	11	126	11	632	11	200	1505	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	3	3	3	12	12	12	4	4	4
Cap, veh/h	123	81	81	149	33	154	268	2359	41	640	2882	21
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.72	0.72	0.72	0.05	0.81	0.81
Sat Flow, veh/h	1203	824	824	1010	341	1572	317	3291	57	1753	3559	26
Grp Volume(v), veh/h	11	0	22	53	0	126	11	314	329	200	739	777
Grp Sat Flow(s),veh/h/ln	1203	0	1648	1351	0	1572	317	1636	1712	1753	1749	1836
Q Serve(g_s), s	1.1	0.0	1.6	3.8	0.0	10.2	1.5	8.7	8.8	3.7	18.1	18.1
Cycle Q Clear(g_c), s	6.5	0.0	1.6	5.4	0.0	10.2	7.6	8.7	8.8	3.7	18.1	18.1
Prop In Lane	1.00		0.50	0.79		1.00	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	123	0	161	182	0	154	268	1173	1227	640	1416	1487
V/C Ratio(X)	0.09	0.00	0.14	0.29	0.00	0.82	0.04	0.27	0.27	0.31	0.52	0.52
Avail Cap(c_a), veh/h	237	0	317	319	0	302	268	1173	1227	774	1416	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	0.0	53.6	55.6	0.0	57.5	7.3	6.4	6.4	4.2	4.1	4.1
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.9	0.0	10.1	0.3	0.5	0.5	0.3	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	1.2	3.1	0.0	8.0	0.2	5.3	5.5	2.1	9.2	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.7	0.0	54.0	56.5	0.0	67.6	7.6	7.0	6.9	4.5	5.5	5.4
LnGrp LOS	E	A	D	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		33			179			654			1716	
Approach Delay, s/veh		55.6			64.3			7.0			5.3	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.1	99.2		18.7		111.3		18.7				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	16.0	71.0		25.0		93.0		25.0				
Max Q Clear Time (g_c+I1), s	5.7	10.8		8.5		20.1		12.2				
Green Ext Time (p_c), s	0.4	4.7		0.1		17.0		0.5				

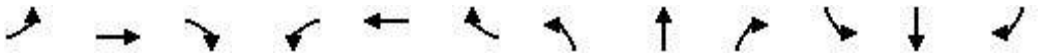
Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	20	30	70	20	540	20	190	1280	10
Future Volume (veh/h)	10	20	10	20	30	70	20	540	20	190	1280	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1707	1707	1707	1841	1841	1841
Adj Flow Rate, veh/h	12	23	12	23	35	81	23	628	23	221	1488	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	3	3	3	13	13	13	4	4	4
Cap, veh/h	164	299	139	111	171	322	129	1632	60	390	1466	12
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.02	0.51	0.51	0.41	0.41	0.41
Sat Flow, veh/h	317	878	410	175	502	945	1626	3191	117	769	3556	29
Grp Volume(v), veh/h	47	0	0	139	0	0	23	319	332	221	732	768
Grp Sat Flow(s),veh/h/ln	1605	0	0	1622	0	0	1626	1622	1686	769	1749	1836
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.6	9.7	9.7	19.9	33.4	33.4
Cycle Q Clear(g_c), s	1.5	0.0	0.0	4.8	0.0	0.0	0.6	9.7	9.7	21.6	33.4	33.4
Prop In Lane	0.26		0.26	0.17		0.58	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	602	0	0	604	0	0	129	830	862	390	721	757
V/C Ratio(X)	0.08	0.00	0.00	0.23	0.00	0.00	0.18	0.38	0.39	0.57	1.01	1.02
Avail Cap(c_a), veh/h	610	0	0	612	0	0	189	830	862	390	721	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.48	0.48	0.48	0.81	0.81	0.81
Uniform Delay (d), s/veh	18.1	0.0	0.0	19.2	0.0	0.0	19.6	12.0	12.0	21.0	23.8	23.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	0.3	0.6	0.6	4.8	33.8	33.3
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(95%),veh/ln	1.1	0.0	0.0	3.4	0.0	0.0	0.4	5.3	5.5	6.7	25.9	26.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	0.0	0.0	19.4	0.0	0.0	19.9	12.7	12.7	25.8	57.6	57.1
LnGrp LOS	B	A	A	B	A	A	B	B	B	C	F	F
Approach Vol, veh/h		47			139			674			1721	
Approach Delay, s/veh		18.2			19.4			12.9			53.3	
Approach LOS		B			B			B			D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.4		33.6	8.0	39.4		33.6				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		41.0		28.0	5.0	30.0		28.0				
Max Q Clear Time (g_c+I1), s		11.7		3.5	2.6	35.4		6.8				
Green Ext Time (p_c), s		4.2		0.2	0.0	0.0		0.8				

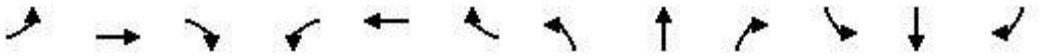
Intersection Summary												
HCM 6th Ctrl Delay			40.3									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	20	10	40	30	40	20	520	70	30	870	50
Future Volume (veh/h)	10	20	10	40	30	40	20	520	70	30	870	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1767	1767	1767	1811	1811	1811
Adj Flow Rate, veh/h	11	22	11	44	33	44	22	571	77	33	956	55
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	1	1	1	9	9	9	6	6	6
Cap, veh/h	455	364	182	494	223	297	280	1622	218	421	1804	104
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1343	1195	597	1387	733	977	527	2973	400	758	3307	190
Grp Volume(v), veh/h	11	0	33	44	0	77	22	322	326	33	497	514
Grp Sat Flow(s),veh/h/ln	1343	0	1792	1387	0	1709	527	1678	1695	758	1721	1777
Q Serve(g_s), s	0.5	0.0	1.0	1.9	0.0	2.6	2.2	8.6	8.7	2.0	14.8	14.8
Cycle Q Clear(g_c), s	3.1	0.0	1.0	2.9	0.0	2.6	17.0	8.6	8.7	10.7	14.8	14.8
Prop In Lane	1.00		0.33	1.00		0.57	1.00		0.24	1.00		0.11
Lane Grp Cap(c), veh/h	455	0	546	494	0	521	280	915	924	421	939	969
V/C Ratio(X)	0.02	0.00	0.06	0.09	0.00	0.15	0.08	0.35	0.35	0.08	0.53	0.53
Avail Cap(c_a), veh/h	499	0	605	540	0	577	280	915	924	421	939	969
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	21.4	0.0	19.7	20.7	0.0	20.3	17.1	10.2	10.2	13.3	11.6	11.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.1	0.5	1.1	1.1	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.8	1.1	0.0	1.9	0.5	5.5	5.6	0.6	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	0.0	19.8	20.8	0.0	20.4	17.6	11.3	11.3	13.3	11.8	11.8
LnGrp LOS	C	A	B	C	A	C	B	B	B	B	B	B
Approach Vol, veh/h		44			121			670			1044	
Approach Delay, s/veh		20.2			20.5			11.5			11.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		49.6		30.4		49.6		30.4				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		41.0		27.0		41.0		27.0				
Max Q Clear Time (g_c+I1), s		19.0		5.1		16.8		4.9				
Green Ext Time (p_c), s		4.2		0.1		7.3		0.5				

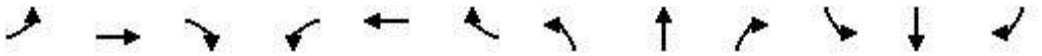
Intersection Summary												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	590	20	90	710	90	20	70	60	80	120	30
Future Volume (veh/h)	20	590	20	90	710	90	20	70	60	80	120	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	22	641	22	98	772	98	22	76	65	87	130	33
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, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	439	2202	76	553	2050	260	162	154	131	174	240	61
Arrive On Green	0.02	0.64	0.64	0.04	0.66	0.66	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1739	3422	117	1739	3097	393	1213	924	790	1248	1439	365
Grp Volume(v), veh/h	22	325	338	98	432	438	22	0	141	87	0	163
Grp Sat Flow(s),veh/h/ln	1739	1735	1805	1739	1735	1755	1213	0	1713	1248	0	1805
Q Serve(g_s), s	0.5	9.9	9.9	2.3	13.5	13.5	2.0	0.0	9.0	8.2	0.0	9.9
Cycle Q Clear(g_c), s	0.5	9.9	9.9	2.3	13.5	13.5	12.0	0.0	9.0	17.1	0.0	9.9
Prop In Lane	1.00		0.07	1.00		0.22	1.00		0.46	1.00		0.20
Lane Grp Cap(c), veh/h	439	1116	1161	553	1148	1162	162	0	285	174	0	300
V/C Ratio(X)	0.05	0.29	0.29	0.18	0.38	0.38	0.14	0.00	0.49	0.50	0.00	0.54
Avail Cap(c_a), veh/h	517	1116	1161	671	1148	1162	253	0	414	268	0	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	9.4	9.4	6.8	9.1	9.1	51.3	0.0	45.4	53.2	0.0	45.8
Incr Delay (d2), s/veh	0.0	0.7	0.6	0.2	0.9	0.9	0.4	0.0	1.3	2.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	6.7	6.9	1.4	8.7	8.7	1.2	0.0	7.1	4.8	0.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	10.0	10.0	7.0	10.1	10.1	51.7	0.0	46.7	55.4	0.0	47.3
LnGrp LOS	A	B	B	A	B	B	D	A	D	E	A	D
Approach Vol, veh/h		685			968			163			250	
Approach Delay, s/veh		9.9			9.8			47.4			50.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	83.2		26.0	8.6	85.4		26.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	13.0	60.0		29.0	8.0	65.0		29.0				
Max Q Clear Time (g_c+I1), s	4.3	11.9		14.0	2.5	15.5		19.1				
Green Ext Time (p_c), s	0.1	4.5		0.7	0.0	6.5		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		17.7	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	60	170	20	20	10	90	570	30	10	700	60
Future Volume (veh/h)	80	60	170	20	20	10	90	570	30	10	700	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	86	65	183	22	22	11	97	613	32	11	753	65
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	3	3	3	5	5	5	5	5	5
Cap, veh/h	238	78	219	90	94	47	474	2468	129	556	2126	183
Arrive On Green	0.06	0.18	0.18	0.08	0.08	0.08	0.03	0.74	0.74	0.66	0.66	0.66
Sat Flow, veh/h	1795	436	1228	1123	1167	584	1739	3354	175	767	3231	279
Grp Volume(v), veh/h	86	0	248	22	0	33	97	317	328	11	404	414
Grp Sat Flow(s),veh/h/ln	1795	0	1664	1123	0	1751	1739	1735	1794	767	1735	1776
Q Serve(g_s), s	6.0	0.0	20.1	2.7	0.0	2.5	2.4	8.3	8.3	0.7	14.5	14.6
Cycle Q Clear(g_c), s	6.0	0.0	20.1	9.1	0.0	2.5	2.4	8.3	8.3	0.7	14.5	14.6
Prop In Lane	1.00		0.74	1.00		0.33	1.00		0.10	1.00		0.16
Lane Grp Cap(c), veh/h	238	0	297	90	0	141	474	1276	1320	556	1141	1168
V/C Ratio(X)	0.36	0.00	0.83	0.24	0.00	0.23	0.20	0.25	0.25	0.02	0.35	0.35
Avail Cap(c_a), veh/h	267	0	535	233	0	363	574	1276	1320	556	1141	1168
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	0.0	55.5	66.5	0.0	60.3	7.5	6.0	6.0	8.3	10.7	10.7
Incr Delay (d2), s/veh	0.9	0.0	6.1	1.4	0.0	0.8	0.1	0.3	0.3	0.1	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	0.0	14.0	1.5	0.0	2.1	1.6	5.2	5.3	0.2	9.5	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	61.6	67.9	0.0	61.2	7.7	6.3	6.3	8.4	11.5	11.5
LnGrp LOS	D	A	E	E	A	E	A	A	A	A	B	B
Approach Vol, veh/h		334			55			742			829	
Approach Delay, s/veh		59.7			63.9			6.5			11.5	
Approach LOS		E			E			A			B	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		109.0		31.0	10.9	98.1	13.7	17.3				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		83.0		45.0	13.0	64.0	10.0	29.0				
Max Q Clear Time (g_c+I1), s		10.3		22.1	4.4	16.6	8.0	11.1				
Green Ext Time (p_c), s		1.9		1.6	0.1	2.7	0.0	0.2				

Intersection Summary												
HCM 6th Ctrl Delay			19.3									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	25.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	570	400	60	200	70
Future Vol, veh/h	20	570	400	60	200	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	10	10	23	23
Mvmt Flow	26	750	526	79	263	92

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1394	263	263	0	-	0
Stage 1	263	-	-	-	-	-
Stage 2	1131	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.2	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.29	-	-	-
Pot Cap-1 Maneuver	156	776	1256	-	-	0
Stage 1	781	-	-	-	-	0
Stage 2	308	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	88	776	1256	-	-	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	439	-	-	-	-	-
Stage 2	308	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	48.1	8.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1256	-	88	776	-
HCM Lane V/C Ratio	0.419	-	0.299	0.966	-
HCM Control Delay (s)	9.9	0	62.5	47.6	-
HCM Lane LOS	A	A	F	E	-
HCM 95th %tile Q(veh)	2.1	-	1.1	15.2	-

Intersection	
Int Delay, s/veh	35.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	110	150	310	50	160	610
Future Vol, veh/h	110	150	310	50	160	610
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	11	11	2	2
Mvmt Flow	138	188	388	63	200	763

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1583	420	0	0	388	0
Stage 1	420	-	-	-	-	-
Stage 2	1163	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 120	633	-	-	1170	-
Stage 1	663	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 84	633	-	-	1170	-
Mov Cap-2 Maneuver	~ 84	-	-	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	209	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	185	0	1.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	84	633	1170	-
HCM Lane V/C Ratio	-	-	1.637	0.296	0.171	-
HCM Control Delay (s)	-	-	$ 419.4	13.1	8.7	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %tile Q(veh)	-	-	11.3	1.2	0.6	-

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	390	220	470	890	10
Future Volume (veh/h)	0	390	220	470	890	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1722	1722	1856	1856
Adj Flow Rate, veh/h	0	398	224	480	908	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	5	12	12	3	3
Cap, veh/h	0	386	203	1085	898	10
Arrive On Green	0.00	0.25	0.08	0.63	0.49	0.49
Sat Flow, veh/h	0	1544	1640	1722	1832	20
Grp Volume(v), veh/h	0	399	224	480	0	918
Grp Sat Flow(s),veh/h/ln	0	1548	1640	1722	0	1852
Q Serve(g_s), s	0.0	25.0	8.0	14.3	0.0	49.0
Cycle Q Clear(g_c), s	0.0	25.0	8.0	14.3	0.0	49.0
Prop In Lane	0.00	1.00	1.00			0.01
Lane Grp Cap(c), veh/h	0	387	203	1085	0	907
V/C Ratio(X)	0.00	1.03	1.10	0.44	0.00	1.01
Avail Cap(c_a), veh/h	0	387	203	1085	0	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.65	0.65	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.5	30.1	9.5	0.0	25.5
Incr Delay (d2), s/veh	0.0	54.0	81.2	0.9	0.0	32.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	21.7	10.7	8.0	0.0	36.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	91.5	111.3	10.3	0.0	58.3
LnGrp LOS	A	F	F	B	A	F
Approach Vol, veh/h	399			704	918	
Approach Delay, s/veh	91.5			42.5	58.3	
Approach LOS	F			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		69.0		31.0	14.0	55.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		63.0		25.0	8.0	49.0
Max Q Clear Time (g_c+I1), s		16.3		27.0	10.0	51.0
Green Ext Time (p_c), s		3.3		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	59.3
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	80	420	270	50	1000	280
Future Volume (veh/h)	80	420	270	50	1000	280
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1722	1722	1856	1856
Adj Flow Rate, veh/h	82	429	276	51	1020	286
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	12	12	3	3
Cap, veh/h	291	983	276	51	885	1327
Arrive On Green	0.16	0.16	0.20	0.20	0.46	0.72
Sat Flow, veh/h	1767	1572	1414	261	1767	1856
Grp Volume(v), veh/h	82	429	0	327	1020	286
Grp Sat Flow(s),veh/h/ln	1767	1572	0	1675	1767	1856
Q Serve(g_s), s	4.1	14.1	0.0	19.5	46.0	5.2
Cycle Q Clear(g_c), s	4.1	14.1	0.0	19.5	46.0	5.2
Prop In Lane	1.00	1.00		0.16	1.00	
Lane Grp Cap(c), veh/h	291	983	0	327	885	1327
V/C Ratio(X)	0.28	0.44	0.00	1.00	1.15	0.22
Avail Cap(c_a), veh/h	318	1006	0	327	885	1327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.00	1.00	0.09	0.09
Uniform Delay (d), s/veh	36.6	9.7	0.0	40.2	22.5	4.8
Incr Delay (d2), s/veh	0.3	0.2	0.0	49.9	70.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	7.0	0.0	18.1	44.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.9	9.9	0.0	90.1	92.5	4.8
LnGrp LOS	D	A	A	F	F	A
Approach Vol, veh/h	511		327			1306
Approach Delay, s/veh	14.2		90.1			73.3
Approach LOS	B		F			E

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	52.0	25.5			77.5	22.5
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0
Max Green Setting (Gmax), s	46.0	18.0			70.0	18.0
Max Q Clear Time (g_c+I1), s	48.0	21.5			7.2	16.1
Green Ext Time (p_c), s	0.0	0.0			1.8	0.4

Intersection Summary		
HCM 6th Ctrl Delay	61.8	
HCM 6th LOS	E	

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	780	50	240	330	0	0	400	20
Future Volume (veh/h)	0	0	0	10	780	50	240	330	0	0	400	20
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1811	1811	1811	1781	1781	0	0	1856	1856
Adj Flow Rate, veh/h				13	1026	66	316	434	0	0	526	26
Peak Hour Factor				0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %				6	6	6	8	8	0	0	3	3
Cap, veh/h				15	1225	83	345	909	0	0	559	474
Arrive On Green				0.37	0.37	0.37	0.15	0.51	0.00	0.00	0.30	0.30
Sat Flow, veh/h				40	3315	224	1697	1781	0	0	1856	1572
Grp Volume(v), veh/h				584	0	521	316	434	0	0	526	26
Grp Sat Flow(s),veh/h/ln				1809	0	1771	1697	1781	0	0	1856	1572
Q Serve(g_s), s				30.1	0.0	26.3	12.8	15.8	0.0	0.0	27.6	1.2
Cycle Q Clear(g_c), s				30.1	0.0	26.3	12.8	15.8	0.0	0.0	27.6	1.2
Prop In Lane				0.02		0.13	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				668	0	654	345	909	0	0	559	474
V/C Ratio(X)				0.87	0.00	0.80	0.91	0.48	0.00	0.00	0.94	0.05
Avail Cap(c_a), veh/h				668	0	654	364	944	0	0	575	487
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.45	0.45	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.4	0.0	28.2	24.2	15.8	0.0	0.0	34.1	24.8
Incr Delay (d2), s/veh				14.8	0.0	9.7	14.5	0.2	0.0	0.0	23.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				22.0	0.0	18.6	9.1	9.1	0.0	0.0	22.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				44.2	0.0	37.9	38.7	16.0	0.0	0.0	57.6	24.9
LnGrp LOS				D	A	D	D	B	A	A	E	C
Approach Vol, veh/h					1105			750			552	
Approach Delay, s/veh					41.2			25.6			56.1	
Approach LOS					D			C			E	

Timer - Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				57.1		42.9	20.9	36.1				
Change Period (Y+Rc), s				6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s				53.0		35.0	16.0	31.0				
Max Q Clear Time (g_c+I1), s				17.8		32.1	14.8	29.6				
Green Ext Time (p_c), s				3.2		1.3	0.1	0.5				

Intersection Summary		
HCM 6th Ctrl Delay		39.8
HCM 6th LOS		D

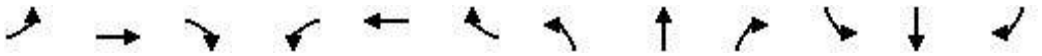
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	1410	40	0	300	10	30	540	10	70	330	10
Future Volume (veh/h)	20	1410	40	0	300	10	30	540	10	70	330	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	0	1811	1811	1781	1781	1781	1856	1856	1856
Adj Flow Rate, veh/h	29	2043	58	0	435	14	43	783	14	101	478	14
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	4	4	4	0	6	6	8	8	8	3	3	3
Cap, veh/h	535	1150	33	0	1126	36	60	947	17	88	499	15
Arrive On Green	0.65	0.65	0.65	0.00	0.65	0.65	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	926	1781	51	0	1745	56	862	3402	61	676	1794	53
Grp Volume(v), veh/h	29	0	2101	0	0	449	43	389	408	101	0	492
Grp Sat Flow(s),veh/h/ln	926	0	1832	0	0	1801	862	1692	1770	676	0	1846
Q Serve(g_s), s	2.4	0.0	102.0	0.0	0.0	18.6	2.6	34.1	34.1	9.9	0.0	41.4
Cycle Q Clear(g_c), s	21.0	0.0	102.0	0.0	0.0	18.6	44.0	34.1	34.1	44.0	0.0	41.4
Prop In Lane	1.00		0.03	0.00		0.03	1.00		0.03	1.00		0.03
Lane Grp Cap(c), veh/h	535	0	1182	0	0	1163	60	471	493	88	0	514
V/C Ratio(X)	0.05	0.00	1.78	0.00	0.00	0.39	0.72	0.83	0.83	1.15	0.00	0.96
Avail Cap(c_a), veh/h	535	0	1182	0	0	1163	60	471	493	88	0	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.22	0.00	0.22
Uniform Delay (d), s/veh	18.2	0.0	28.0	0.0	0.0	13.2	78.6	53.4	53.4	76.6	0.0	56.1
Incr Delay (d2), s/veh	0.2	0.0	353.0	0.0	0.0	1.0	34.5	11.5	11.1	91.8	0.0	10.4
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(95%),veh/ln	1.0	0.0	252.9	0.0	0.0	12.7	4.2	22.8	23.6	8.4	0.0	24.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	381.0	0.0	0.0	14.2	113.0	64.9	64.5	168.4	0.0	66.5
LnGrp LOS	B	A	F	A	A	B	F	E	E	F	A	E
Approach Vol, veh/h		2130			449			840			593	
Approach Delay, s/veh		376.1			14.2			67.2			83.8	
Approach LOS		F			B			E			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		108.0		50.0		108.0		50.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		102.0		44.0		102.0		44.0				
Max Q Clear Time (g_c+I1), s		104.0		46.0		20.6		46.0				
Green Ext Time (p_c), s		0.0		0.0		3.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			227.7									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
1: N Monument St & Main St/High St

07/08/2021



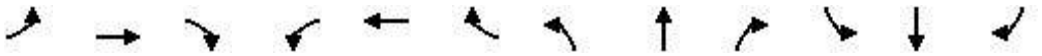
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1490	90	0	2070	10	0	0	0	10	20	140
Future Volume (veh/h)	0	1490	90	0	2070	10	0	0	0	10	20	140
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1900	1900	1900
Adj Flow Rate, veh/h	0	1520	92	0	2112	10				10	20	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	0	2	2				0	0	0
Cap, veh/h	0	4440	269	0	3271	15				14	29	
Arrive On Green	0.00	0.90	0.90	0.00	0.90	0.90				0.02	0.02	0.00
Sat Flow, veh/h	0	5091	298	0	3720	17				623	1246	1610
Grp Volume(v), veh/h	0	1051	561	0	1034	1088				30	0	0
Grp Sat Flow(s),veh/h/ln	0	1702	1817	0	1777	1867				1869	0	1610
Q Serve(g_s), s	0.0	7.0	7.0	0.0	21.8	21.9				2.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	7.0	7.0	0.0	21.8	21.9				2.6	0.0	0.0
Prop In Lane	0.00		0.16	0.00		0.01				0.33		1.00
Lane Grp Cap(c), veh/h	0	3070	1639	0	1603	1684				43	0	
V/C Ratio(X)	0.00	0.34	0.34	0.00	0.65	0.65				0.70	0.00	
Avail Cap(c_a), veh/h	0	3070	1639	0	1603	1684				210	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.55	0.55				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.1	1.1	0.0	1.8	1.8				77.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.0	1.1	1.1				18.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	2.5	2.9	0.0	7.3	7.6				2.6	0.0	0.0
Unsig. Movement Delay, s/veh												0.00
LnGrp Delay(d),s/veh	0.0	1.4	1.7	0.0	3.0	2.9				96.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				F	A	A
Approach Vol, veh/h		1612			2122						173	A
Approach Delay, s/veh		1.5			2.9						16.6	
Approach LOS		A			A						B	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		150.3				150.3		9.7				
Change Period (Y+Rc), s		6.0				6.0		6.0				
Max Green Setting (Gmax), s		130.0				130.0		18.0				
Max Q Clear Time (g_c+I1), s		9.0				23.9		4.6				
Green Ext Time (p_c), s		21.7				50.9		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	3.0
HCM 6th LOS	A

Notes

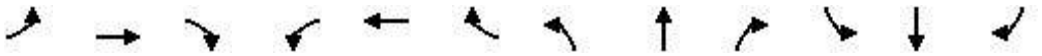
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1350	110	200	1910	30	150	40	150	20	50	20
Future Volume (veh/h)	40	1350	110	200	1910	30	150	40	150	20	50	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	40	1364	111	202	1929	30	152	40	152	20	51	20
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	3	3	3
Cap, veh/h	158	2300	1026	294	2433	38	147	64	245	65	151	295
Arrive On Green	0.03	0.65	0.65	0.05	0.67	0.67	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1795	3610	56	1340	344	1306	193	806	1572
Grp Volume(v), veh/h	40	1364	111	202	954	1005	152	0	192	71	0	20
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1795	1791	1875	1340	0	1650	1000	0	1572
Q Serve(g_s), s	1.2	35.2	4.3	6.0	59.5	60.2	12.2	0.0	17.1	0.7	0.0	1.7
Cycle Q Clear(g_c), s	1.2	35.2	4.3	6.0	59.5	60.2	30.0	0.0	17.1	17.8	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.79	0.28		1.00
Lane Grp Cap(c), veh/h	158	2300	1026	294	1207	1264	147	0	309	216	0	295
V/C Ratio(X)	0.25	0.59	0.11	0.69	0.79	0.79	1.03	0.00	0.62	0.33	0.00	0.07
Avail Cap(c_a), veh/h	179	2300	1026	401	1207	1264	147	0	309	216	0	295
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.47	0.47	0.47	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.6	16.2	10.7	16.9	18.2	18.3	75.8	0.0	59.8	55.6	0.0	53.5
Incr Delay (d2), s/veh	0.8	1.1	0.2	1.4	2.6	2.5	83.2	0.0	3.8	0.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	20.9	2.9	5.5	30.7	32.3	14.9	0.0	12.1	4.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	17.2	10.9	18.3	20.8	20.8	159.0	0.0	63.5	56.5	0.0	53.6
LnGrp LOS	C	B	B	B	C	C	F	A	E	E	A	D
Approach Vol, veh/h		1515			2161			344			91	
Approach Delay, s/veh		16.9			20.6			105.7			55.8	
Approach LOS		B			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	109.6		36.0	10.2	113.8		36.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	18.0	94.0		30.0	6.0	106.0		30.0				
Max Q Clear Time (g_c+I1), s	8.0	37.2		32.0	3.2	62.2		19.8				
Green Ext Time (p_c), s	0.4	17.7		0.0	0.0	27.2		0.2				

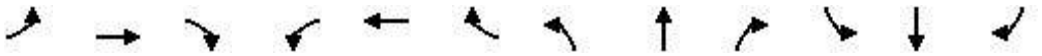
Intersection Summary			
HCM 6th Ctrl Delay		27.1	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1460	30	110	2010	20	70	20	90	40	50	60
Future Volume (veh/h)	30	1460	30	110	2010	20	70	20	90	40	50	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	31	1521	31	115	2094	21	73	21	94	42	52	62
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	147	2516	51	263	2574	26	160	45	201	156	117	140
Arrive On Green	0.02	0.71	0.71	0.03	0.71	0.71	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3562	73	1781	3605	36	1289	300	1343	1288	783	934
Grp Volume(v), veh/h	31	758	794	115	1030	1085	73	0	115	42	0	114
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1864	1289	0	1643	1288	0	1717
Q Serve(g_s), s	0.8	34.9	35.1	2.9	63.1	63.7	8.7	0.0	10.2	4.9	0.0	9.7
Cycle Q Clear(g_c), s	0.8	34.9	35.1	2.9	63.1	63.7	18.4	0.0	10.2	15.2	0.0	9.7
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.82	1.00		0.54
Lane Grp Cap(c), veh/h	147	1255	1312	263	1269	1331	160	0	247	156	0	258
V/C Ratio(X)	0.21	0.60	0.61	0.44	0.81	0.81	0.46	0.00	0.47	0.27	0.00	0.44
Avail Cap(c_a), veh/h	161	1255	1312	318	1269	1331	160	0	247	156	0	258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.46	0.46	0.46	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	12.0	12.0	11.8	15.6	15.6	70.3	0.0	62.1	69.1	0.0	61.9
Incr Delay (d2), s/veh	0.5	1.7	1.6	0.5	2.7	2.7	2.0	0.0	1.4	0.9	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	19.8	20.6	2.3	31.2	32.8	5.4	0.0	7.9	3.0	0.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	13.7	13.7	12.3	18.3	18.3	72.3	0.0	63.5	70.0	0.0	63.1
LnGrp LOS	C	B	B	B	B	B	E	A	E	E	A	E
Approach Vol, veh/h		1583			2230			188			156	
Approach Delay, s/veh		13.8			18.0			66.9			65.0	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	119.0		30.0	9.7	120.3		30.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	10.0	108.0		24.0	5.0	113.0		24.0				
Max Q Clear Time (g_c+I1), s	4.9	37.1		20.4	2.8	65.7		17.2				
Green Ext Time (p_c), s	0.1	20.6		0.3	0.0	32.4		0.4				

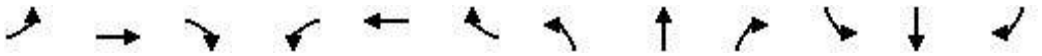
Intersection Summary			
HCM 6th Ctrl Delay		20.4	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1530	30	30	2050	50	50	60	100	30	40	40
Future Volume (veh/h)	30	1530	30	30	2050	50	50	60	100	30	40	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	31	1594	31	31	2135	52	52	62	104	31	42	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	1	1	1
Cap, veh/h	144	2604	51	245	2589	63	162	83	140	92	116	116
Arrive On Green	0.02	0.73	0.73	0.02	0.73	0.73	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	3566	69	1781	3546	86	1303	623	1045	1229	865	865
Grp Volume(v), veh/h	31	793	832	31	1065	1122	52	0	166	31	0	84
Grp Sat Flow(s),veh/h/ln	1781	1777	1858	1781	1777	1855	1303	0	1667	1229	0	1730
Q Serve(g_s), s	0.7	34.8	35.0	0.7	64.6	66.0	6.1	0.0	15.3	4.0	0.0	7.1
Cycle Q Clear(g_c), s	0.7	34.8	35.0	0.7	64.6	66.0	13.1	0.0	15.3	19.3	0.0	7.1
Prop In Lane	1.00		0.04	1.00		0.05	1.00		0.63	1.00		0.50
Lane Grp Cap(c), veh/h	144	1298	1357	245	1298	1355	162	0	223	92	0	231
V/C Ratio(X)	0.22	0.61	0.61	0.13	0.82	0.83	0.32	0.00	0.74	0.34	0.00	0.36
Avail Cap(c_a), veh/h	158	1298	1357	259	1298	1355	183	0	250	112	0	259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	10.5	10.5	9.2	14.5	14.7	69.1	0.0	66.7	75.9	0.0	63.1
Incr Delay (d2), s/veh	0.6	1.6	1.5	0.0	0.6	0.6	1.1	0.0	10.2	2.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	19.2	20.0	0.5	27.5	29.2	3.8	0.0	11.6	2.4	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	12.1	12.1	9.2	15.1	15.3	70.2	0.0	76.8	78.1	0.0	64.0
LnGrp LOS	C	B	B	A	B	B	E	A	E	E	A	E
Approach Vol, veh/h		1656			2218			218			115	
Approach Delay, s/veh		12.3			15.1			75.3			67.8	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	122.8		27.4	9.7	122.8		27.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	113.0		24.0	5.0	113.0		24.0				
Max Q Clear Time (g_c+I1), s	2.7	37.0		17.3	2.7	68.0		21.3				
Green Ext Time (p_c), s	0.0	23.1		0.6	0.0	33.0		0.1				

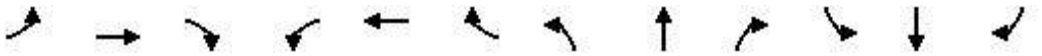
Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1440	130	240	1880	600	170	630	270	470	460	80
Future Volume (veh/h)	90	1440	130	240	1880	600	170	630	270	470	460	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1885	1885	1885	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	96	1532	138	255	2000	638	181	670	287	500	489	85
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	1	1	1	3	3	3	6	6	6
Cap, veh/h	100	1360	122	191	1679	939	202	556	238	397	691	120
Arrive On Green	0.03	0.42	0.42	0.08	0.47	0.47	0.11	0.23	0.23	0.12	0.24	0.24
Sat Flow, veh/h	1753	3247	290	1795	3582	1598	1767	2403	1030	3346	2933	507
Grp Volume(v), veh/h	96	819	851	255	2000	638	181	491	466	500	286	288
Grp Sat Flow(s),veh/h/ln	1753	1749	1788	1795	1791	1598	1767	1763	1670	1673	1721	1720
Q Serve(g_s), s	5.0	67.0	67.0	13.0	75.0	43.9	16.2	37.0	37.0	19.0	24.4	24.6
Cycle Q Clear(g_c), s	5.0	67.0	67.0	13.0	75.0	43.9	16.2	37.0	37.0	19.0	24.4	24.6
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.62	1.00		0.29
Lane Grp Cap(c), veh/h	100	732	749	191	1679	939	202	408	386	397	406	405
V/C Ratio(X)	0.96	1.12	1.14	1.34	1.19	0.68	0.90	1.21	1.21	1.26	0.70	0.71
Avail Cap(c_a), veh/h	100	732	749	191	1679	939	232	408	386	397	406	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.25	0.25	0.25	0.91	0.91	0.91	0.83	0.83	0.83
Uniform Delay (d), s/veh	40.3	46.5	46.5	53.6	42.5	22.7	69.9	61.5	61.5	70.5	56.0	56.1
Incr Delay (d2), s/veh	66.2	67.4	73.6	160.0	87.7	1.0	28.5	111.9	112.9	132.3	4.6	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.9	56.8	60.1	17.1	67.6	19.7	13.6	41.7	39.8	23.4	16.1	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.5	113.9	120.1	213.6	130.2	23.7	98.4	173.4	174.4	202.8	60.6	60.9
LnGrp LOS	F	F	F	F	F	C	F	F	F	F	E	E
Approach Vol, veh/h		1766			2893			1138			1074	
Approach Delay, s/veh		116.5			114.0			161.9			126.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	73.0	25.0	43.0	11.0	81.0	24.3	43.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	67.0	19.0	37.0	5.0	75.0	21.0	35.0
Max Q Clear Time (g_c+I1), s	15.0	69.0	21.0	39.0	7.0	77.0	18.2	26.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	124.6
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	2100	30	40	2550	20	60	30	40	20	30	110
Future Volume (veh/h)	50	2100	30	40	2550	20	60	30	40	20	30	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1900	1900	1900	1870	1870	1870
Adj Flow Rate, veh/h	53	2211	32	42	2684	21	63	32	42	21	32	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	2	2	2
Cap, veh/h	74	2914	42	131	2936	23	76	84	110	141	40	145
Arrive On Green	0.81	0.81	0.81	0.81	0.81	0.81	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	107	3586	52	169	3614	28	1259	745	978	1326	354	1285
Grp Volume(v), veh/h	53	1093	1150	42	1318	1387	63	0	74	21	0	148
Grp Sat Flow(s),veh/h/ln	107	1777	1861	169	1777	1865	1259	0	1724	1326	0	1639
Q Serve(g_s), s	43.0	47.9	48.5	25.9	86.1	87.0	3.9	0.0	6.4	2.4	0.0	14.1
Cycle Q Clear(g_c), s	130.0	47.9	48.5	74.4	86.1	87.0	18.0	0.0	6.4	8.8	0.0	14.1
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.57	1.00		0.78
Lane Grp Cap(c), veh/h	74	1444	1512	131	1444	1516	76	0	194	141	0	184
V/C Ratio(X)	0.72	0.76	0.76	0.32	0.91	0.92	0.83	0.00	0.38	0.15	0.00	0.80
Avail Cap(c_a), veh/h	74	1444	1512	131	1444	1516	76	0	194	141	0	184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.32	0.32	0.32	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	68.4	7.3	7.4	25.6	10.9	11.0	79.0	0.0	65.8	69.9	0.0	69.3
Incr Delay (d2), s/veh	5.4	0.3	0.3	2.1	3.8	3.7	51.5	0.0	1.2	0.5	0.0	22.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	16.9	17.8	2.0	33.1	34.9	6.7	0.0	5.2	1.5	0.0	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.8	7.7	7.7	27.7	14.7	14.7	130.5	0.0	67.1	70.4	0.0	91.2
LnGrp LOS	E	A	A	C	B	B	F	A	E	E	A	F
Approach Vol, veh/h		2296			2747			137			169	
Approach Delay, s/veh		9.2			14.9			96.3			88.6	
Approach LOS		A			B			F			F	

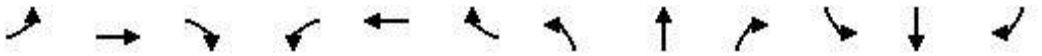
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		136.0		24.0		136.0		24.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		130.0		18.0		130.0		18.0				
Max Q Clear Time (g_c+I1), s		132.0		20.0		89.0		16.1				
Green Ext Time (p_c), s		0.0		0.0		37.9		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			16.9									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2110	50	60	2520	90	100
Future Volume (veh/h)	2110	50	60	2520	90	100
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1856	1856	1856	1856
Adj Flow Rate, veh/h	2175	52	62	2598	93	103
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	3	3	3	3
Cap, veh/h	2837	68	130	2864	199	177
Arrive On Green	0.81	0.81	0.81	0.81	0.11	0.11
Sat Flow, veh/h	3583	83	171	3618	1767	1572
Grp Volume(v), veh/h	1085	1142	62	2598	93	103
Grp Sat Flow(s),veh/h/ln	1749	1826	171	1763	1767	1572
Q Serve(g_s), s	49.0	50.1	45.7	84.0	7.9	10.0
Cycle Q Clear(g_c), s	49.0	50.1	95.8	84.0	7.9	10.0
Prop In Lane		0.05	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1421	1483	130	2864	199	177
V/C Ratio(X)	0.76	0.77	0.48	0.91	0.47	0.58
Avail Cap(c_a), veh/h	1421	1483	130	2864	199	177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	7.4	7.5	31.5	10.7	66.5	67.4
Incr Delay (d2), s/veh	2.2	2.2	1.1	0.5	7.7	13.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	20.6	21.8	2.6	28.5	7.3	8.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.6	9.7	32.6	11.2	74.2	80.7
LnGrp LOS	A	A	C	B	E	F
Approach Vol, veh/h	2227			2660	196	
Approach Delay, s/veh	9.7			11.7	77.6	
Approach LOS	A			B	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		136.0		24.0		136.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		130.0		18.0		130.0
Max Q Clear Time (g_c+I1), s		52.1		12.0		97.8
Green Ext Time (p_c), s		44.3		0.3		29.2

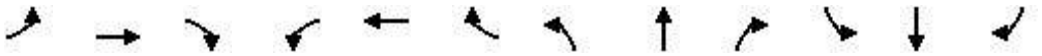
Intersection Summary			
HCM 6th Ctrl Delay		13.4	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	1600	220	280	1940	130	310	690	120	110	530	330
Future Volume (veh/h)	390	1600	220	280	1940	130	310	690	120	110	530	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	398	1633	224	286	1980	133	316	704	122	112	541	337
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	346	1821	961	324	1799	802	324	644	111	107	529	393
Arrive On Green	0.10	0.51	0.51	0.09	0.51	0.51	0.09	0.21	0.21	0.03	0.15	0.15
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	3028	524	3428	3526	1572
Grp Volume(v), veh/h	398	1633	224	286	1980	133	316	413	413	112	541	337
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1776	1714	1763	1572
Q Serve(g_s), s	16.0	66.3	10.4	13.1	81.0	5.7	14.6	34.0	34.0	5.0	24.0	13.5
Cycle Q Clear(g_c), s	16.0	66.3	10.4	13.1	81.0	5.7	14.6	34.0	34.0	5.0	24.0	13.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	346	1821	961	324	1799	802	324	378	377	107	529	393
V/C Ratio(X)	1.15	0.90	0.23	0.88	1.10	0.17	0.98	1.09	1.09	1.05	1.02	0.86
Avail Cap(c_a), veh/h	346	1821	961	324	1799	802	324	378	377	107	529	393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.09	0.09	0.09	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	72.0	35.2	14.4	71.6	39.5	13.1	72.3	63.0	63.0	77.5	68.0	36.6
Incr Delay (d2), s/veh	85.1	4.2	0.3	2.9	46.2	0.0	43.2	73.8	74.3	94.7	42.9	15.3
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(95%),veh/ln	16.1	35.5	6.2	7.1	53.7	3.5	13.2	32.5	32.5	6.5	19.9	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	157.1	39.3	14.7	74.5	85.7	13.2	115.5	136.8	137.3	172.2	110.9	51.9
LnGrp LOS	F	D	B	E	F	B	F	F	F	F	F	D
Approach Vol, veh/h		2255			2399			1142			990	
Approach Delay, s/veh		57.7			80.4			131.1			97.7	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	88.0	11.0	40.0	22.0	87.0	21.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	82.0	5.0	34.0	16.0	81.0	15.0	24.0
Max Q Clear Time (g_c+I1), s	15.1	68.3	7.0	36.0	18.0	83.0	16.6	26.0
Green Ext Time (p_c), s	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	83.9
HCM 6th LOS	F



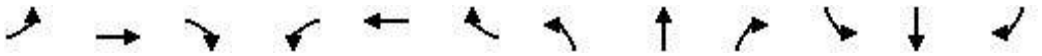
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1730	60	130	2210	160	80	140	90	220	160	60
Future Volume (veh/h)	40	1730	60	130	2210	160	80	140	90	220	160	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	41	1784	62	134	2278	165	82	144	93	227	165	62
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	114	2118	945	188	2184	974	155	198	168	168	197	167
Arrive On Green	0.03	0.61	0.61	0.04	0.62	0.62	0.04	0.11	0.11	0.04	0.11	0.11
Sat Flow, veh/h	1753	3497	1560	1767	3526	1572	1753	1841	1560	1739	1826	1547
Grp Volume(v), veh/h	41	1784	62	134	2278	165	82	144	93	227	165	62
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1767	1763	1572	1753	1841	1560	1739	1826	1547
Q Serve(g_s), s	1.0	49.3	2.0	3.4	74.3	5.4	5.0	9.1	6.8	5.0	10.6	4.5
Cycle Q Clear(g_c), s	1.0	49.3	2.0	3.4	74.3	5.4	5.0	9.1	6.8	5.0	10.6	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	2118	945	188	2184	974	155	198	168	168	197	167
V/C Ratio(X)	0.36	0.84	0.07	0.71	1.04	0.17	0.53	0.73	0.55	1.35	0.84	0.37
Avail Cap(c_a), veh/h	133	2118	945	197	2184	974	155	276	234	168	274	232
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.29	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	19.1	9.7	25.7	22.8	9.7	46.1	51.8	50.8	52.9	52.5	49.8
Incr Delay (d2), s/veh	0.5	1.3	0.0	11.0	31.6	0.4	3.4	5.7	2.8	191.1	14.8	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(95%),veh/ln	1.3	22.5	1.2	5.2	48.8	3.5	4.2	8.0	5.1	18.7	9.6	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	20.3	9.8	36.7	54.4	10.1	49.4	57.5	53.6	244.0	67.3	51.1
LnGrp LOS	C	C	A	D	F	B	D	E	D	F	E	D
Approach Vol, veh/h		1887			2577			319			454	
Approach Delay, s/veh		20.2			50.7			54.3			153.5	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	78.7	11.0	18.9	9.7	80.3	11.0	18.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	6.0	67.0	5.0	18.0	5.0	68.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	5.4	51.3	7.0	11.1	3.0	76.3	7.0	12.6
Green Ext Time (p_c), s	0.0	11.5	0.0	0.4	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	48.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
10: Hampshire Dr & High St

07/08/2021



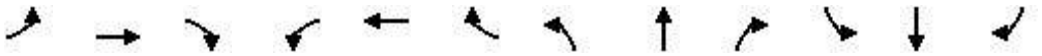
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	1580	40	60	1900	40	20	70	40	40	70	580
Future Volume (veh/h)	420	1580	40	60	1900	40	20	70	40	40	70	580
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	433	1629	41	62	1959	41	21	72	41	41	72	598
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	442	2611	66	269	1974	881	29	58	27	66	92	533
Arrive On Green	0.22	0.74	0.74	0.04	0.56	0.56	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1781	3542	89	1781	3554	1585	34	522	245	319	831	1598
Grp Volume(v), veh/h	433	815	855	62	1959	41	134	0	0	113	0	598
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1585	801	0	0	1150	0	1598
Q Serve(g_s), s	34.9	36.1	36.4	2.4	88.4	1.9	2.6	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	34.9	36.1	36.4	2.4	88.4	1.9	18.0	0.0	0.0	15.4	0.0	18.0
Prop In Lane	1.00		0.05	1.00		1.00	0.16		0.31	0.36		1.00
Lane Grp Cap(c), veh/h	442	1310	1367	269	1974	881	115	0	0	158	0	533
V/C Ratio(X)	0.98	0.62	0.63	0.23	0.99	0.05	1.17	0.00	0.00	0.72	0.00	1.12
Avail Cap(c_a), veh/h	442	1310	1367	274	1974	881	115	0	0	158	0	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.0	10.3	10.4	13.9	35.7	16.4	72.2	0.0	0.0	70.1	0.0	54.0
Incr Delay (d2), s/veh	37.1	2.2	2.2	0.4	18.5	0.1	136.4	0.0	0.0	14.2	0.0	77.4
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(95%),veh/ln	28.6	18.8	19.6	1.7	50.9	1.3	15.0	0.0	0.0	9.1	0.0	45.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.2	12.6	12.5	14.3	54.2	16.5	208.6	0.0	0.0	84.3	0.0	131.4
LnGrp LOS	F	B	B	B	D	B	F	A	A	F	A	F
Approach Vol, veh/h		2103			2062			134			711	
Approach Delay, s/veh		29.4			52.2			208.6			123.9	
Approach LOS		C			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	125.4		24.0	42.0	96.0		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	119.0		18.0	36.0	90.0		18.0				
Max Q Clear Time (g_c+I1), s	4.4	38.4		20.0	36.9	90.4		20.0				
Green Ext Time (p_c), s	0.0	17.8		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		57.0	
HCM 6th LOS		E	

HCM 6th Signalized Intersection Summary
11: N 3rd St & Black St

07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	800	10	10	10	970	830	10	0	420	70
Future Volume (veh/h)	20	10	800	10	10	10	970	830	10	0	420	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1900	1900	1900	1856	1856	1856	0	1826	1826
Adj Flow Rate, veh/h	21	11	638	11	11	11	1032	883	11	0	447	74
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	0	0	0	3	3	3	0	5	5
Cap, veh/h	111	84	798	97	40	40	1068	1546	19	0	969	159
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.47	0.85	0.85	0.00	0.32	0.32
Sat Flow, veh/h	1368	1841	1560	795	872	872	1767	1829	23	0	3073	491
Grp Volume(v), veh/h	21	11	638	11	0	22	1032	0	894	0	259	262
Grp Sat Flow(s),veh/h/ln	1368	1841	1560	795	0	1743	1767	0	1851	0	1735	1738
Q Serve(g_s), s	1.7	0.6	5.0	1.5	0.0	1.3	45.9	0.0	15.9	0.0	13.0	13.2
Cycle Q Clear(g_c), s	3.0	0.6	5.0	2.1	0.0	1.3	45.9	0.0	15.9	0.0	13.0	13.2
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.01	0.00		0.28
Lane Grp Cap(c), veh/h	111	84	798	97	0	79	1068	0	1565	0	564	565
V/C Ratio(X)	0.19	0.13	0.80	0.11	0.00	0.28	0.97	0.00	0.57	0.00	0.46	0.46
Avail Cap(c_a), veh/h	111	84	798	97	0	79	1176	0	1565	0	564	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	50.4	22.2	51.4	0.0	50.8	15.6	0.0	2.5	0.0	29.5	29.5
Incr Delay (d2), s/veh	0.1	0.1	0.6	0.5	0.0	1.9	17.9	0.0	1.5	0.0	2.7	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.5	15.1	0.6	0.0	1.1	36.2	0.0	6.2	0.0	9.7	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	50.5	22.8	51.9	0.0	52.6	33.4	0.0	4.1	0.0	32.1	32.3
LnGrp LOS	D	D	C	D	A	D	C	A	A	A	C	C
Approach Vol, veh/h		670			33			1926			521	
Approach Delay, s/veh		24.1			52.4			19.8			32.2	
Approach LOS		C			D			B			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		99.0		11.0	57.3	41.7		11.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		93.0		5.0	58.0	29.0		5.0				
Max Q Clear Time (g_c+I1), s		17.9		7.0	47.9	15.2		4.1				
Green Ext Time (p_c), s		8.8		0.0	3.4	2.6		0.0				

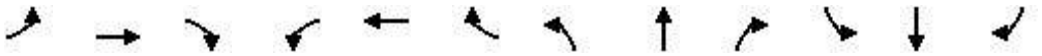
Intersection Summary		
HCM 6th Ctrl Delay	23.1	
HCM 6th LOS	C	

Notes

User approved changes to right turn type.

HCM 6th Signalized Intersection Summary
12: N MLK Jr Blvd & Village St/Heaton St

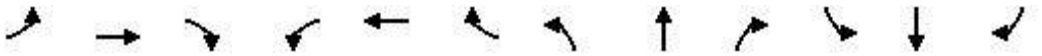
07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	20	20	50	40	290	20	1470	40	170	1040	20
Future Volume (veh/h)	50	20	20	50	40	290	20	1470	40	170	1040	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	52	21	21	52	41	299	21	1515	41	175	1072	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	0	0	0	3	3	3	5	5	5
Cap, veh/h	213	172	172	208	152	328	347	2071	56	247	2423	47
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.59	0.59	0.59	0.06	0.70	0.70
Sat Flow, veh/h	1024	844	844	792	747	1610	512	3507	95	1739	3480	68
Grp Volume(v), veh/h	52	0	42	93	0	299	21	760	796	175	534	559
Grp Sat Flow(s),veh/h/ln	1024	0	1689	1540	0	1610	512	1763	1838	1739	1735	1814
Q Serve(g_s), s	5.5	0.0	2.4	4.1	0.0	21.8	2.3	37.3	37.5	4.5	16.2	16.2
Cycle Q Clear(g_c), s	12.0	0.0	2.4	6.6	0.0	21.8	5.8	37.3	37.5	4.5	16.2	16.2
Prop In Lane	1.00		0.50	0.56		1.00	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	213	0	344	360	0	328	347	1041	1086	247	1208	1263
V/C Ratio(X)	0.24	0.00	0.12	0.26	0.00	0.91	0.06	0.73	0.73	0.71	0.44	0.44
Avail Cap(c_a), veh/h	243	0	394	407	0	376	347	1041	1086	309	1208	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	39.0	40.7	0.0	46.7	12.1	17.7	17.7	21.1	8.0	8.0
Incr Delay (d2), s/veh	0.6	0.0	0.2	0.4	0.0	24.0	0.3	3.5	3.4	5.4	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	1.9	4.3	0.0	16.4	0.5	20.7	21.5	6.1	9.8	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	39.2	41.1	0.0	70.7	12.3	21.2	21.1	26.5	9.2	9.1
LnGrp LOS	D	A	D	D	A	E	B	C	C	C	A	A
Approach Vol, veh/h		94			392			1577			1268	
Approach Delay, s/veh		43.2			63.7			21.0			11.6	
Approach LOS		D			E			C			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.7	76.9		30.4		89.6		30.4				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	11.0	63.0		28.0		80.0		28.0				
Max Q Clear Time (g_c+I1), s	6.5	39.5		14.0		18.2		23.8				
Green Ext Time (p_c), s	0.2	12.6		0.3		9.1		0.7				

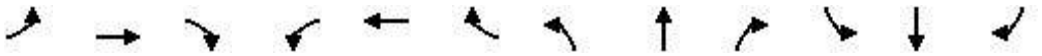
Intersection Summary			
HCM 6th Ctrl Delay		23.1	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	30	20	40	100	250	50	1250	20	150	950	10
Future Volume (veh/h)	30	30	20	40	100	250	50	1250	20	150	950	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	30	30	20	40	101	253	51	1263	20	152	960	10
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	3	3	3	5	5	5
Cap, veh/h	132	126	66	76	116	254	341	2176	34	258	1741	18
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.04	0.61	0.61	0.50	0.50	0.50
Sat Flow, veh/h	296	532	276	110	487	1070	1767	3552	56	421	3517	37
Grp Volume(v), veh/h	80	0	0	394	0	0	51	627	656	152	473	497
Grp Sat Flow(s),veh/h/ln	1105	0	0	1666	0	0	1767	1763	1845	421	1735	1819
Q Serve(g_s), s	0.0	0.0	0.0	12.3	0.0	0.0	1.0	17.1	17.1	27.2	15.2	15.2
Cycle Q Clear(g_c), s	2.8	0.0	0.0	18.9	0.0	0.0	1.0	17.1	17.1	35.0	15.2	15.2
Prop In Lane	0.37		0.25	0.10		0.64	1.00		0.03	1.00		0.02
Lane Grp Cap(c), veh/h	324	0	0	445	0	0	341	1080	1130	258	859	901
V/C Ratio(X)	0.25	0.00	0.00	0.89	0.00	0.00	0.15	0.58	0.58	0.59	0.55	0.55
Avail Cap(c_a), veh/h	324	0	0	445	0	0	376	1080	1130	258	859	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.10	0.10	0.10	0.88	0.88	0.88
Uniform Delay (d), s/veh	24.3	0.0	0.0	30.4	0.0	0.0	9.9	9.3	9.3	22.7	14.0	14.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	18.7	0.0	0.0	0.0	0.2	0.2	8.5	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	0.0	0.0	14.8	0.0	0.0	0.6	6.6	6.9	5.5	9.5	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	0.0	0.0	49.1	0.0	0.0	9.9	9.5	9.5	31.1	16.3	16.2
LnGrp LOS	C	A	A	D	A	A	A	A	A	C	B	B
Approach Vol, veh/h		80			394			1334			1122	
Approach Delay, s/veh		24.7			49.1			9.6			18.2	
Approach LOS		C			D			A			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		55.0		25.0	9.4	45.6		25.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		49.0		19.0	5.0	38.0		19.0				
Max Q Clear Time (g_c+I1), s		19.1		4.8	3.0	37.0		20.9				
Green Ext Time (p_c), s		10.3		0.3	0.0	0.8		0.0				

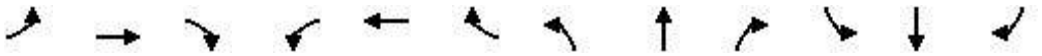
Intersection Summary												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	60	30	80	70	60	30	880	80	20	690	30
Future Volume (veh/h)	60	60	30	80	70	60	30	880	80	20	690	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	66	66	33	88	77	66	33	967	88	22	758	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	3	3	3	5	5	5
Cap, veh/h	193	187	93	231	148	127	502	2266	206	385	2349	102
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1265	1195	597	1317	945	810	680	3267	297	522	3387	147
Grp Volume(v), veh/h	66	0	99	88	0	143	33	522	533	22	388	403
Grp Sat Flow(s),veh/h/ln	1265	0	1792	1317	0	1754	680	1763	1802	522	1735	1799
Q Serve(g_s), s	4.0	0.0	3.9	5.1	0.0	6.0	1.6	10.3	10.3	1.5	7.1	7.1
Cycle Q Clear(g_c), s	10.0	0.0	3.9	9.1	0.0	6.0	8.7	10.3	10.3	11.8	7.1	7.1
Prop In Lane	1.00		0.33	1.00		0.46	1.00		0.16	1.00		0.08
Lane Grp Cap(c), veh/h	193	0	280	231	0	274	502	1223	1250	385	1203	1248
V/C Ratio(X)	0.34	0.00	0.35	0.38	0.00	0.52	0.07	0.43	0.43	0.06	0.32	0.32
Avail Cap(c_a), veh/h	343	0	493	387	0	482	502	1223	1250	385	1203	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.25	0.25	0.25
Uniform Delay (d), s/veh	35.6	0.0	30.1	34.2	0.0	31.0	6.6	5.3	5.3	7.9	4.8	4.8
Incr Delay (d2), s/veh	1.0	0.0	0.8	1.0	0.0	1.5	0.3	1.1	1.1	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	0.0	3.1	3.0	0.0	4.7	0.4	5.6	5.7	0.3	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	0.0	30.9	35.2	0.0	32.5	6.8	6.4	6.4	8.0	5.0	5.0
LnGrp LOS	D	A	C	D	A	C	A	A	A	A	A	A
Approach Vol, veh/h		165			231			1088			813	
Approach Delay, s/veh		33.2			33.5			6.4			5.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.5		18.5		61.5		18.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		46.0		22.0		46.0		22.0				
Max Q Clear Time (g_c+I1), s		12.3		12.0		13.8		11.1				
Green Ext Time (p_c), s		8.5		0.5		5.7		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									



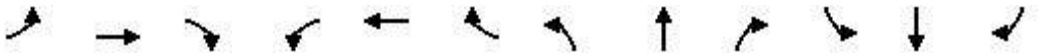
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	910	20	100	810	200	20	160	110	120	60	30
Future Volume (veh/h)	40	910	20	100	810	200	20	160	110	120	60	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	42	958	21	105	853	211	21	168	116	126	63	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	328	2035	45	370	1642	406	319	249	172	164	285	145
Arrive On Green	0.03	0.57	0.57	0.04	0.58	0.58	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1795	3583	79	1795	2846	704	1301	1031	712	1104	1179	599
Grp Volume(v), veh/h	42	479	500	105	537	527	21	0	284	126	0	95
Grp Sat Flow(s),veh/h/ln	1795	1791	1871	1795	1791	1759	1301	0	1742	1104	0	1777
Q Serve(g_s), s	1.2	18.9	18.9	2.9	21.7	21.7	1.6	0.0	17.7	11.3	0.0	5.1
Cycle Q Clear(g_c), s	1.2	18.9	18.9	2.9	21.7	21.7	6.7	0.0	17.7	29.0	0.0	5.1
Prop In Lane	1.00		0.04	1.00		0.40	1.00		0.41	1.00		0.34
Lane Grp Cap(c), veh/h	328	1017	1063	370	1033	1015	319	0	421	164	0	430
V/C Ratio(X)	0.13	0.47	0.47	0.28	0.52	0.52	0.07	0.00	0.67	0.77	0.00	0.22
Avail Cap(c_a), veh/h	376	1017	1063	402	1033	1015	319	0	421	164	0	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.8	15.3	15.3	11.6	15.3	15.3	39.1	0.0	41.2	55.4	0.0	36.5
Incr Delay (d2), s/veh	0.2	1.6	1.5	0.4	1.9	1.9	0.1	0.0	4.2	19.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	12.4	12.8	2.0	13.7	13.5	0.9	0.0	12.8	8.3	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	16.9	16.8	12.0	17.2	17.2	39.2	0.0	45.4	75.1	0.0	36.7
LnGrp LOS	B	B	B	B	B	B	D	A	D	E	A	D
Approach Vol, veh/h		1021			1169			305			221	
Approach Delay, s/veh		16.6			16.8			45.0			58.6	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	74.2		35.0	9.8	75.2		35.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	66.0		29.0	7.0	66.0		29.0				
Max Q Clear Time (g_c+I1), s	4.9	20.9		19.7	3.2	23.7		31.0				
Green Ext Time (p_c), s	0.0	7.5		1.2	0.0	8.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
16: N Erie Blvd & Dayton St

07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	50	150	50	140	10	240	910	60	10	770	120
Future Volume (veh/h)	70	50	150	50	140	10	240	910	60	10	770	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	53	158	53	147	11	253	958	63	11	811	126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	153	79	234	134	178	13	459	2457	162	391	1892	294
Arrive On Green	0.04	0.19	0.19	0.10	0.10	0.10	0.07	0.73	0.73	0.61	0.61	0.61
Sat Flow, veh/h	1795	417	1244	1180	1732	130	1781	3385	223	552	3082	479
Grp Volume(v), veh/h	74	0	211	53	0	158	253	503	518	11	468	469
Grp Sat Flow(s),veh/h/ln	1795	0	1661	1180	0	1862	1781	1777	1830	552	1777	1784
Q Serve(g_s), s	5.1	0.0	16.5	6.1	0.0	11.6	7.0	15.2	15.2	1.1	19.3	19.3
Cycle Q Clear(g_c), s	5.1	0.0	16.5	10.7	0.0	11.6	7.0	15.2	15.2	1.1	19.3	19.3
Prop In Lane	1.00		0.75	1.00		0.07	1.00		0.12	1.00		0.27
Lane Grp Cap(c), veh/h	153	0	313	134	0	191	459	1290	1329	391	1091	1095
V/C Ratio(X)	0.49	0.00	0.67	0.39	0.00	0.83	0.55	0.39	0.39	0.03	0.43	0.43
Avail Cap(c_a), veh/h	153	0	427	216	0	319	667	1290	1329	391	1091	1095
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	0.0	52.8	63.3	0.0	61.6	10.3	7.3	7.3	10.6	14.2	14.2
Incr Delay (d2), s/veh	2.4	0.0	2.5	1.9	0.0	8.7	0.1	0.1	0.1	0.1	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.3	0.0	11.6	3.5	0.0	10.1	3.3	6.5	6.6	0.3	12.6	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	0.0	55.3	65.2	0.0	70.3	10.4	7.4	7.4	10.8	15.4	15.4
LnGrp LOS	D	A	E	E	A	E	B	A	A	B	B	B
Approach Vol, veh/h		285			211			1274			948	
Approach Delay, s/veh		55.2			69.0			8.0			15.3	
Approach LOS		E			E			A			B	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		107.6		32.4	15.7	92.0	12.0	20.4				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		92.0		36.0	26.0	60.0	6.0	24.0				
Max Q Clear Time (g_c+I1), s		17.2		18.5	9.0	21.3	7.1	13.6				
Green Ext Time (p_c), s		3.4		1.2	0.6	3.2	0.0	0.7				

Intersection Summary												
HCM 6th Ctrl Delay			20.2									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	550	620	250	170	90
Future Vol, veh/h	20	550	620	250	170	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	6	6
Mvmt Flow	22	598	674	272	185	98

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1805	185	185	0	-	0
Stage 1	185	-	-	-	-	-
Stage 2	1620	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.12	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.218	-	-	-
Pot Cap-1 Maneuver	88	860	1390	-	-	0
Stage 1	849	-	-	-	-	0
Stage 2	179	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	38	860	1390	-	-	-
Mov Cap-2 Maneuver	38	-	-	-	-	-
Stage 1	364	-	-	-	-	-
Stage 2	179	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24	7.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1390	-	38	860	-
HCM Lane V/C Ratio	0.485	-	0.572	0.695	-
HCM Control Delay (s)	10	0	186.9	18.1	-
HCM Lane LOS	B	A	F	C	-
HCM 95th %tile Q(veh)	2.7	-	2	5.8	-

Intersection	
Int Delay, s/veh	21.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	260	610	160	270	450
Future Vol, veh/h	80	260	610	160	270	450
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	268	629	165	278	464

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1732	712	0	0	629	0
Stage 1	712	-	-	-	-	-
Stage 2	1020	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	97	432	-	-	953	-
Stage 1	486	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 59	432	-	-	953	-
Mov Cap-2 Maneuver	~ 59	-	-	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	211	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	107.2	0	3.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	59	432	953	-
HCM Lane V/C Ratio	-	-	1.398	0.62	0.292	-
HCM Control Delay (s)	-	-	$ 370.9	26	10.3	0
HCM Lane LOS	-	-	F	D	B	A
HCM 95th %tile Q(veh)	-	-	7.2	4.1	1.2	-

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	320	440	1030	760	40
Future Volume (veh/h)	0	320	440	1030	760	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1841	1841
Adj Flow Rate, veh/h	0	340	468	1096	809	43
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	4	4
Cap, veh/h	0	304	408	1320	787	42
Arrive On Green	0.00	0.19	0.19	0.70	0.45	0.45
Sat Flow, veh/h	0	1594	1795	1885	1732	92
Grp Volume(v), veh/h	0	341	468	1096	0	852
Grp Sat Flow(s),veh/h/ln	0	1598	1795	1885	0	1824
Q Serve(g_s), s	0.0	21.0	21.0	45.8	0.0	50.0
Cycle Q Clear(g_c), s	0.0	21.0	21.0	45.8	0.0	50.0
Prop In Lane	0.00	1.00	1.00			0.05
Lane Grp Cap(c), veh/h	0	305	408	1320	0	829
V/C Ratio(X)	0.00	1.12	1.15	0.83	0.00	1.03
Avail Cap(c_a), veh/h	0	305	408	1320	0	829
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.09	0.09	0.00	1.00
Uniform Delay (d), s/veh	0.0	44.5	36.9	11.8	0.0	30.0
Incr Delay (d2), s/veh	0.0	87.0	68.9	0.6	0.0	38.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	23.3	21.9	18.0	0.0	39.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	131.5	105.8	12.4	0.0	68.5
LnGrp LOS	A	F	F	B	A	F
Approach Vol, veh/h	341			1564	852	
Approach Delay, s/veh	131.5			40.4	68.5	
Approach LOS	F			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		83.0		27.0	27.0	56.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		77.0		21.0	21.0	50.0
Max Q Clear Time (g_c+I1), s		47.8		23.0	23.0	52.0
Green Ext Time (p_c), s		11.2		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		60.3
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	960	510	40	790	290
Future Volume (veh/h)	90	960	510	40	790	290
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1841	1841
Adj Flow Rate, veh/h	92	827	520	41	806	296
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	1	1	4	4
Cap, veh/h	287	851	502	40	735	1339
Arrive On Green	0.16	0.16	0.29	0.29	0.38	0.73
Sat Flow, veh/h	1753	1560	1725	136	1753	1841
Grp Volume(v), veh/h	92	827	0	561	806	296
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1861	1753	1841
Q Serve(g_s), s	5.1	18.0	0.0	32.0	42.0	5.7
Cycle Q Clear(g_c), s	5.1	18.0	0.0	32.0	42.0	5.7
Prop In Lane	1.00	1.00		0.07	1.00	
Lane Grp Cap(c), veh/h	287	851	0	541	735	1339
V/C Ratio(X)	0.32	0.97	0.00	1.04	1.10	0.22
Avail Cap(c_a), veh/h	287	851	0	541	735	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	24.2	0.0	39.0	29.1	4.9
Incr Delay (d2), s/veh	2.9	24.8	0.0	48.4	62.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.3	33.0	0.0	29.7	41.4	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.5	48.9	0.0	87.4	91.9	5.3
LnGrp LOS	D	D	A	F	F	A
Approach Vol, veh/h	919		561			1102
Approach Delay, s/veh	48.4		87.4			68.7
Approach LOS	D		F			E

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	48.0	38.0			86.0	24.0
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0
Max Green Setting (Gmax), s	42.0	32.0			80.0	18.0
Max Q Clear Time (g_c+I1), s	44.0	34.0			7.7	20.0
Green Ext Time (p_c), s	0.0	0.0			1.9	0.0

Intersection Summary		
HCM 6th Ctrl Delay	65.5	
HCM 6th LOS	E	

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	40	1330	150	370	380	0	0	370	40
Future Volume (veh/h)	0	0	0	40	1330	150	370	380	0	0	370	40
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1885	1885	0	0	1841	1841
Adj Flow Rate, veh/h				44	1478	167	411	422	0	0	411	44
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	1	1	0	0	4	4
Cap, veh/h				41	1439	170	359	811	0	0	387	328
Arrive On Green				0.45	0.45	0.45	0.16	0.43	0.00	0.00	0.21	0.21
Sat Flow, veh/h				92	3199	377	1795	1885	0	0	1841	1560
Grp Volume(v), veh/h				891	0	798	411	422	0	0	411	44
Grp Sat Flow(s),veh/h/ln				1866	0	1802	1795	1885	0	0	1841	1560
Q Serve(g_s), s				45.0	0.0	43.7	16.0	16.4	0.0	0.0	21.0	2.3
Cycle Q Clear(g_c), s				45.0	0.0	43.7	16.0	16.4	0.0	0.0	21.0	2.3
Prop In Lane				0.05		0.21	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				840	0	811	359	811	0	0	387	328
V/C Ratio(X)				1.06	0.00	0.98	1.14	0.52	0.00	0.00	1.06	0.13
Avail Cap(c_a), veh/h				840	0	811	359	811	0	0	387	328
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.54	0.54	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.5	0.0	27.1	28.2	20.9	0.0	0.0	39.5	32.1
Incr Delay (d2), s/veh				48.6	0.0	27.9	81.8	0.3	0.0	0.0	63.5	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				41.5	0.0	32.4	21.0	10.5	0.0	0.0	23.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				76.1	0.0	55.1	110.0	21.3	0.0	0.0	103.0	32.3
LnGrp LOS				F	A	E	F	C	A	A	F	C
Approach Vol, veh/h					1689			833			455	
Approach Delay, s/veh					66.2			65.0			96.2	
Approach LOS					E			E			F	

Timer - Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				49.0		51.0	22.0	27.0				
Change Period (Y+Rc), s				6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s				43.0		45.0	16.0	21.0				
Max Q Clear Time (g_c+I1), s				18.4		47.0	18.0	23.0				
Green Ext Time (p_c), s				2.9		0.0	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		70.4
HCM 6th LOS		E

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	830	80	0	680	10	100	720	10	70	330	10
Future Volume (veh/h)	20	830	80	0	680	10	100	720	10	70	330	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	22	892	86	0	731	11	108	774	11	75	355	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	0	2	2	1	1	1	4	4	4
Cap, veh/h	301	991	96	0	1084	16	187	1048	15	138	515	16
Arrive On Green	0.59	0.59	0.59	0.00	0.59	0.59	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	718	1679	162	0	1838	28	1024	3615	51	678	1776	55
Grp Volume(v), veh/h	22	0	978	0	0	742	108	383	402	75	0	366
Grp Sat Flow(s),veh/h/ln	718	0	1841	0	0	1865	1024	1791	1876	678	0	1831
Q Serve(g_s), s	2.2	0.0	46.5	0.0	0.0	27.1	10.5	19.3	19.3	9.7	0.0	17.7
Cycle Q Clear(g_c), s	29.2	0.0	46.5	0.0	0.0	27.1	28.2	19.3	19.3	29.0	0.0	17.7
Prop In Lane	1.00		0.09	0.00		0.01	1.00		0.03	1.00		0.03
Lane Grp Cap(c), veh/h	301	0	1086	0	0	1101	187	519	544	138	0	531
V/C Ratio(X)	0.07	0.00	0.90	0.00	0.00	0.67	0.58	0.74	0.74	0.55	0.00	0.69
Avail Cap(c_a), veh/h	301	0	1086	0	0	1101	187	519	544	138	0	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.09	0.00	0.09
Uniform Delay (d), s/veh	23.9	0.0	17.9	0.0	0.0	14.0	44.0	32.1	32.1	45.8	0.0	31.5
Incr Delay (d2), s/veh	0.5	0.0	11.8	0.0	0.0	3.3	4.3	5.5	5.3	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	29.4	0.0	0.0	17.4	5.2	14.1	14.6	2.6	0.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	0.0	29.8	0.0	0.0	17.3	48.3	37.6	37.3	46.2	0.0	31.8
LnGrp LOS	C	A	C	A	A	B	D	D	D	D	A	C
Approach Vol, veh/h		1000			742			893			441	
Approach Delay, s/veh		29.6			17.3			38.8			34.3	
Approach LOS		C			B			D			C	

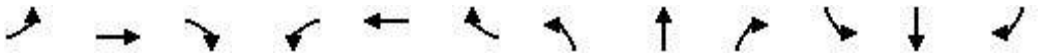
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		35.0		65.0		35.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		59.0		29.0		59.0		29.0				
Max Q Clear Time (g_c+I1), s		48.5		30.2		29.1		31.0				
Green Ext Time (p_c), s		5.8		0.0		6.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			30.0									
HCM 6th LOS			C									

2050 NO-BUILD INTERSECTION SYNCHRO RESULTS

HCM 6th Signalized Intersection Summary
1: N Monument St & Main St/High St

07/08/2021



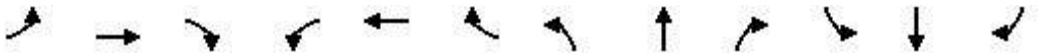
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2160	110	0	1340	20	0	0	0	10	10	40
Future Volume (veh/h)	0	2160	110	0	1340	20	0	0	0	10	10	40
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1811	1811				1767	1767	1767
Adj Flow Rate, veh/h	0	2250	115	0	1396	21				10	10	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	4	4	0	6	6				9	9	9
Cap, veh/h	0	4435	225	0	3142	47				16	16	
Arrive On Green	0.00	0.91	0.91	0.00	0.91	0.91				0.02	0.02	0.00
Sat Flow, veh/h	0	5063	249	0	3561	52				862	862	1497
Grp Volume(v), veh/h	0	1535	830	0	692	725				20	0	0
Grp Sat Flow(s),veh/h/ln	0	1675	1796	0	1721	1802				1724	0	1497
Q Serve(g_s), s	0.0	12.6	12.8	0.0	10.0	10.1				1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.6	12.8	0.0	10.0	10.1				1.8	0.0	0.0
Prop In Lane	0.00		0.14	0.00		0.03				0.50		1.00
Lane Grp Cap(c), veh/h	0	3034	1626	0	1558	1632				32	0	
V/C Ratio(X)	0.00	0.51	0.51	0.00	0.44	0.44				0.63	0.00	
Avail Cap(c_a), veh/h	0	3034	1626	0	1558	1632				218	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.84	0.84				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.3	1.3	0.0	1.2	1.2				77.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	1.1	0.0	0.8	0.7				18.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	4.3	5.1	0.0	3.7	3.9				1.8	0.0	0.0
Unsig. Movement Delay, s/veh												0.00
LnGrp Delay(d),s/veh	0.0	1.9	2.5	0.0	2.0	1.9				95.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				F	A	A
Approach Vol, veh/h		2365			1417						62	A
Approach Delay, s/veh		2.1			1.9						30.8	
Approach LOS		A			A						C	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		149.1				149.1		8.9				
Change Period (Y+Rc), s		6.0				6.0		6.0				
Max Green Setting (Gmax), s		126.0				126.0		20.0				
Max Q Clear Time (g_c+I1), s		14.8				12.1		3.8				
Green Ext Time (p_c), s		53.4				17.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		2.5
HCM 6th LOS		A

Notes

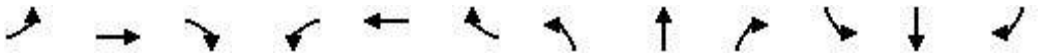
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	2030	90	250	1280	20	60	10	160	10	20	10
Future Volume (veh/h)	50	2030	90	250	1280	20	60	10	160	10	20	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	50	2115	94	260	1333	21	62	10	167	10	21	10
Peak Hour Factor	1.00	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	5	5	5	5	5	5	5	5	5
Cap, veh/h	323	2258	1007	272	2579	41	54	11	177	34	55	186
Arrive On Green	0.03	0.65	0.65	0.12	0.74	0.74	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1753	3497	1560	1739	3496	55	1346	88	1473	32	461	1547
Grp Volume(v), veh/h	50	2115	94	260	661	693	62	0	177	31	0	10
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1739	1735	1816	1346	0	1561	493	0	1547
Q Serve(g_s), s	1.5	85.7	3.6	17.7	25.5	25.6	0.9	0.0	17.8	0.3	0.0	0.9
Cycle Q Clear(g_c), s	1.5	85.7	3.6	17.7	25.5	25.6	19.0	0.0	17.8	18.1	0.0	0.9
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.94	0.32		1.00
Lane Grp Cap(c), veh/h	323	2258	1007	272	1280	1340	54	0	188	89	0	186
V/C Ratio(X)	0.15	0.94	0.09	0.95	0.52	0.52	1.16	0.00	0.94	0.35	0.00	0.05
Avail Cap(c_a), veh/h	329	2258	1007	272	1280	1340	54	0	188	89	0	186
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.75	0.75	0.75	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	25.1	10.6	57.7	8.8	8.8	78.9	0.0	69.0	62.8	0.0	61.5
Incr Delay (d2), s/veh	0.2	7.8	0.2	35.4	1.1	1.1	172.2	0.0	49.4	2.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	46.0	2.4	17.9	14.3	14.9	8.6	0.0	14.9	2.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	32.9	10.7	93.1	9.9	9.9	251.1	0.0	118.4	65.1	0.0	61.7
LnGrp LOS	A	C	B	F	A	A	F	A	F	E	A	E
Approach Vol, veh/h		2259			1614			239			41	
Approach Delay, s/veh		31.4			23.3			152.8			64.3	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	108.0		25.0	10.4	122.6		25.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	102.0		19.0	5.0	116.0		19.0				
Max Q Clear Time (g_c+I1), s	19.7	87.7		21.0	3.5	27.6		20.1				
Green Ext Time (p_c), s	0.0	12.5		0.0	0.0	15.8		0.0				

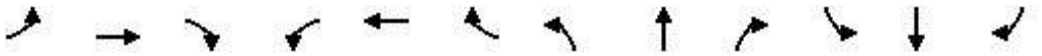
Intersection Summary			
HCM 6th Ctrl Delay		35.6	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2130	40	100	1510	20	10	20	50	20	20	30
Future Volume (veh/h)	30	2130	40	100	1510	20	10	20	50	20	20	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1767	1767	1767	1781	1781	1781
Adj Flow Rate, veh/h	33	2315	43	109	1641	22	11	22	54	22	22	33
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, %	4	4	4	5	5	5	9	9	9	8	8	8
Cap, veh/h	263	2730	51	151	2749	37	103	35	86	84	50	75
Arrive On Green	0.02	0.78	0.78	0.03	0.78	0.78	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1753	3513	65	1739	3505	47	1274	453	1113	1260	643	965
Grp Volume(v), veh/h	33	1149	1209	109	811	852	11	0	76	22	0	55
Grp Sat Flow(s),veh/h/ln	1753	1749	1829	1739	1735	1817	1274	0	1566	1260	0	1608
Q Serve(g_s), s	0.6	67.4	68.7	2.0	29.9	30.1	1.3	0.0	7.4	2.7	0.0	5.2
Cycle Q Clear(g_c), s	0.6	67.4	68.7	2.0	29.9	30.1	6.5	0.0	7.4	10.2	0.0	5.2
Prop In Lane	1.00		0.04	1.00		0.03	1.00		0.71	1.00		0.60
Lane Grp Cap(c), veh/h	263	1359	1421	151	1360	1425	103	0	122	84	0	125
V/C Ratio(X)	0.13	0.85	0.85	0.72	0.60	0.60	0.11	0.00	0.63	0.26	0.00	0.44
Avail Cap(c_a), veh/h	276	1359	1421	173	1360	1425	149	0	178	130	0	183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.22	0.22	0.22	0.77	0.77	0.77	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	11.4	11.6	38.3	6.9	6.9	72.7	0.0	70.6	75.6	0.0	69.6
Incr Delay (d2), s/veh	0.0	1.6	1.6	9.4	1.5	1.4	0.5	0.0	5.2	1.6	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	28.3	30.0	6.6	15.7	16.4	0.8	0.0	5.8	1.7	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	13.0	13.1	47.7	8.4	8.4	73.1	0.0	75.8	77.2	0.0	72.0
LnGrp LOS	A	B	B	D	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2391			1772			87			77	
Approach Delay, s/veh		13.0			10.8			75.5			73.5	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	128.8		18.3	9.8	129.9		18.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	115.0		18.0	5.0	117.0		18.0				
Max Q Clear Time (g_c+I1), s	4.0	70.7		9.4	2.6	32.1		12.2				
Green Ext Time (p_c), s	0.1	36.0		0.2	0.0	25.1		0.1				

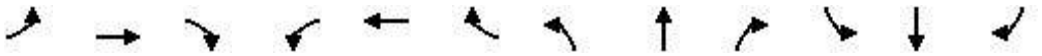
Intersection Summary			
HCM 6th Ctrl Delay		14.4	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	2150	30	50	1580	50	20	20	40	20	30	30
Future Volume (veh/h)	20	2150	30	50	1580	50	20	20	40	20	30	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1900	1900	1900	1737	1737	1737
Adj Flow Rate, veh/h	21	2263	32	53	1663	53	21	21	42	21	32	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	5	5	5	0	0	0	11	11	11
Cap, veh/h	249	2794	39	160	2748	87	84	38	77	84	54	54
Arrive On Green	0.02	0.79	0.79	0.03	0.80	0.80	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1753	3531	50	1739	3432	109	1359	565	1131	1244	797	797
Grp Volume(v), veh/h	21	1118	1177	53	838	878	21	0	63	21	0	64
Grp Sat Flow(s),veh/h/ln	1753	1749	1832	1739	1735	1806	1359	0	1696	1244	0	1594
Q Serve(g_s), s	0.4	59.1	60.0	0.9	29.8	30.1	2.4	0.0	5.8	2.7	0.0	6.2
Cycle Q Clear(g_c), s	0.4	59.1	60.0	0.9	29.8	30.1	8.7	0.0	5.8	8.4	0.0	6.2
Prop In Lane	1.00		0.03	1.00		0.06	1.00		0.67	1.00		0.50
Lane Grp Cap(c), veh/h	249	1384	1450	160	1389	1447	84	0	115	84	0	108
V/C Ratio(X)	0.08	0.81	0.81	0.33	0.60	0.61	0.25	0.00	0.55	0.25	0.00	0.59
Avail Cap(c_a), veh/h	271	1384	1450	165	1389	1447	145	0	191	140	0	179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.29	0.25	0.25	0.25	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.7	9.6	9.7	19.6	6.1	6.2	76.7	0.0	72.2	76.3	0.0	72.4
Incr Delay (d2), s/veh	0.0	1.6	1.5	0.3	0.5	0.5	1.5	0.0	4.0	1.5	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	25.1	26.5	2.0	12.8	13.4	1.6	0.0	4.8	1.6	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.7	11.2	11.3	19.9	6.6	6.7	78.2	0.0	76.2	77.8	0.0	77.6
LnGrp LOS	A	B	B	B	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2316			1769			84			85	
Approach Delay, s/veh		11.2			7.0			76.7			77.6	
Approach LOS		B			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	132.6		16.8	9.0	134.1		16.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	119.0		18.0	5.0	119.0		18.0				
Max Q Clear Time (g_c+I1), s	2.9	62.0		10.7	2.4	32.1		10.4				
Green Ext Time (p_c), s	0.0	42.3		0.2	0.0	27.3		0.2				

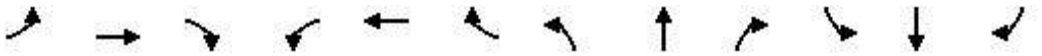
Intersection Summary			
HCM 6th Ctrl Delay		12.1	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1960	150	230	1460	320	140	270	310	620	860	80
Future Volume (veh/h)	100	1960	150	230	1460	320	140	270	310	620	860	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1811	1811	1811	1737	1737	1737	1826	1826	1826
Adj Flow Rate, veh/h	106	2085	160	245	1553	340	149	287	330	660	915	85
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	6	6	6	11	11	11	5	5	5
Cap, veh/h	129	1593	121	155	1786	1001	105	272	242	448	751	70
Arrive On Green	0.03	0.49	0.49	0.06	0.52	0.52	0.06	0.16	0.16	0.13	0.23	0.23
Sat Flow, veh/h	1739	3268	248	1725	3441	1535	1654	1650	1472	3374	3209	298
Grp Volume(v), veh/h	106	1094	1151	245	1553	340	149	287	330	660	495	505
Grp Sat Flow(s),veh/h/ln	1739	1735	1781	1725	1721	1535	1654	1650	1472	1687	1735	1772
Q Serve(g_s), s	4.9	77.0	77.0	10.0	62.5	15.7	10.0	26.0	26.0	21.0	37.0	37.0
Cycle Q Clear(g_c), s	4.9	77.0	77.0	10.0	62.5	15.7	10.0	26.0	26.0	21.0	37.0	37.0
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	129	845	868	155	1786	1001	105	272	242	448	406	415
V/C Ratio(X)	0.82	1.29	1.33	1.58	0.87	0.34	1.42	1.06	1.36	1.47	1.22	1.22
Avail Cap(c_a), veh/h	129	845	868	155	1786	1001	105	272	242	448	406	415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.48	0.65	0.65	0.65	0.93	0.93	0.93	0.09	0.09	0.09
Uniform Delay (d), s/veh	35.6	40.5	40.5	51.9	33.3	12.3	74.0	66.0	66.0	68.5	60.5	60.5
Incr Delay (d2), s/veh	17.8	136.6	150.7	281.6	4.1	0.6	234.1	68.5	185.8	213.5	100.1	100.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.6	89.2	97.3	22.9	33.3	8.6	18.0	23.0	34.0	29.4	34.1	34.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	177.1	191.2	333.5	37.4	12.9	308.1	134.5	251.8	282.0	160.6	160.6
LnGrp LOS	D	F	F	F	D	B	F	F	F	F	F	F
Approach Vol, veh/h		2351			2138			766			1660	
Approach Delay, s/veh		178.4			67.4			218.8			208.9	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	83.0	27.0	32.0	11.0	88.0	16.0	43.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.0	77.0	21.0	26.0	5.0	82.0	10.0	37.0
Max Q Clear Time (g_c+I1), s	12.0	79.0	23.0	28.0	6.9	64.5	12.0	39.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	155.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	2740	60	40	1930	20	60	20	40	30	20	20
Future Volume (veh/h)	90	2740	60	40	1930	20	60	20	40	30	20	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1811	1811	1811	1870	1870	1870	1796	1796	1796
Adj Flow Rate, veh/h	93	2825	62	41	1990	21	62	21	41	31	21	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	7	7	7
Cap, veh/h	178	2944	64	60	2935	31	126	47	91	106	68	68
Arrive On Green	0.84	0.84	0.84	0.84	0.84	0.84	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	210	3499	77	86	3488	37	1365	566	1105	1287	824	824
Grp Volume(v), veh/h	93	1406	1481	41	980	1031	62	0	62	31	0	42
Grp Sat Flow(s),veh/h/ln	210	1749	1827	86	1721	1804	1365	0	1671	1287	0	1648
Q Serve(g_s), s	46.6	103.0	107.0	25.9	33.1	33.4	7.1	0.0	5.6	3.7	0.0	3.8
Cycle Q Clear(g_c), s	80.0	103.0	107.0	133.0	33.1	33.4	10.9	0.0	5.6	9.3	0.0	3.8
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.66	1.00		0.50
Lane Grp Cap(c), veh/h	178	1471	1537	60	1448	1518	126	0	138	106	0	136
V/C Ratio(X)	0.52	0.96	0.96	0.69	0.68	0.68	0.49	0.00	0.45	0.29	0.00	0.31
Avail Cap(c_a), veh/h	178	1471	1537	60	1448	1518	168	0	190	147	0	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	10.1	10.5	74.5	4.6	4.6	73.3	0.0	69.1	73.5	0.0	68.2
Incr Delay (d2), s/veh	1.0	2.2	2.4	33.2	1.6	1.5	3.0	0.0	2.3	1.5	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	31.2	33.9	4.0	13.4	14.0	4.7	0.0	4.5	2.3	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	12.3	12.9	107.7	6.2	6.2	76.3	0.0	71.3	75.0	0.0	69.5
LnGrp LOS	C	B	B	F	A	A	E	A	E	E	A	E
Approach Vol, veh/h		2980			2052			124			73	
Approach Delay, s/veh		12.8			8.2			73.8			71.8	
Approach LOS		B			A			E			E	

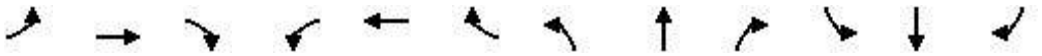
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		139.0		19.0		139.0		19.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		128.0		18.0		128.0		18.0				
Max Q Clear Time (g_c+I1), s		109.0		12.9		135.0		11.3				
Green Ext Time (p_c), s		18.6		0.2		0.0		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			13.3									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2770	40	30	1960	30	60
Future Volume (veh/h)	2770	40	30	1960	30	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	2856	41	31	2021	31	62
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	2860	41	46	2788	197	175
Arrive On Green	0.81	0.81	0.81	0.81	0.11	0.11
Sat Flow, veh/h	3622	51	85	3532	1725	1535
Grp Volume(v), veh/h	1411	1486	31	2021	31	62
Grp Sat Flow(s),veh/h/ln	1749	1832	85	1721	1725	1535
Q Serve(g_s), s	125.5	128.0	0.0	42.7	2.6	5.9
Cycle Q Clear(g_c), s	125.5	128.0	128.0	42.7	2.6	5.9
Prop In Lane		0.03	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1417	1484	46	2788	197	175
V/C Ratio(X)	1.00	1.00	0.68	0.72	0.16	0.35
Avail Cap(c_a), veh/h	1417	1484	46	2788	197	175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.14	0.14	0.31	0.31	1.00	1.00
Uniform Delay (d), s/veh	14.8	15.0	79.0	6.9	63.2	64.6
Incr Delay (d2), s/veh	8.1	9.0	22.5	0.5	1.7	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	45.3	48.7	2.7	16.3	2.2	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.9	24.0	101.5	7.4	64.9	70.2
LnGrp LOS	C	F	F	A	E	E
Approach Vol, veh/h	2897			2052	93	
Approach Delay, s/veh	23.5			8.8	68.4	
Approach LOS	C			A	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		134.0		24.0		134.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		128.0		18.0		128.0
Max Q Clear Time (g_c+I1), s		130.0		7.9		130.0
Green Ext Time (p_c), s		0.0		0.1		0.0

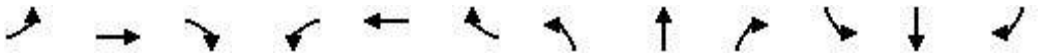
Intersection Summary		
HCM 6th Ctrl Delay		18.3
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	2180	270	240	1430	60	190	380	130	120	580	370
Future Volume (veh/h)	380	2180	270	240	1430	60	190	380	130	120	580	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1811	1811	1811	1841	1841	1841
Adj Flow Rate, veh/h	396	2271	281	250	1490	62	198	396	135	125	604	385
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	5	6	6	6	4	4	4
Cap, veh/h	512	2086	999	192	1757	783	148	400	135	108	509	464
Arrive On Green	0.15	0.60	0.60	0.06	0.51	0.51	0.04	0.16	0.16	0.03	0.15	0.15
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	3346	2527	851	3401	3497	1560
Grp Volume(v), veh/h	396	2271	281	250	1490	62	198	268	263	125	604	385
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1673	1721	1658	1700	1749	1560
Q Serve(g_s), s	17.8	95.0	12.4	9.0	58.7	2.5	7.0	24.5	25.0	5.0	23.0	8.4
Cycle Q Clear(g_c), s	17.8	95.0	12.4	9.0	58.7	2.5	7.0	24.5	25.0	5.0	23.0	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	512	2086	999	192	1757	783	148	272	262	108	509	464
V/C Ratio(X)	0.77	1.09	0.28	1.30	0.85	0.08	1.34	0.98	1.00	1.16	1.19	0.83
Avail Cap(c_a), veh/h	512	2086	999	192	1757	783	148	272	262	108	509	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.34	0.34	0.34	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	64.4	31.5	12.1	74.5	33.7	12.3	75.5	66.3	66.5	76.5	67.5	33.2
Incr Delay (d2), s/veh	0.7	40.9	0.1	148.0	1.9	0.1	189.5	50.2	56.1	131.3	100.4	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	57.5	5.3	11.5	29.4	2.2	12.0	20.8	20.9	7.5	25.7	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	72.4	12.2	222.5	35.6	12.3	265.0	116.5	122.6	207.8	167.9	43.9
LnGrp LOS	E	F	B	F	D	B	F	F	F	F	F	D
Approach Vol, veh/h		2948			1802			729			1114	
Approach Delay, s/veh		65.6			60.8			159.0			129.5	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	101.0	11.0	31.0	30.0	86.0	13.0	29.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	95.0	5.0	25.0	24.0	80.0	7.0	23.0
Max Q Clear Time (g_c+I1), s	11.0	97.0	7.0	27.0	19.8	60.7	9.0	25.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.6	11.2	0.0	0.0

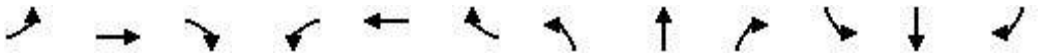
Intersection Summary	
HCM 6th Ctrl Delay	85.4
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	2190	100	60	1610	90	50	190	60	150	180	70
Future Volume (veh/h)	140	2190	100	60	1610	90	50	190	60	150	180	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1826	1826	1826	1796	1796	1796	1811	1811	1811
Adj Flow Rate, veh/h	156	2433	111	67	1789	100	56	211	67	167	200	78
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	5	5	5	7	7	7	6	6	6
Cap, veh/h	176	2055	917	125	1994	889	157	240	203	151	249	211
Arrive On Green	0.05	0.59	0.59	0.04	0.57	0.57	0.04	0.13	0.13	0.04	0.14	0.14
Sat Flow, veh/h	1753	3497	1560	1739	3469	1547	1711	1796	1522	1725	1811	1535
Grp Volume(v), veh/h	156	2433	111	67	1789	100	56	211	67	167	200	78
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1739	1735	1547	1711	1796	1522	1725	1811	1535
Q Serve(g_s), s	4.5	70.5	3.8	1.9	54.3	3.5	3.4	13.8	4.8	5.0	12.8	5.5
Cycle Q Clear(g_c), s	4.5	70.5	3.8	1.9	54.3	3.5	3.4	13.8	4.8	5.0	12.8	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	2055	917	125	1994	889	157	240	203	151	249	211
V/C Ratio(X)	0.88	1.18	0.12	0.54	0.90	0.11	0.36	0.88	0.33	1.10	0.80	0.37
Avail Cap(c_a), veh/h	176	2055	917	132	1994	889	163	269	228	151	272	230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	24.7	11.0	29.2	22.4	11.6	43.3	51.0	47.1	51.1	50.2	47.0
Incr Delay (d2), s/veh	5.2	83.3	0.0	3.7	6.9	0.3	1.4	24.8	0.9	103.6	14.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	62.5	1.9	2.2	30.1	2.3	2.7	12.5	3.4	11.1	11.2	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	108.0	11.0	32.9	29.3	11.9	44.6	75.8	48.1	154.7	65.0	48.1
LnGrp LOS	C	F	B	C	C	B	D	E	D	F	E	D
Approach Vol, veh/h		2700			1956			334			445	
Approach Delay, s/veh		99.7			28.5			65.0			95.7	
Approach LOS		F			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	76.5	11.0	22.0	12.0	75.0	10.5	22.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	5.0	68.0	5.0	18.0	6.0	67.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.9	72.5	7.0	15.8	6.5	56.3	5.4	14.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	8.4	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	71.6
HCM 6th LOS	E



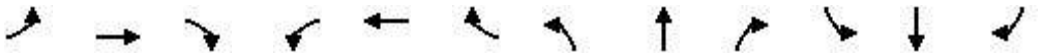
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	2100	30	30	1560	40	20	40	70	80	20	180
Future Volume (veh/h)	270	2100	30	30	1560	40	20	40	70	80	20	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	281	2188	31	31	1625	42	21	42	73	83	21	188
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	305	2512	36	143	2292	1023	26	40	46	99	20	368
Arrive On Green	0.09	0.71	0.71	0.03	0.66	0.66	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1753	3531	50	1753	3497	1560	0	278	322	411	138	1585
Grp Volume(v), veh/h	281	1081	1138	31	1625	42	136	0	0	104	0	188
Grp Sat Flow(s),veh/h/ln	1753	1749	1832	1753	1749	1560	600	0	0	549	0	1585
Q Serve(g_s), s	11.6	74.9	75.8	0.9	47.9	1.5	0.0	0.0	0.0	0.0	0.0	16.6
Cycle Q Clear(g_c), s	11.6	74.9	75.8	0.9	47.9	1.5	23.0	0.0	0.0	23.0	0.0	16.6
Prop In Lane	1.00		0.03	1.00		1.00	0.15		0.54	0.80		1.00
Lane Grp Cap(c), veh/h	305	1244	1303	143	2292	1023	112	0	0	119	0	368
V/C Ratio(X)	0.92	0.87	0.87	0.22	0.71	0.04	1.21	0.00	0.00	0.87	0.00	0.51
Avail Cap(c_a), veh/h	423	1244	1303	162	2292	1023	112	0	0	119	0	368
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	17.5	17.6	25.0	17.8	9.8	65.6	0.0	0.0	71.0	0.0	53.6
Incr Delay (d2), s/veh	20.8	8.4	8.3	0.8	1.9	0.1	153.5	0.0	0.0	45.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	37.3	39.3	1.1	25.1	0.9	15.7	0.0	0.0	9.8	0.0	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	25.9	25.9	25.7	19.6	9.8	219.1	0.0	0.0	116.9	0.0	54.8
LnGrp LOS	E	C	C	C	B	A	F	A	A	F	A	D
Approach Vol, veh/h		2500			1698			136			292	
Approach Delay, s/veh		29.5			19.5			219.1			76.9	
Approach LOS		C			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	120.0		29.0	20.2	111.0		29.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	114.0		23.0	25.0	96.0		23.0				
Max Q Clear Time (g_c+I1), s	2.9	77.8		25.0	13.6	49.9		25.0				
Green Ext Time (p_c), s	0.0	24.5		0.0	0.6	17.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		34.4	
HCM 6th LOS		C	

HCM 6th Signalized Intersection Summary
11: N 3rd St & Black St

07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	10	1200	20	0	0	530	330	10	0	720	80
Future Volume (veh/h)	50	10	1200	20	0	0	530	330	10	0	720	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1900	1900	1900	1693	1693	1693	0	1811	1811
Adj Flow Rate, veh/h	54	11	1032	22	0	0	576	359	11	0	783	87
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, %	3	3	3	0	0	0	14	14	14	0	6	6
Cap, veh/h	337	358	743	169	367	0	603	1140	35	0	1135	126
Arrive On Green	0.19	0.19	0.19	0.19	0.00	0.00	0.28	0.70	0.70	0.00	0.36	0.36
Sat Flow, veh/h	1406	1856	1572	550	1900	0	1612	1633	50	0	3213	347
Grp Volume(v), veh/h	54	11	1032	22	0	0	576	0	370	0	431	439
Grp Sat Flow(s),veh/h/ln	1406	1856	1572	550	1900	0	1612	0	1684	0	1721	1749
Q Serve(g_s), s	3.5	0.5	21.2	3.7	0.0	0.0	27.9	0.0	9.4	0.0	23.4	23.4
Cycle Q Clear(g_c), s	3.5	0.5	21.2	4.3	0.0	0.0	27.9	0.0	9.4	0.0	23.4	23.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.03	0.00		0.20
Lane Grp Cap(c), veh/h	337	358	743	169	367	0	603	0	1175	0	626	636
V/C Ratio(X)	0.16	0.03	1.39	0.13	0.00	0.00	0.96	0.00	0.31	0.00	0.69	0.69
Avail Cap(c_a), veh/h	337	358	743	169	367	0	650	0	1377	0	782	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	36.0	29.0	37.8	0.0	0.0	23.8	0.0	6.4	0.0	29.7	29.7
Incr Delay (d2), s/veh	0.1	0.0	175.5	1.6	0.0	0.0	23.9	0.0	0.2	0.0	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.4	70.5	1.0	0.0	0.0	15.9	0.0	5.3	0.0	14.8	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	36.0	204.5	39.3	0.0	0.0	47.7	0.0	6.6	0.0	31.6	31.6
LnGrp LOS	D	D	F	D	A	A	D	A	A	A	C	C
Approach Vol, veh/h		1097			22			946			870	
Approach Delay, s/veh		194.6			39.3			31.6			31.6	
Approach LOS		F			D			C			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.8		27.2	36.8	46.0		27.2				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		90.0		8.0	34.0	50.0		8.0				
Max Q Clear Time (g_c+I1), s		11.4		23.2	29.9	25.4		6.3				
Green Ext Time (p_c), s		2.5		0.0	0.9	5.8		0.0				

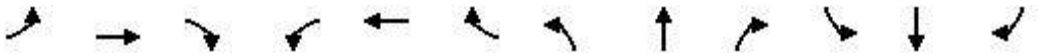
Intersection Summary		
HCM 6th Ctrl Delay		92.6
HCM 6th LOS		F

Notes

User approved changes to right turn type.

HCM 6th Signalized Intersection Summary
12: N MLK Jr Blvd & Village St/Heaton St

07/08/2021



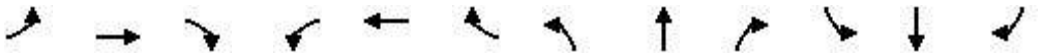
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	20	50	20	150	10	710	10	230	1700	10
Future Volume (veh/h)	10	10	20	50	20	150	10	710	10	230	1700	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1856	1856	1856	1722	1722	1722	1841	1841	1841
Adj Flow Rate, veh/h	11	11	21	53	21	158	11	747	11	242	1789	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	3	3	3	12	12	12	4	4	4
Cap, veh/h	127	66	125	154	54	187	194	2261	33	569	2811	17
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.68	0.68	0.68	0.06	0.79	0.79
Sat Flow, veh/h	1157	552	1054	898	451	1572	241	3301	49	1753	3564	22
Grp Volume(v), veh/h	11	0	32	74	0	158	11	370	388	242	877	923
Grp Sat Flow(s),veh/h/ln	1157	0	1606	1349	0	1572	241	1636	1713	1753	1749	1837
Q Serve(g_s), s	1.2	0.0	2.3	5.1	0.0	12.8	2.6	12.0	12.0	5.0	27.6	27.7
Cycle Q Clear(g_c), s	8.6	0.0	2.3	7.4	0.0	12.8	16.8	12.0	12.0	5.0	27.6	27.7
Prop In Lane	1.00		0.66	0.72		1.00	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	127	0	191	208	0	187	194	1121	1174	569	1380	1449
V/C Ratio(X)	0.09	0.00	0.17	0.36	0.00	0.85	0.06	0.33	0.33	0.43	0.64	0.64
Avail Cap(c_a), veh/h	212	0	309	316	0	302	194	1121	1174	697	1380	1449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	0.0	51.5	54.2	0.0	56.1	12.3	8.3	8.3	5.6	5.8	5.8
Incr Delay (d2), s/veh	0.3	0.0	0.4	1.0	0.0	11.4	0.5	0.7	0.7	0.5	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	1.8	4.2	0.0	9.6	0.3	7.3	7.6	3.0	13.7	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	0.0	51.9	55.2	0.0	67.5	12.7	9.0	9.0	6.1	8.1	8.0
LnGrp LOS	E	A	D	E	A	E	B	A	A	A	A	A
Approach Vol, veh/h		43			232			769			2042	
Approach Delay, s/veh		53.5			63.6			9.1			7.8	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	13.5	95.0		21.4		108.6		21.4				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	17.0	70.0		25.0		93.0		25.0				
Max Q Clear Time (g_c+I1), s	7.0	18.8		10.6		29.7		14.8				
Green Ext Time (p_c), s	0.5	5.8		0.1		24.3		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
13: N MLK Jr Blvd & Dayton St

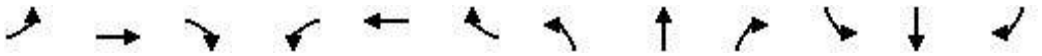
07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	30	20	20	40	70	20	650	20	240	1520	10
Future Volume (veh/h)	10	30	20	20	40	70	20	650	20	240	1520	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1707	1707	1707	1841	1841	1841
Adj Flow Rate, veh/h	12	35	23	23	47	81	23	756	23	279	1767	12
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	5	5	5	3	3	3	13	13	13	4	4	4
Cap, veh/h	116	314	185	105	207	301	129	1635	50	333	1458	10
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.02	0.51	0.51	0.41	0.41	0.41
Sat Flow, veh/h	186	915	539	156	602	878	1626	3214	98	682	3561	24
Grp Volume(v), veh/h	70	0	0	151	0	0	23	381	398	279	867	912
Grp Sat Flow(s),veh/h/ln	1639	0	0	1636	0	0	1626	1622	1690	682	1749	1836
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.6	12.2	12.2	28.9	33.2	33.2
Cycle Q Clear(g_c), s	2.3	0.0	0.0	5.2	0.0	0.0	0.6	12.2	12.2	33.2	33.2	33.2
Prop In Lane	0.17		0.33	0.15		0.54	1.00		0.06	1.00		0.01
Lane Grp Cap(c), veh/h	615	0	0	613	0	0	129	825	859	333	716	752
V/C Ratio(X)	0.11	0.00	0.00	0.25	0.00	0.00	0.18	0.46	0.46	0.84	1.21	1.21
Avail Cap(c_a), veh/h	619	0	0	617	0	0	189	825	859	333	716	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.24	0.24	0.24	0.68	0.68	0.68
Uniform Delay (d), s/veh	18.2	0.0	0.0	19.2	0.0	0.0	19.7	12.8	12.8	27.9	23.9	23.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.4	0.4	15.7	103.8	104.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	0.0	3.7	0.0	0.0	0.4	5.7	5.9	10.3	46.5	48.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	0.0	19.4	0.0	0.0	19.8	13.2	13.2	43.6	127.7	128.1
LnGrp LOS	B	A	A	B	A	A	B	B	B	D	F	F
Approach Vol, veh/h		70			151			802			2058	
Approach Delay, s/veh		18.3			19.4			13.4			116.5	
Approach LOS		B			B			B			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		47.2		33.8	8.0	39.2		33.8				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		41.0		28.0	5.0	30.0		28.0				
Max Q Clear Time (g_c+I1), s		14.2		4.3	2.6	35.2		7.2				
Green Ext Time (p_c), s		5.2		0.3	0.0	0.0		0.8				

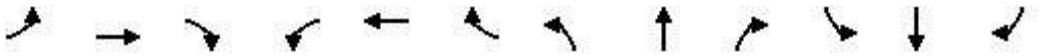
Intersection Summary												
HCM 6th Ctrl Delay			82.6									
HCM 6th LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	30	10	50	40	50	20	630	90	40	1020	60
Future Volume (veh/h)	20	30	10	50	40	50	20	630	90	40	1020	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1767	1767	1767	1811	1811	1811
Adj Flow Rate, veh/h	22	33	11	55	44	55	22	692	99	44	1121	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	1	1	1	9	9	9	6	6	6
Cap, veh/h	443	423	141	492	236	295	225	1591	227	355	1783	105
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1317	1364	455	1373	762	952	446	2948	421	664	3302	194
Grp Volume(v), veh/h	22	0	44	55	0	99	22	394	397	44	584	603
Grp Sat Flow(s),veh/h/ln	1317	0	1818	1373	0	1714	446	1678	1691	664	1721	1776
Q Serve(g_s), s	1.0	0.0	1.4	2.4	0.0	3.4	2.9	11.3	11.3	3.4	18.9	18.9
Cycle Q Clear(g_c), s	4.4	0.0	1.4	3.7	0.0	3.4	21.8	11.3	11.3	14.7	18.9	18.9
Prop In Lane	1.00		0.25	1.00		0.56	1.00		0.25	1.00		0.11
Lane Grp Cap(c), veh/h	443	0	564	492	0	532	225	906	913	355	929	959
V/C Ratio(X)	0.05	0.00	0.08	0.11	0.00	0.19	0.10	0.43	0.44	0.12	0.63	0.63
Avail Cap(c_a), veh/h	446	0	568	496	0	536	225	906	913	355	929	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	21.8	0.0	19.5	20.8	0.0	20.2	20.4	11.1	11.1	15.5	12.8	12.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.2	0.9	1.5	1.5	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	1.0	1.4	0.0	2.4	0.6	7.3	7.3	0.8	7.6	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	0.0	19.6	20.9	0.0	20.4	21.3	12.6	12.6	15.6	13.1	13.1
LnGrp LOS	C	A	B	C	A	C	C	B	B	B	B	B
Approach Vol, veh/h		66			154			813			1231	
Approach Delay, s/veh		20.3			20.6			12.8			13.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		49.2		30.8		49.2		30.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		43.0		25.0		43.0		25.0				
Max Q Clear Time (g_c+I1), s		23.8		6.4		20.9		5.7				
Green Ext Time (p_c), s		5.1		0.2		8.8		0.6				

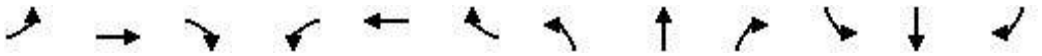
Intersection Summary												
HCM 6th Ctrl Delay			13.8									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	700	20	110	850	110	30	90	80	100	140	40
Future Volume (veh/h)	20	700	20	110	850	110	30	90	80	100	140	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	22	761	22	120	924	120	33	98	87	109	152	43
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, %	5	5	5	5	5	5	3	3	3	2	2	2
Cap, veh/h	339	2058	59	462	1914	249	192	189	168	195	292	83
Arrive On Green	0.02	0.60	0.60	0.04	0.62	0.62	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1739	3443	100	1739	3087	401	1178	906	805	1199	1402	397
Grp Volume(v), veh/h	22	383	400	120	519	525	33	0	185	109	0	195
Grp Sat Flow(s),veh/h/ln	1739	1735	1808	1739	1735	1754	1178	0	1711	1199	0	1799
Q Serve(g_s), s	0.6	13.7	13.7	3.2	19.5	19.5	3.1	0.0	11.5	10.7	0.0	11.5
Cycle Q Clear(g_c), s	0.6	13.7	13.7	3.2	19.5	19.5	14.6	0.0	11.5	22.2	0.0	11.5
Prop In Lane	1.00		0.06	1.00		0.23	1.00		0.47	1.00		0.22
Lane Grp Cap(c), veh/h	339	1037	1081	462	1075	1087	192	0	357	195	0	375
V/C Ratio(X)	0.06	0.37	0.37	0.26	0.48	0.48	0.17	0.00	0.52	0.56	0.00	0.52
Avail Cap(c_a), veh/h	403	1037	1081	574	1075	1087	251	0	442	255	0	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	12.5	12.5	9.2	12.4	12.4	48.6	0.0	42.1	52.0	0.0	42.2
Incr Delay (d2), s/veh	0.1	1.0	1.0	0.3	1.6	1.5	0.4	0.0	1.2	2.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	9.2	9.5	2.1	12.1	12.2	1.7	0.0	8.7	6.0	0.0	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	13.5	13.4	9.5	13.9	13.9	49.1	0.0	43.3	54.5	0.0	43.3
LnGrp LOS	B	B	B	A	B	B	D	A	D	D	A	D
Approach Vol, veh/h		805			1164			218			304	
Approach Delay, s/veh		13.4			13.5			44.2			47.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	77.7		31.0	8.6	80.4		31.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	13.0	58.0		31.0	7.0	64.0		31.0				
Max Q Clear Time (g_c+I1), s	5.2	15.7		16.6	2.6	21.5		24.2				
Green Ext Time (p_c), s	0.2	5.5		1.0	0.0	8.3		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		20.2	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	70	200	30	30	10	100	690	30	10	840	70
Future Volume (veh/h)	100	70	200	30	30	10	100	690	30	10	840	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1856	1856	1856	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	108	75	215	32	32	11	108	742	32	11	903	75
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	3	3	3	5	5	5	5	5	5
Cap, veh/h	277	91	261	100	147	51	383	2381	103	473	2023	168
Arrive On Green	0.06	0.21	0.21	0.11	0.11	0.11	0.04	0.70	0.70	0.62	0.62	0.62
Sat Flow, veh/h	1795	430	1233	1081	1320	454	1739	3388	146	680	3243	269
Grp Volume(v), veh/h	108	0	290	32	0	43	108	380	394	11	483	495
Grp Sat Flow(s),veh/h/ln	1795	0	1663	1081	0	1774	1739	1735	1800	680	1735	1777
Q Serve(g_s), s	7.3	0.0	23.3	4.1	0.0	3.1	3.0	11.7	11.7	0.9	20.3	20.3
Cycle Q Clear(g_c), s	7.3	0.0	23.3	13.4	0.0	3.1	3.0	11.7	11.7	1.5	20.3	20.3
Prop In Lane	1.00		0.74	1.00		0.26	1.00		0.08	1.00		0.15
Lane Grp Cap(c), veh/h	277	0	352	100	0	198	383	1219	1265	473	1082	1109
V/C Ratio(X)	0.39	0.00	0.82	0.32	0.00	0.22	0.28	0.31	0.31	0.02	0.45	0.45
Avail Cap(c_a), veh/h	277	0	523	211	0	380	469	1219	1265	473	1082	1109
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.38	0.38	0.38	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	0.0	52.7	65.8	0.0	56.6	10.1	7.9	7.9	10.3	13.7	13.7
Incr Delay (d2), s/veh	0.9	0.0	6.7	1.8	0.0	0.5	0.2	0.3	0.2	0.1	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.1	0.0	15.8	2.1	0.0	2.6	2.0	6.3	6.5	0.3	12.8	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	0.0	59.4	67.6	0.0	57.2	10.3	8.2	8.2	10.4	15.1	15.0
LnGrp LOS	D	A	E	E	A	E	B	A	A	B	B	B
Approach Vol, veh/h		398			75			882			989	
Approach Delay, s/veh		57.0			61.6			8.4			15.0	
Approach LOS		E			E			A			B	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		104.4		35.6	11.1	93.3	14.0	21.6				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		84.0		44.0	12.0	66.0	8.0	30.0				
Max Q Clear Time (g_c+I1), s		13.7		25.3	5.0	22.3	9.3	15.4				
Green Ext Time (p_c), s		2.4		1.8	0.1	3.4	0.0	0.2				

Intersection Summary												
HCM 6th Ctrl Delay			21.2									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	70.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	680	470	70	240	80
Future Vol, veh/h	30	680	470	70	240	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	10	10	23	23
Mvmt Flow	39	895	618	92	316	105

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1644	316	316	0	-	0
Stage 1	316	-	-	-	-	-
Stage 2	1328	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.2	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.29	-	-	-
Pot Cap-1 Maneuver	110	~ 724	1200	-	-	0
Stage 1	739	-	-	-	-	0
Stage 2	247	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	50	~ 724	1200	-	-	-
Mov Cap-2 Maneuver	50	-	-	-	-	-
Stage 1	338	-	-	-	-	-
Stage 2	247	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	140.2	9.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1200	-	50	724	-
HCM Lane V/C Ratio	0.515	-	0.789	1.236	-
HCM Control Delay (s)	11.1	0	196.4	137.7	-
HCM Lane LOS	B	A	F	F	-
HCM 95th %tile Q(veh)	3.1	-	3.2	31.9	-

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

Intersection	
Int Delay, s/veh	110

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	180	360	60	190	730
Future Vol, veh/h	130	180	360	60	190	730
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	11	11	2	2
Mvmt Flow	163	225	450	75	238	913

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1877	488	0	0	450	0
Stage 1	488	-	-	-	-	-
Stage 2	1389	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 79	580	-	-	1110	-
Stage 1	617	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 45	580	-	-	1110	-
Mov Cap-2 Maneuver	~ 45	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	~ 131	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 579.8	0	1.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	45	580	1110	-
HCM Lane V/C Ratio	-	-	3.611	0.388	0.214	-
HCM Control Delay (s)	-	-	$ 1361.8	15.1	9.1	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	18.1	1.8	0.8	-

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	450	260	560	1070	20
Future Volume (veh/h)	0	450	260	560	1070	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1722	1722	1856	1856
Adj Flow Rate, veh/h	0	459	265	571	1092	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	5	12	12	3	3
Cap, veh/h	0	386	187	1085	908	17
Arrive On Green	0.00	0.25	0.07	0.63	0.50	0.50
Sat Flow, veh/h	0	1545	1640	1722	1816	33
Grp Volume(v), veh/h	0	460	265	571	0	1112
Grp Sat Flow(s),veh/h/ln	0	1548	1640	1722	0	1850
Q Serve(g_s), s	0.0	25.0	7.0	18.4	0.0	50.0
Cycle Q Clear(g_c), s	0.0	25.0	7.0	18.4	0.0	50.0
Prop In Lane	0.00	1.00	1.00			0.02
Lane Grp Cap(c), veh/h	0	387	187	1085	0	925
V/C Ratio(X)	0.00	1.19	1.42	0.53	0.00	1.20
Avail Cap(c_a), veh/h	0	387	187	1085	0	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.59	0.59	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.5	29.3	10.2	0.0	25.0
Incr Delay (d2), s/veh	0.0	108.0	206.0	1.1	0.0	101.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	31.0	19.4	9.6	0.0	65.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	145.5	235.3	11.3	0.0	126.5
LnGrp LOS	A	F	F	B	A	F
Approach Vol, veh/h	460			836	1112	
Approach Delay, s/veh	145.5			82.3	126.5	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		69.0		31.0	13.0	56.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		63.0		25.0	7.0	50.0
Max Q Clear Time (g_c+I1), s		20.4		27.0	9.0	52.0
Green Ext Time (p_c), s		4.2		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	114.8
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	100	510	310	70	1190	330
Future Volume (veh/h)	100	510	310	70	1190	330
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1722	1722	1856	1856
Adj Flow Rate, veh/h	102	520	316	71	1214	337
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	12	12	3	3
Cap, veh/h	318	943	299	67	814	1299
Arrive On Green	0.18	0.18	0.22	0.22	0.42	0.70
Sat Flow, veh/h	1767	1572	1361	306	1767	1856
Grp Volume(v), veh/h	102	520	0	387	1214	337
Grp Sat Flow(s),veh/h/ln	1767	1572	0	1667	1767	1856
Q Serve(g_s), s	5.0	18.0	0.0	22.0	42.0	6.7
Cycle Q Clear(g_c), s	5.0	18.0	0.0	22.0	42.0	6.7
Prop In Lane	1.00	1.00		0.18	1.00	
Lane Grp Cap(c), veh/h	318	943	0	367	814	1299
V/C Ratio(X)	0.32	0.55	0.00	1.06	1.49	0.26
Avail Cap(c_a), veh/h	318	943	0	367	814	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	0.00	1.00	0.09	0.09
Uniform Delay (d), s/veh	35.7	12.0	0.0	39.0	24.1	5.5
Incr Delay (d2), s/veh	0.1	0.1	0.0	62.3	221.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	8.1	0.0	22.1	93.7	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.8	12.1	0.0	101.3	245.7	5.5
LnGrp LOS	D	B	A	F	F	A
Approach Vol, veh/h	622		387			1551
Approach Delay, s/veh	16.0		101.3			193.5
Approach LOS	B		F			F

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	48.0	28.0				76.0	24.0
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	42.0	22.0				70.0	18.0
Max Q Clear Time (g_c+I1), s	44.0	24.0				8.7	20.0
Green Ext Time (p_c), s	0.0	0.0				2.2	0.0

Intersection Summary		
HCM 6th Ctrl Delay	136.4	
HCM 6th LOS	F	

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	10	940	60	290	390	0	0	470	30
Future Volume (veh/h)	0	0	0	10	940	60	290	390	0	0	470	30
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1811	1811	1811	1781	1781	0	0	1856	1856
Adj Flow Rate, veh/h				13	1237	79	382	513	0	0	618	39
Peak Hour Factor				0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %				6	6	6	8	8	0	0	3	3
Cap, veh/h				12	1230	83	326	909	0	0	557	472
Arrive On Green				0.37	0.37	0.37	0.15	0.51	0.00	0.00	0.30	0.30
Sat Flow, veh/h				34	3324	223	1697	1781	0	0	1856	1572
Grp Volume(v), veh/h				702	0	627	382	513	0	0	618	39
Grp Sat Flow(s),veh/h/ln				1809	0	1771	1697	1781	0	0	1856	1572
Q Serve(g_s), s				37.0	0.0	34.5	15.0	19.8	0.0	0.0	30.0	1.8
Cycle Q Clear(g_c), s				37.0	0.0	34.5	15.0	19.8	0.0	0.0	30.0	1.8
Prop In Lane				0.02		0.13	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				669	0	655	326	909	0	0	557	472
V/C Ratio(X)				1.05	0.00	0.96	1.17	0.56	0.00	0.00	1.11	0.08
Avail Cap(c_a), veh/h				669	0	655	326	909	0	0	557	472
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.48	0.48	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.5	0.0	30.7	29.2	16.9	0.0	0.0	35.0	25.1
Incr Delay (d2), s/veh				48.2	0.0	26.0	91.7	0.4	0.0	0.0	72.0	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				34.0	0.0	26.3	18.7	11.2	0.0	0.0	34.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				79.7	0.0	56.8	120.9	17.3	0.0	0.0	107.0	25.2
LnGrp LOS				F	A	E	F	B	A	A	F	C
Approach Vol, veh/h					1329			895			657	
Approach Delay, s/veh					68.9			61.5			102.2	
Approach LOS					E			E			F	

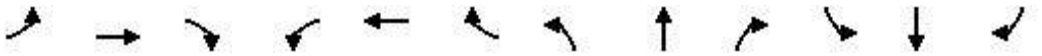
Timer - Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				57.0		43.0	21.0	36.0				
Change Period (Y+Rc), s				6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s				51.0		37.0	15.0	30.0				
Max Q Clear Time (g_c+I1), s				21.8		39.0	17.0	32.0				
Green Ext Time (p_c), s				3.9		0.0	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		74.2
HCM 6th LOS		E

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	30	1690	50	0	360	10	40	640	10	90	380	10
Future Volume (veh/h)	30	1690	50	0	360	10	40	640	10	90	380	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	0	1811	1811	1781	1781	1781	1856	1856	1856
Adj Flow Rate, veh/h	43	2449	72	0	522	14	58	928	14	130	551	14
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	4	4	4	0	6	6	8	8	8	3	3	3
Cap, veh/h	400	1047	31	0	1033	28	80	1145	17	97	604	15
Arrive On Green	0.59	0.59	0.59	0.00	0.59	0.59	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	855	1779	52	0	1756	47	806	3413	51	590	1802	46
Grp Volume(v), veh/h	43	0	2521	0	0	536	58	460	482	130	0	565
Grp Sat Flow(s),veh/h/ln	855	0	1831	0	0	1803	806	1692	1772	590	0	1847
Q Serve(g_s), s	4.9	0.0	93.0	0.0	0.0	27.5	6.7	39.2	39.2	13.8	0.0	46.3
Cycle Q Clear(g_c), s	32.4	0.0	93.0	0.0	0.0	27.5	53.0	39.2	39.2	53.0	0.0	46.3
Prop In Lane	1.00		0.03	0.00		0.03	1.00		0.03	1.00		0.02
Lane Grp Cap(c), veh/h	400	0	1078	0	0	1061	80	568	594	97	0	620
V/C Ratio(X)	0.11	0.00	2.34	0.00	0.00	0.51	0.73	0.81	0.81	1.34	0.00	0.91
Avail Cap(c_a), veh/h	400	0	1078	0	0	1061	80	568	594	97	0	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.09	0.00	0.09
Uniform Delay (d), s/veh	28.5	0.0	32.5	0.0	0.0	19.0	77.0	47.9	47.9	75.3	0.0	50.3
Incr Delay (d2), s/veh	0.5	0.0	605.3	0.0	0.0	1.7	27.8	8.7	8.3	158.9	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	363.0	0.0	0.0	18.0	5.4	25.1	26.0	11.6	0.0	24.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	0.0	637.8	0.0	0.0	20.7	104.8	56.6	56.2	234.2	0.0	52.5
LnGrp LOS	C	A	F	A	A	C	F	E	E	F	A	D
Approach Vol, veh/h		2564			536			1000			695	
Approach Delay, s/veh		627.6			20.7			59.2			86.5	
Approach LOS		F			C			E			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.0		59.0		99.0		59.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		93.0		53.0		93.0		53.0				
Max Q Clear Time (g_c+I1), s		95.0		55.0		29.5		55.0				
Green Ext Time (p_c), s		0.0		0.0		4.4		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			362.8									
HCM 6th LOS			F									



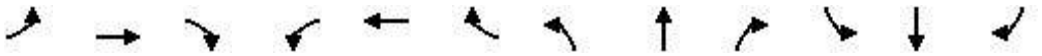
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1800	110	0	2490	10	0	0	0	10	20	170
Future Volume (veh/h)	0	1800	110	0	2490	10	0	0	0	10	20	170
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1900	1900	1900
Adj Flow Rate, veh/h	0	1837	112	0	2541	10				10	20	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	0	2	2				0	0	0
Cap, veh/h	0	4439	270	0	3275	13				14	29	
Arrive On Green	0.00	0.90	0.90	0.00	0.90	0.90				0.02	0.02	0.00
Sat Flow, veh/h	0	5089	299	0	3724	14				623	1246	1610
Grp Volume(v), veh/h	0	1269	680	0	1243	1308				30	0	0
Grp Sat Flow(s),veh/h/ln	0	1702	1816	0	1777	1868				1869	0	1610
Q Serve(g_s), s	0.0	9.3	9.4	0.0	36.5	36.7				2.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.3	9.4	0.0	36.5	36.7				2.6	0.0	0.0
Prop In Lane	0.00		0.16	0.00		0.01				0.33		1.00
Lane Grp Cap(c), veh/h	0	3070	1638	0	1603	1685				43	0	
V/C Ratio(X)	0.00	0.41	0.41	0.00	0.78	0.78				0.70	0.00	
Avail Cap(c_a), veh/h	0	3070	1638	0	1603	1685				210	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.35	0.35				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.2	1.2	0.0	2.6	2.6				77.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.8	0.0	1.3	1.3				18.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	3.4	3.9	0.0	10.2	10.7				2.6	0.0	0.0
Unsig. Movement Delay, s/veh												0.00
LnGrp Delay(d),s/veh	0.0	1.6	2.0	0.0	3.9	3.8				96.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				F	A	A
Approach Vol, veh/h		1949			2551						203	A
Approach Delay, s/veh		1.8			3.9						14.2	
Approach LOS		A			A						B	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		150.3				150.3		9.7				
Change Period (Y+Rc), s		6.0				6.0		6.0				
Max Green Setting (Gmax), s		130.0				130.0		18.0				
Max Q Clear Time (g_c+I1), s		11.4				38.7		4.6				
Green Ext Time (p_c), s		33.7				71.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		3.4
HCM 6th LOS		A

Notes

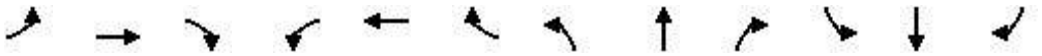
Unsignalized Delay for [SBR] is included in calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1620	140	240	2280	30	60	10	160	10	60	30
Future Volume (veh/h)	50	1620	140	240	2280	30	60	10	160	10	60	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	51	1636	141	242	2303	30	61	10	162	10	61	30
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	3	3	3
Cap, veh/h	126	2391	1066	267	2569	33	107	14	228	37	190	236
Arrive On Green	0.03	0.67	0.67	0.06	0.71	0.71	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1795	3621	47	1316	94	1518	78	1269	1572
Grp Volume(v), veh/h	51	1636	141	242	1137	1196	61	0	172	71	0	30
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1795	1791	1877	1316	0	1612	1348	0	1572
Q Serve(g_s), s	1.4	44.7	5.1	7.7	80.7	81.7	7.4	0.0	16.2	0.3	0.0	2.6
Cycle Q Clear(g_c), s	1.4	44.7	5.1	7.7	80.7	81.7	23.9	0.0	16.2	16.5	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.94	0.14		1.00
Lane Grp Cap(c), veh/h	126	2391	1066	267	1271	1332	107	0	242	228	0	236
V/C Ratio(X)	0.41	0.68	0.13	0.91	0.89	0.90	0.57	0.00	0.71	0.31	0.00	0.13
Avail Cap(c_a), veh/h	131	2391	1066	432	1271	1332	107	0	242	228	0	236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.13	0.13	0.13	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	15.9	9.4	32.3	18.5	18.6	76.2	0.0	64.7	60.2	0.0	58.9
Incr Delay (d2), s/veh	1.9	1.5	0.2	2.5	1.5	1.5	7.2	0.0	9.4	0.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	25.2	3.4	11.9	35.8	37.8	5.0	0.0	11.8	4.8	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	17.3	9.6	34.7	20.0	20.1	83.4	0.0	74.1	61.0	0.0	59.2
LnGrp LOS	D	B	A	C	B	C	F	A	E	E	A	E
Approach Vol, veh/h		1828			2575			233			101	
Approach Delay, s/veh		17.3			21.4			76.5			60.4	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.4	113.6		30.0	10.5	119.5		30.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	25.0	93.0		24.0	5.0	113.0		24.0				
Max Q Clear Time (g_c+I1), s	9.7	46.7		25.9	3.4	83.7		18.5				
Green Ext Time (p_c), s	0.6	22.6		0.0	0.0	25.0		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			C									



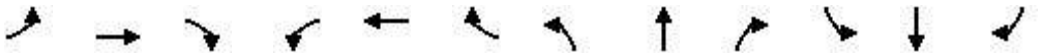
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1750	30	130	2400	30	80	20	110	40	60	70
Future Volume (veh/h)	30	1750	30	130	2400	30	80	20	110	40	60	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	31	1823	31	135	2500	31	83	21	115	42	62	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	94	2511	43	205	2567	32	143	38	208	137	118	139
Arrive On Green	0.02	0.70	0.70	0.04	0.71	0.71	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3576	61	1781	3595	44	1264	253	1384	1263	789	929
Grp Volume(v), veh/h	31	904	950	135	1233	1298	83	0	136	42	0	135
Grp Sat Flow(s),veh/h/ln	1781	1777	1859	1781	1777	1862	1264	0	1636	1263	0	1718
Q Serve(g_s), s	0.8	49.3	49.8	3.4	103.7	105.2	10.4	0.0	12.3	5.1	0.0	11.6
Cycle Q Clear(g_c), s	0.8	49.3	49.8	3.4	103.7	105.2	22.0	0.0	12.3	17.4	0.0	11.6
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.85	1.00		0.54
Lane Grp Cap(c), veh/h	94	1248	1306	205	1269	1330	143	0	245	137	0	258
V/C Ratio(X)	0.33	0.72	0.73	0.66	0.97	0.98	0.58	0.00	0.55	0.31	0.00	0.52
Avail Cap(c_a), veh/h	108	1248	1306	309	1269	1330	143	0	245	137	0	258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.15	0.15	0.15	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.5	14.4	14.5	23.0	21.4	21.6	72.9	0.0	63.0	71.1	0.0	62.7
Incr Delay (d2), s/veh	1.2	2.2	2.1	0.5	5.2	5.5	5.8	0.0	2.7	1.2	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	25.8	27.1	4.5	46.4	49.3	6.5	0.0	9.2	3.1	0.0	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	16.6	16.6	23.5	26.6	27.0	78.6	0.0	65.7	72.4	0.0	64.7
LnGrp LOS	D	B	B	C	C	C	E	A	E	E	A	E
Approach Vol, veh/h		1885			2666			219			177	
Approach Delay, s/veh		17.1			26.6			70.6			66.5	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	118.3		30.0	9.7	120.3		30.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	103.0		24.0	5.0	113.0		24.0				
Max Q Clear Time (g_c+I1), s	5.4	51.8		24.0	2.8	107.2		19.4				
Green Ext Time (p_c), s	0.2	26.9		0.0	0.0	5.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		26.4	
HCM 6th LOS		C	

HCM 6th Signalized Intersection Summary
4: S 3rd St/N 3rd St & High St

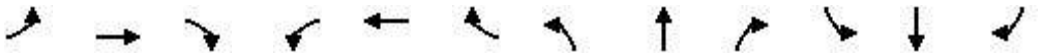
07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1830	30	40	2450	60	60	80	120	30	50	50
Future Volume (veh/h)	40	1830	30	40	2450	60	60	80	120	30	50	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1885	1885	1885
Adj Flow Rate, veh/h	42	1906	31	42	2552	62	62	83	125	31	52	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	1	1	1
Cap, veh/h	100	2657	43	194	2632	64	125	79	119	45	103	103
Arrive On Green	0.03	0.74	0.74	0.03	0.74	0.74	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1781	3579	58	1781	3546	86	1280	668	1006	1183	865	865
Grp Volume(v), veh/h	42	944	993	42	1273	1341	62	0	208	31	0	104
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1777	1855	1280	0	1674	1183	0	1730
Q Serve(g_s), s	0.9	46.7	47.3	0.9	104.3	107.4	7.6	0.0	19.0	0.0	0.0	9.0
Cycle Q Clear(g_c), s	0.9	46.7	47.3	0.9	104.3	107.4	16.7	0.0	19.0	19.0	0.0	9.0
Prop In Lane	1.00		0.03	1.00		0.05	1.00		0.60	1.00		0.50
Lane Grp Cap(c), veh/h	100	1319	1381	194	1319	1377	125	0	199	45	0	205
V/C Ratio(X)	0.42	0.72	0.72	0.22	0.97	0.97	0.50	0.00	1.05	0.69	0.00	0.51
Avail Cap(c_a), veh/h	109	1319	1381	214	1319	1377	125	0	199	45	0	205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.3	11.3	11.4	12.9	18.7	19.2	73.9	0.0	70.5	80.0	0.0	66.1
Incr Delay (d2), s/veh	1.5	1.8	1.7	0.0	2.9	3.4	3.0	0.0	76.5	36.1	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	23.5	24.7	0.9	43.8	47.1	4.8	0.0	18.6	3.1	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.8	13.1	13.1	13.0	21.6	22.5	76.9	0.0	147.0	116.1	0.0	68.1
LnGrp LOS	D	B	B	B	C	C	E	A	F	F	A	E
Approach Vol, veh/h		1979			2656			270			135	
Approach Delay, s/veh		13.9			22.0			130.9			79.1	
Approach LOS		B			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	124.8		25.0	10.2	124.8		25.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	117.0		19.0	5.0	118.0		19.0				
Max Q Clear Time (g_c+I1), s	2.9	49.3		21.0	2.9	109.4		21.0				
Green Ext Time (p_c), s	0.0	33.6		0.0	0.0	8.3		0.0				

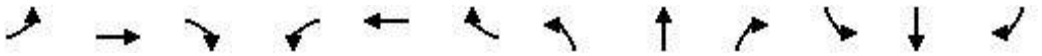
Intersection Summary			
HCM 6th Ctrl Delay		26.2	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1710	160	290	2250	720	200	740	330	550	530	100
Future Volume (veh/h)	110	1710	160	290	2250	720	200	740	330	550	530	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1885	1885	1885	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	117	1819	170	309	2394	766	213	787	351	585	564	106
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	1	1	1	3	3	3	6	6	6
Cap, veh/h	100	1315	121	202	1657	919	221	578	257	376	669	125
Arrive On Green	0.03	0.41	0.41	0.09	0.46	0.46	0.13	0.24	0.24	0.11	0.23	0.23
Sat Flow, veh/h	1753	3238	298	1795	3582	1598	1767	2372	1056	3346	2892	542
Grp Volume(v), veh/h	117	969	1020	309	2394	766	213	584	554	585	335	335
Grp Sat Flow(s),veh/h/ln	1753	1749	1787	1795	1791	1598	1767	1763	1665	1673	1721	1714
Q Serve(g_s), s	5.0	65.0	65.0	14.0	74.0	62.6	19.2	39.0	39.0	18.0	29.7	29.9
Cycle Q Clear(g_c), s	5.0	65.0	65.0	14.0	74.0	62.6	19.2	39.0	39.0	18.0	29.7	29.9
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.63	1.00		0.32
Lane Grp Cap(c), veh/h	100	710	726	202	1657	919	221	430	406	376	398	396
V/C Ratio(X)	1.17	1.36	1.40	1.53	1.45	0.83	0.96	1.36	1.36	1.55	0.84	0.85
Avail Cap(c_a), veh/h	100	710	726	202	1657	919	221	430	406	376	398	396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	0.09	0.09	0.09	0.84	0.84	0.84	0.71	0.71	0.71
Uniform Delay (d), s/veh	42.9	47.5	47.5	53.9	43.0	27.8	69.6	60.5	60.5	71.0	58.7	58.8
Incr Delay (d2), s/veh	123.8	169.3	187.2	240.3	200.6	0.9	45.5	174.3	176.7	258.5	11.1	11.5
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(95%),veh/ln	9.2	87.8	95.7	23.3	106.7	25.8	16.5	55.7	53.3	32.3	19.3	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	166.7	216.8	234.7	294.2	243.6	28.6	115.2	234.8	237.2	329.5	69.8	70.3
LnGrp LOS	F	F	F	F	F	C	F	F	F	F	E	E
Approach Vol, veh/h		2106			3469			1351			1255	
Approach Delay, s/veh		222.7			200.7			216.9			191.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	71.0	24.0	45.0	11.0	80.0	26.0	43.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	65.0	18.0	39.0	5.0	74.0	20.0	37.0
Max Q Clear Time (g_c+I1), s	16.0	67.0	20.0	41.0	7.0	76.0	21.2	31.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	207.5
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	2490	40	50	3060	20	70	40	50	30	40	130
Future Volume (veh/h)	60	2490	40	50	3060	20	70	40	50	30	40	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1900	1900	1900	1870	1870	1870
Adj Flow Rate, veh/h	63	2621	42	53	3221	21	74	42	53	32	42	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	2	2	2
Cap, veh/h	45	2909	46	78	2941	19	50	86	108	124	43	142
Arrive On Green	0.81	0.81	0.81	0.81	0.81	0.81	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	62	3580	57	111	3619	24	1224	763	963	1301	386	1258
Grp Volume(v), veh/h	63	1297	1366	53	1579	1663	74	0	95	32	0	179
Grp Sat Flow(s),veh/h/ln	62	1777	1860	111	1777	1866	1224	0	1727	1301	0	1644
Q Serve(g_s), s	0.0	81.2	82.9	47.1	130.0	130.0	0.6	0.0	8.3	3.8	0.0	17.4
Cycle Q Clear(g_c), s	130.0	81.2	82.9	130.0	130.0	130.0	18.0	0.0	8.3	12.1	0.0	17.4
Prop In Lane	1.00		0.03	1.00		0.01	1.00		0.56	1.00		0.77
Lane Grp Cap(c), veh/h	45	1444	1511	78	1444	1516	50	0	194	124	0	185
V/C Ratio(X)	1.40	0.90	0.90	0.68	1.09	1.10	1.48	0.00	0.49	0.26	0.00	0.97
Avail Cap(c_a), veh/h	45	1444	1511	78	1444	1516	50	0	194	124	0	185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	80.0	10.4	10.6	65.4	15.0	15.0	80.0	0.0	66.7	72.3	0.0	70.7
Incr Delay (d2), s/veh	191.8	1.0	1.0	4.3	43.6	44.6	297.3	0.0	1.9	1.1	0.0	56.6
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(95%),veh/ln	6.8	28.0	29.8	3.0	67.6	71.6	11.2	0.0	6.8	2.4	0.0	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	271.8	11.4	11.6	69.7	58.6	59.6	377.2	0.0	68.6	73.4	0.0	127.3
LnGrp LOS	F	B	B	E	F	F	F	A	E	E	A	F
Approach Vol, veh/h		2726			3295			169			211	
Approach Delay, s/veh		17.5			59.3			203.7			119.2	
Approach LOS		B			E			F			F	

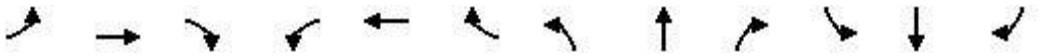
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		136.0		24.0		136.0		24.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		130.0		18.0		130.0		18.0				
Max Q Clear Time (g_c+I1), s		132.0		20.0		132.0		19.4				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			47.3									
HCM 6th LOS			D									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2520	50	70	3030	100	110
Future Volume (veh/h)	2520	50	70	3030	100	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1856	1856	1856	1856
Adj Flow Rate, veh/h	2598	52	72	3124	103	113
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	3	3	3	3
Cap, veh/h	2849	57	75	2864	199	177
Arrive On Green	0.81	0.81	0.81	0.81	0.11	0.11
Sat Flow, veh/h	3599	70	112	3618	1767	1572
Grp Volume(v), veh/h	1291	1359	72	3124	103	113
Grp Sat Flow(s),veh/h/ln	1749	1828	112	1763	1767	1572
Q Serve(g_s), s	84.6	86.9	43.1	130.0	8.8	11.0
Cycle Q Clear(g_c), s	84.6	86.9	130.0	130.0	8.8	11.0
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1421	1485	75	2864	199	177
V/C Ratio(X)	0.91	0.91	0.96	1.09	0.52	0.64
Avail Cap(c_a), veh/h	1421	1485	75	2864	199	177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.27	0.27	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	10.7	11.0	71.0	15.0	66.9	67.9
Incr Delay (d2), s/veh	3.2	3.2	22.4	41.4	9.3	16.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	31.4	33.6	4.4	65.9	8.0	9.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.9	14.2	93.4	56.4	76.2	84.2
LnGrp LOS	B	B	F	F	E	F
Approach Vol, veh/h	2650			3196	216	
Approach Delay, s/veh	14.1			57.3	80.4	
Approach LOS	B			E	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		136.0		24.0		136.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		130.0		18.0		130.0
Max Q Clear Time (g_c+I1), s		88.9		13.0		132.0
Green Ext Time (p_c), s		36.6		0.3		0.0

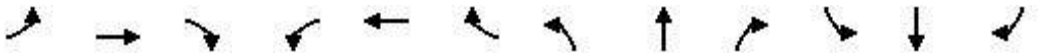
Intersection Summary			
HCM 6th Ctrl Delay		39.2	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	1890	260	340	2320	150	380	810	140	130	620	400
Future Volume (veh/h)	480	1890	260	340	2320	150	380	810	140	130	620	400
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	490	1929	265	347	2367	153	388	827	143	133	633	408
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	367	1799	931	324	1755	783	281	663	115	107	595	432
Arrive On Green	0.11	0.51	0.51	0.09	0.49	0.49	0.08	0.22	0.22	0.03	0.17	0.17
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	3029	524	3428	3526	1572
Grp Volume(v), veh/h	490	1929	265	347	2367	153	388	485	485	133	633	408
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1776	1714	1763	1572
Q Serve(g_s), s	17.0	81.0	13.2	15.0	79.0	6.8	13.0	35.0	35.0	5.0	27.0	19.4
Cycle Q Clear(g_c), s	17.0	81.0	13.2	15.0	79.0	6.8	13.0	35.0	35.0	5.0	27.0	19.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	367	1799	931	324	1755	783	281	389	389	107	595	432
V/C Ratio(X)	1.33	1.07	0.28	1.07	1.35	0.20	1.38	1.25	1.25	1.24	1.06	0.94
Avail Cap(c_a), veh/h	367	1799	931	324	1755	783	281	389	389	107	595	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.25	0.25	0.09	0.09	0.09	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	71.5	39.5	16.3	72.5	40.5	14.2	73.5	62.5	62.5	77.5	66.5	37.9
Incr Delay (d2), s/veh	155.3	35.9	0.2	38.3	157.4	0.1	192.6	131.4	131.4	153.3	50.0	23.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.1	51.8	6.7	10.1	95.5	0.0	21.3	43.7	43.6	7.8	22.6	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	226.8	75.4	16.5	110.8	197.9	14.2	266.1	193.9	193.9	230.8	116.5	61.7
LnGrp LOS	F	F	B	F	F	B	F	F	F	F	F	E
Approach Vol, veh/h		2684			2867			1358			1174	
Approach Delay, s/veh		97.2			177.6			214.5			110.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	87.0	11.0	41.0	23.0	85.0	19.0	33.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	81.0	5.0	35.0	17.0	79.0	13.0	27.0
Max Q Clear Time (g_c+I1), s	17.0	83.0	7.0	37.0	19.0	81.0	15.0	29.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	147.3
HCM 6th LOS	F



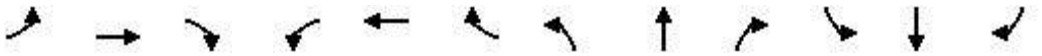
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2050	70	150	2650	190	90	160	110	260	190	70
Future Volume (veh/h)	40	2050	70	150	2650	190	90	160	110	260	190	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1856	1856	1856	1841	1841	1841	1826	1826	1826
Adj Flow Rate, veh/h	41	2113	72	155	2732	196	93	165	113	268	196	72
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	3	3	3	4	4	4	5	5	5
Cap, veh/h	114	2072	924	134	2126	948	154	229	194	173	227	192
Arrive On Green	0.03	0.59	0.59	0.04	0.60	0.60	0.04	0.12	0.12	0.04	0.12	0.12
Sat Flow, veh/h	1753	3497	1560	1767	3526	1572	1753	1841	1560	1739	1826	1547
Grp Volume(v), veh/h	41	2113	72	155	2732	196	93	165	113	268	196	72
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1767	1763	1572	1753	1841	1560	1739	1826	1547
Q Serve(g_s), s	1.1	71.1	2.4	5.0	72.4	6.8	5.0	10.3	8.2	5.0	12.6	5.1
Cycle Q Clear(g_c), s	1.1	71.1	2.4	5.0	72.4	6.8	5.0	10.3	8.2	5.0	12.6	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	114	2072	924	134	2126	948	154	229	194	173	227	192
V/C Ratio(X)	0.36	1.02	0.08	1.16	1.28	0.21	0.61	0.72	0.58	1.55	0.86	0.37
Avail Cap(c_a), veh/h	133	2072	924	134	2126	948	154	276	234	173	274	232
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	24.5	10.4	36.7	23.8	10.8	46.1	50.6	49.6	52.2	51.6	48.3
Incr Delay (d2), s/veh	0.2	11.9	0.0	127.2	131.9	0.5	6.6	7.1	2.8	272.7	20.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	33.5	1.3	14.1	95.8	4.5	1.2	9.0	6.1	25.1	11.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	36.3	10.5	163.9	155.7	11.3	52.7	57.7	52.4	324.9	72.5	49.5
LnGrp LOS	C	F	B	F	F	B	D	E	D	F	E	D
Approach Vol, veh/h		2226			3083			371			536	
Approach Delay, s/veh		35.4			146.9			54.8			195.6	
Approach LOS		D			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	77.1	11.0	20.9	9.7	78.4	11.0	20.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	5.0	68.0	5.0	18.0	5.0	68.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	7.0	73.1	7.0	12.3	3.1	74.4	7.0	14.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	105.7
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
10: Hampshire Dr & High St

07/08/2021



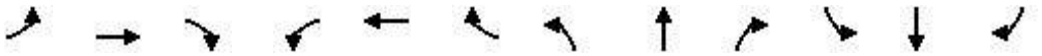
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	500	1870	50	70	2270	50	20	80	40	50	80	700
Future Volume (veh/h)	500	1870	50	70	2270	50	20	80	40	50	80	700
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	515	1928	52	72	2340	52	21	82	41	52	82	722
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	385	2603	70	210	2084	930	25	47	19	68	77	483
Arrive On Green	0.19	0.74	0.74	0.04	0.59	0.59	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1781	3535	95	1781	3554	1585	0	420	167	338	696	1598
Grp Volume(v), veh/h	515	965	1015	72	2340	52	144	0	0	134	0	722
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	1781	1777	1585	587	0	0	1034	0	1598
Q Serve(g_s), s	31.0	50.7	51.8	2.5	95.0	2.3	0.0	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	31.0	50.7	51.8	2.5	95.0	2.3	18.0	0.0	0.0	18.0	0.0	18.0
Prop In Lane	1.00		0.05	1.00		1.00	0.15		0.28	0.39		1.00
Lane Grp Cap(c), veh/h	385	1308	1364	210	2084	930	91	0	0	146	0	483
V/C Ratio(X)	1.34	0.74	0.74	0.34	1.12	0.06	1.59	0.00	0.00	0.92	0.00	1.49
Avail Cap(c_a), veh/h	385	1308	1364	224	2084	930	91	0	0	146	0	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.8	12.3	12.5	15.2	33.5	14.3	70.2	0.0	0.0	72.7	0.0	56.5
Incr Delay (d2), s/veh	168.2	3.7	3.7	1.0	62.3	0.1	310.0	0.0	0.0	51.2	0.0	233.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	48.6	25.5	26.9	1.8	74.4	1.5	19.9	0.0	0.0	12.3	0.0	73.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	228.0	16.1	16.2	16.1	95.8	14.4	380.1	0.0	0.0	123.9	0.0	289.6
LnGrp LOS	F	B	B	B	F	B	F	A	A	F	A	F
Approach Vol, veh/h		2495			2464			144			856	
Approach Delay, s/veh		59.9			91.8			380.1			263.7	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.7	125.3		24.0	37.0	101.0		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	118.0		18.0	31.0	95.0		18.0				
Max Q Clear Time (g_c+I1), s	4.5	53.8		20.0	33.0	97.0		20.0				
Green Ext Time (p_c), s	0.0	26.0		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		110.1
HCM 6th LOS		F

HCM 6th Signalized Intersection Summary
11: N 3rd St & Black St

07/08/2021



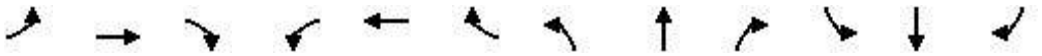
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	960	10	10	10	1150	1000	10	0	510	90
Future Volume (veh/h)	20	10	960	10	10	10	1150	1000	10	0	510	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1900	1900	1900	1856	1856	1856	0	1826	1826
Adj Flow Rate, veh/h	21	11	808	11	11	11	1223	1064	11	0	543	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	0	0	0	3	3	3	0	5	5
Cap, veh/h	111	84	893	92	40	40	1073	1550	16	0	777	137
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.53	0.85	0.85	0.00	0.26	0.26
Sat Flow, veh/h	1368	1841	1560	678	872	872	1767	1833	19	0	3039	519
Grp Volume(v), veh/h	21	11	808	11	0	22	1223	0	1075	0	319	320
Grp Sat Flow(s),veh/h/ln	1368	1841	1560	678	0	1743	1767	0	1852	0	1735	1732
Q Serve(g_s), s	1.7	0.6	5.0	1.7	0.0	1.3	58.0	0.0	23.5	0.0	18.2	18.4
Cycle Q Clear(g_c), s	3.0	0.6	5.0	2.4	0.0	1.3	58.0	0.0	23.5	0.0	18.2	18.4
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.01	0.00		0.30
Lane Grp Cap(c), veh/h	111	84	893	92	0	79	1073	0	1566	0	457	457
V/C Ratio(X)	0.19	0.13	0.90	0.12	0.00	0.28	1.14	0.00	0.69	0.00	0.70	0.70
Avail Cap(c_a), veh/h	111	84	893	92	0	79	1073	0	1566	0	457	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	50.4	20.8	51.6	0.0	50.8	19.0	0.0	3.1	0.0	36.5	36.6
Incr Delay (d2), s/veh	0.1	0.1	1.4	0.6	0.0	1.9	74.5	0.0	2.5	0.0	8.5	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.5	19.8	0.6	0.0	1.1	63.9	0.0	8.9	0.0	13.5	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	50.5	22.2	52.1	0.0	52.6	93.5	0.0	5.6	0.0	45.1	45.3
LnGrp LOS	D	D	C	D	A	D	F	A	A	A	D	D
Approach Vol, veh/h		840			33			2298			639	
Approach Delay, s/veh		23.4			52.5			52.4			45.2	
Approach LOS		C			D			D			D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		99.0		11.0	64.0	35.0		11.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		93.0		5.0	58.0	29.0		5.0				
Max Q Clear Time (g_c+I1), s		25.5		7.0	60.0	20.4		4.4				
Green Ext Time (p_c), s		13.2		0.0	0.0	2.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			44.8									
HCM 6th LOS			D									

Notes

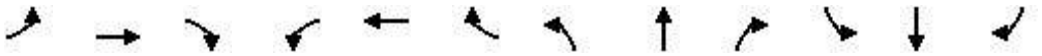
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	20	20	60	50	370	30	1740	40	250	1210	20
Future Volume (veh/h)	50	20	20	60	50	370	30	1740	40	250	1210	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	52	21	21	62	52	381	31	1794	41	258	1247	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	0	0	0	3	3	3	5	5	5
Cap, veh/h	221	197	197	230	181	376	269	1821	41	237	2327	39
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.52	0.52	0.52	0.10	0.67	0.67
Sat Flow, veh/h	940	844	844	788	775	1610	434	3524	80	1739	3491	59
Grp Volume(v), veh/h	52	0	42	114	0	381	31	895	940	258	619	649
Grp Sat Flow(s),veh/h/ln	940	0	1689	1563	0	1610	434	1763	1841	1739	1735	1815
Q Serve(g_s), s	5.8	0.0	2.3	5.2	0.0	28.0	4.8	59.8	60.5	12.0	22.2	22.2
Cycle Q Clear(g_c), s	13.3	0.0	2.3	7.5	0.0	28.0	9.0	59.8	60.5	12.0	22.2	22.2
Prop In Lane	1.00		0.50	0.54		1.00	1.00		0.04	1.00		0.03
Lane Grp Cap(c), veh/h	221	0	394	411	0	376	269	911	951	237	1156	1210
V/C Ratio(X)	0.24	0.00	0.11	0.28	0.00	1.01	0.12	0.98	0.99	1.09	0.54	0.54
Avail Cap(c_a), veh/h	221	0	394	411	0	376	269	911	951	237	1156	1210
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.63	0.63	0.63	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	0.0	36.2	38.2	0.0	46.0	17.4	28.5	28.6	40.7	10.4	10.4
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.4	0.0	50.0	0.5	19.8	20.6	84.3	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	0.0	1.8	5.2	0.0	23.3	0.9	35.6	37.6	14.4	13.0	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	36.3	38.5	0.0	96.0	17.9	48.3	49.2	125.0	12.1	12.1
LnGrp LOS	D	A	D	D	A	F	B	D	D	F	B	B
Approach Vol, veh/h		94			495			1866			1526	
Approach Delay, s/veh		40.7			82.8			48.3			31.2	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	18.0	68.0		34.0		86.0		34.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	12.0	62.0		28.0		80.0		28.0				
Max Q Clear Time (g_c+I1), s	14.0	62.5		15.3		24.2		30.0				
Green Ext Time (p_c), s	0.0	0.0		0.3		11.6		0.0				

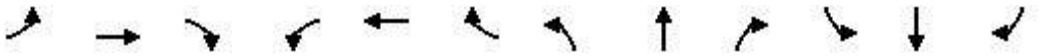
Intersection Summary												
HCM 6th Ctrl Delay			45.8									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	40	20	50	120	300	60	1480	30	170	1110	10
Future Volume (veh/h)	30	40	20	50	120	300	60	1480	30	170	1110	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	30	40	20	51	121	303	61	1495	30	172	1121	10
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	3	3	3	5	5	5
Cap, veh/h	125	156	63	80	113	252	297	2165	43	199	1730	15
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.61	0.61	0.49	0.49	0.49
Sat Flow, veh/h	273	657	266	125	476	1059	1767	3535	71	333	3523	31
Grp Volume(v), veh/h	90	0	0	475	0	0	61	745	780	172	552	579
Grp Sat Flow(s),veh/h/ln	1195	0	0	1660	0	0	1767	1763	1843	333	1735	1820
Q Serve(g_s), s	0.0	0.0	0.0	13.5	0.0	0.0	1.3	22.7	22.8	26.2	19.0	19.0
Cycle Q Clear(g_c), s	3.2	0.0	0.0	19.0	0.0	0.0	1.3	22.7	22.8	39.3	19.0	19.0
Prop In Lane	0.33		0.22	0.11		0.64	1.00		0.04	1.00		0.02
Lane Grp Cap(c), veh/h	344	0	0	444	0	0	297	1080	1129	199	852	894
V/C Ratio(X)	0.26	0.00	0.00	1.07	0.00	0.00	0.21	0.69	0.69	0.86	0.65	0.65
Avail Cap(c_a), veh/h	344	0	0	444	0	0	326	1080	1129	199	852	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	0.81	0.81	0.81
Uniform Delay (d), s/veh	24.5	0.0	0.0	31.5	0.0	0.0	11.1	10.4	10.4	31.7	15.2	15.2
Incr Delay (d2), s/veh	0.4	0.0	0.0	62.5	0.0	0.0	0.0	0.3	0.3	30.7	3.1	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	0.0	0.0	23.9	0.0	0.0	0.7	8.5	8.9	8.3	11.4	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	0.0	0.0	94.0	0.0	0.0	11.1	10.7	10.7	62.4	18.3	18.1
LnGrp LOS	C	A	A	F	A	A	B	B	B	E	B	B
Approach Vol, veh/h		90			475			1586			1303	
Approach Delay, s/veh		24.9			94.0			10.7			24.0	
Approach LOS		C			F			B			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		55.0		25.0	9.7	45.3		25.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		49.0		19.0	5.0	38.0		19.0				
Max Q Clear Time (g_c+I1), s		24.8		5.2	3.3	41.3		21.0				
Green Ext Time (p_c), s		12.1		0.4	0.0	0.0		0.0				

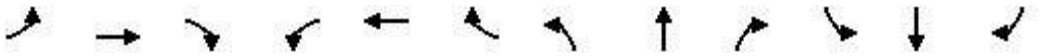
Intersection Summary												
HCM 6th Ctrl Delay			27.6									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	70	40	100	80	70	40	1040	100	30	820	30
Future Volume (veh/h)	70	70	40	100	80	70	40	1040	100	30	820	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	77	77	44	110	88	77	44	1143	110	33	901	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	3	3	3	5	5	5
Cap, veh/h	203	201	115	241	165	145	421	2187	210	304	2297	84
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1240	1135	648	1291	935	818	595	3250	312	433	3413	125
Grp Volume(v), veh/h	77	0	121	110	0	165	44	619	634	33	458	476
Grp Sat Flow(s),veh/h/ln	1240	0	1783	1291	0	1753	595	1763	1799	433	1735	1803
Q Serve(g_s), s	4.8	0.0	4.8	6.6	0.0	6.8	2.8	14.2	14.2	3.3	9.4	9.4
Cycle Q Clear(g_c), s	11.7	0.0	4.8	11.4	0.0	6.8	12.2	14.2	14.2	17.6	9.4	9.4
Prop In Lane	1.00		0.36	1.00		0.47	1.00		0.17	1.00		0.07
Lane Grp Cap(c), veh/h	203	0	316	241	0	310	421	1186	1211	304	1167	1214
V/C Ratio(X)	0.38	0.00	0.38	0.46	0.00	0.53	0.10	0.52	0.52	0.11	0.39	0.39
Avail Cap(c_a), veh/h	309	0	468	351	0	460	421	1186	1211	304	1167	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	35.2	0.0	29.1	34.1	0.0	29.9	8.5	6.6	6.6	11.0	5.8	5.8
Incr Delay (d2), s/veh	1.2	0.0	0.8	1.3	0.0	1.4	0.5	1.6	1.6	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	3.8	3.8	0.0	5.3	0.7	8.0	8.1	0.5	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	0.0	29.8	35.4	0.0	31.3	9.0	8.2	8.2	11.1	5.9	5.9
LnGrp LOS	D	A	C	D	A	C	A	A	A	B	A	A
Approach Vol, veh/h		198			275			1297			967	
Approach Delay, s/veh		32.4			33.0			8.3			6.1	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.8		20.2		59.8		20.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		47.0		21.0		47.0		21.0				
Max Q Clear Time (g_c+I1), s		16.2		13.7		19.6		13.4				
Green Ext Time (p_c), s		10.8		0.5		7.1		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			11.7									
HCM 6th LOS			B									



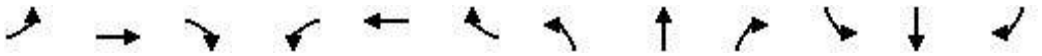
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1090	20	120	960	240	20	200	140	150	70	30
Future Volume (veh/h)	40	1090	20	120	960	240	20	200	140	150	70	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	42	1147	21	126	1011	253	21	211	147	158	74	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1
Cap, veh/h	227	1799	33	279	1473	367	390	308	215	183	374	162
Arrive On Green	0.03	0.50	0.50	0.05	0.52	0.52	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1795	3598	66	1795	2841	708	1288	1026	715	1032	1248	540
Grp Volume(v), veh/h	42	571	597	126	636	628	21	0	358	158	0	106
Grp Sat Flow(s),veh/h/ln	1795	1791	1873	1795	1791	1758	1288	0	1742	1032	0	1788
Q Serve(g_s), s	1.3	28.1	28.1	4.1	31.8	32.1	1.5	0.0	21.7	14.3	0.0	5.3
Cycle Q Clear(g_c), s	1.3	28.1	28.1	4.1	31.8	32.1	6.8	0.0	21.7	36.0	0.0	5.3
Prop In Lane	1.00		0.04	1.00		0.40	1.00		0.41	1.00		0.30
Lane Grp Cap(c), veh/h	227	895	937	279	929	912	390	0	522	183	0	536
V/C Ratio(X)	0.18	0.64	0.64	0.45	0.68	0.69	0.05	0.00	0.69	0.87	0.00	0.20
Avail Cap(c_a), veh/h	276	895	937	294	929	912	390	0	522	183	0	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	22.0	22.0	17.5	21.6	21.6	33.8	0.0	37.0	54.5	0.0	31.3
Incr Delay (d2), s/veh	0.4	3.5	3.3	1.1	4.1	4.2	0.1	0.0	3.7	32.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	18.0	18.6	3.0	19.6	19.5	0.9	0.0	15.0	10.7	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	25.5	25.3	18.7	25.7	25.9	33.8	0.0	40.7	86.9	0.0	31.4
LnGrp LOS	B	C	C	B	C	C	C	A	D	F	A	C
Approach Vol, veh/h		1210			1390			379			264	
Approach Delay, s/veh		25.2			25.1			40.3			64.7	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	66.0		42.0	9.8	68.2		42.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	59.0		36.0	7.0	59.0		36.0				
Max Q Clear Time (g_c+I1), s	6.1	30.1		23.7	3.3	34.1		38.0				
Green Ext Time (p_c), s	0.0	8.9		1.9	0.0	9.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		30.1	
HCM 6th LOS		C	

HCM 6th Signalized Intersection Summary
16: N Erie Blvd & Dayton St

07/08/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	60	180	60	170	10	290	1080	70	10	910	150
Future Volume (veh/h)	80	60	180	60	170	10	290	1080	70	10	910	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	63	189	63	179	11	305	1137	74	11	958	158
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	167	89	267	135	213	13	396	2371	154	304	1738	287
Arrive On Green	0.05	0.21	0.21	0.12	0.12	0.12	0.09	0.70	0.70	0.57	0.57	0.57
Sat Flow, veh/h	1795	415	1246	1137	1758	108	1781	3387	220	461	3053	503
Grp Volume(v), veh/h	84	0	252	63	0	190	305	596	615	11	557	559
Grp Sat Flow(s),veh/h/ln	1795	0	1661	1137	0	1866	1781	1777	1831	461	1777	1780
Q Serve(g_s), s	5.6	0.0	19.7	7.6	0.0	13.9	9.5	21.2	21.2	1.5	27.5	27.6
Cycle Q Clear(g_c), s	5.6	0.0	19.7	14.3	0.0	13.9	9.5	21.2	21.2	4.5	27.5	27.6
Prop In Lane	1.00		0.75	1.00		0.06	1.00		0.12	1.00		0.28
Lane Grp Cap(c), veh/h	167	0	356	135	0	226	396	1244	1282	304	1012	1013
V/C Ratio(X)	0.50	0.00	0.71	0.47	0.00	0.84	0.77	0.48	0.48	0.04	0.55	0.55
Avail Cap(c_a), veh/h	167	0	427	184	0	307	596	1244	1282	304	1012	1013
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	0.0	51.0	63.6	0.0	60.2	17.0	9.5	9.5	14.6	18.9	18.9
Incr Delay (d2), s/veh	2.4	0.0	4.3	2.5	0.0	14.1	0.3	0.1	0.1	0.2	2.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	0.0	13.5	4.2	0.0	12.1	4.9	9.1	9.3	0.3	17.3	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	0.0	55.2	66.1	0.0	74.2	17.3	9.6	9.6	14.8	21.1	21.1
LnGrp LOS	D	A	E	E	A	E	B	A	A	B	C	C
Approach Vol, veh/h		336			253			1516			1127	
Approach Delay, s/veh		54.4			72.2			11.2			21.0	
Approach LOS		D			E			B			C	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		104.0		36.0	18.3	85.7	13.0	23.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		92.0		36.0	28.0	58.0	7.0	23.0				
Max Q Clear Time (g_c+I1), s		23.2		21.7	11.5	29.6	7.6	16.3				
Green Ext Time (p_c), s		4.4		1.3	0.8	4.0	0.0	0.7				

Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	26.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	670	740	310	220	110
Future Vol, veh/h	20	670	740	310	220	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	6	6
Mvmt Flow	22	728	804	337	239	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2184	239	239	0	-	0
Stage 1	239	-	-	-	-	-
Stage 2	1945	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.12	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.218	-	-	-
Pot Cap-1 Maneuver	51	802	1328	-	-	0
Stage 1	803	-	-	-	-	0
Stage 2	123	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	~ 13	802	1328	-	-	-
Mov Cap-2 Maneuver	~ 13	-	-	-	-	-
Stage 1	205	-	-	-	-	-
Stage 2	123	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	61.8	8.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	1328	-	13	802	-
HCM Lane V/C Ratio	0.606	-	1.672	0.908	-
HCM Control Delay (s)	11.8	0$	914.1	36.4	-
HCM Lane LOS	B	A	F	E	-
HCM 95th %tile Q(veh)	4.3	-	3.5	12.5	-

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

Intersection	
Int Delay, s/veh	91.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	100	310	740	190	320	570
Future Vol, veh/h	100	310	740	190	320	570
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	320	763	196	330	588

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2109	861	0	0	763	0
Stage 1	861	-	-	-	-	-
Stage 2	1248	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 56	355	-	-	850	-
Stage 1	414	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 24	355	-	-	850	-
Mov Cap-2 Maneuver	~ 24	-	-	-	-	-
Stage 1	414	-	-	-	-	-
Stage 2	115	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 488	0	4.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	24	355	850	-
HCM Lane V/C Ratio	-	-	4.296	0.9	0.388	-
HCM Control Delay (s)	-	-	$ 1812.9	60.6	11.9	0
HCM Lane LOS	-	-	F	F	B	A
HCM 95th %tile Q(veh)	-	-	12.9	9	1.9	-

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	380	530	1220	910	50
Future Volume (veh/h)	0	380	530	1220	910	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1841	1841
Adj Flow Rate, veh/h	0	404	564	1298	968	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	4	4
Cap, veh/h	0	333	376	1285	786	43
Arrive On Green	0.00	0.21	0.17	0.68	0.45	0.45
Sat Flow, veh/h	0	1594	1795	1885	1729	95
Grp Volume(v), veh/h	0	405	564	1298	0	1021
Grp Sat Flow(s),veh/h/ln	0	1598	1795	1885	0	1824
Q Serve(g_s), s	0.0	23.0	19.0	75.0	0.0	50.0
Cycle Q Clear(g_c), s	0.0	23.0	19.0	75.0	0.0	50.0
Prop In Lane	0.00	1.00	1.00			0.05
Lane Grp Cap(c), veh/h	0	334	376	1285	0	829
V/C Ratio(X)	0.00	1.21	1.50	1.01	0.00	1.23
Avail Cap(c_a), veh/h	0	334	376	1285	0	829
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.09	0.09	0.00	1.00
Uniform Delay (d), s/veh	0.0	43.5	37.0	17.5	0.0	30.0
Incr Delay (d2), s/veh	0.0	119.9	227.1	10.1	0.0	114.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	30.1	43.9	33.3	0.0	67.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	163.4	264.1	27.6	0.0	144.7
LnGrp LOS	A	F	F	F	A	F
Approach Vol, veh/h	405			1862	1021	
Approach Delay, s/veh	163.4			99.2	144.7	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		81.0		29.0	25.0	56.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		75.0		23.0	19.0	50.0
Max Q Clear Time (g_c+I1), s		77.0		25.0	21.0	52.0
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	121.3
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	110	1140	610	50	940	350
Future Volume (veh/h)	110	1140	610	50	940	350
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1841	1841	1885	1885	1841	1841
Adj Flow Rate, veh/h	112	1010	622	51	959	357
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	1	1	4	4
Cap, veh/h	287	823	531	44	703	1339
Arrive On Green	0.16	0.16	0.31	0.31	0.36	0.73
Sat Flow, veh/h	1753	1560	1719	141	1753	1841
Grp Volume(v), veh/h	112	1010	0	673	959	357
Grp Sat Flow(s),veh/h/ln	1753	1560	0	1860	1753	1841
Q Serve(g_s), s	6.3	18.0	0.0	34.0	40.0	7.2
Cycle Q Clear(g_c), s	6.3	18.0	0.0	34.0	40.0	7.2
Prop In Lane	1.00	1.00		0.08	1.00	
Lane Grp Cap(c), veh/h	287	823	0	575	703	1339
V/C Ratio(X)	0.39	1.23	0.00	1.17	1.36	0.27
Avail Cap(c_a), veh/h	287	823	0	575	703	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	26.0	0.0	38.0	30.0	5.1
Incr Delay (d2), s/veh	4.0	113.3	0.0	94.3	173.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	62.9	0.0	43.0	74.5	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.1	139.3	0.0	132.3	203.0	5.6
LnGrp LOS	D	F	A	F	F	A
Approach Vol, veh/h	1122		673			1316
Approach Delay, s/veh	129.9		132.3			149.4
Approach LOS	F		F			F

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.0	40.0			86.0	24.0
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0
Max Green Setting (Gmax), s	40.0	34.0			80.0	18.0
Max Q Clear Time (g_c+I1), s	42.0	36.0			9.2	20.0
Green Ext Time (p_c), s	0.0	0.0			2.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	138.7
HCM 6th LOS	F

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	50	1600	180	450	440	0	0	460	50
Future Volume (veh/h)	0	0	0	50	1600	180	450	440	0	0	460	50
Initial Q (Qb), veh				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
Parking Bus, Adj				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	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1885	1885	0	0	1841	1841
Adj Flow Rate, veh/h				56	1778	200	500	489	0	0	511	56
Peak Hour Factor				0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	1	1	0	0	4	4
Cap, veh/h				43	1407	164	341	829	0	0	423	359
Arrive On Green				0.44	0.44	0.44	0.15	0.44	0.00	0.00	0.23	0.23
Sat Flow, veh/h				98	3199	372	1795	1885	0	0	1841	1560
Grp Volume(v), veh/h				1065	0	969	500	489	0	0	511	56
Grp Sat Flow(s),veh/h/ln				1865	0	1803	1795	1885	0	0	1841	1560
Q Serve(g_s), s				44.0	0.0	44.0	15.0	19.6	0.0	0.0	23.0	2.9
Cycle Q Clear(g_c), s				44.0	0.0	44.0	15.0	19.6	0.0	0.0	23.0	2.9
Prop In Lane				0.05		0.21	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				821	0	793	341	829	0	0	423	359
V/C Ratio(X)				1.30	0.00	1.22	1.46	0.59	0.00	0.00	1.21	0.16
Avail Cap(c_a), veh/h				821	0	793	341	829	0	0	423	359
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.55	0.55	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.0	0.0	28.0	28.3	21.2	0.0	0.0	38.5	30.7
Incr Delay (d2), s/veh				142.8	0.0	110.8	218.0	0.6	0.0	0.0	113.5	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				75.1	0.0	61.3	39.3	12.2	0.0	0.0	34.6	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				170.8	0.0	138.8	246.3	21.8	0.0	0.0	152.0	30.9
LnGrp LOS				F	A	F	F	C	A	A	F	C
Approach Vol, veh/h					2034			989			567	
Approach Delay, s/veh					155.6			135.3			140.0	
Approach LOS					F			F			F	

Timer - Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				50.0		50.0	21.0	29.0				
Change Period (Y+Rc), s				6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s				44.0		44.0	15.0	23.0				
Max Q Clear Time (g_c+I1), s				21.6		46.0	17.0	25.0				
Green Ext Time (p_c), s				3.4		0.0	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		147.5
HCM 6th LOS		F

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	990	90	0	820	10	120	860	20	90	400	20
Future Volume (veh/h)	20	990	90	0	820	10	120	860	20	90	400	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	22	1065	97	0	882	11	129	925	22	97	430	22
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	0	2	2	1	1	1	4	4	4
Cap, veh/h	145	912	83	0	995	12	188	1216	29	136	590	30
Arrive On Green	0.54	0.54	0.54	0.00	0.54	0.54	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	623	1689	154	0	1843	23	946	3576	85	583	1736	89
Grp Volume(v), veh/h	22	0	1162	0	0	893	129	463	484	97	0	452
Grp Sat Flow(s),veh/h/ln	623	0	1843	0	0	1866	946	1791	1870	583	0	1825
Q Serve(g_s), s	3.2	0.0	54.0	0.0	0.0	42.2	12.3	23.0	23.0	11.0	0.0	21.7
Cycle Q Clear(g_c), s	45.4	0.0	54.0	0.0	0.0	42.2	34.0	23.0	23.0	34.0	0.0	21.7
Prop In Lane	1.00		0.08	0.00		0.01	1.00		0.05	1.00		0.05
Lane Grp Cap(c), veh/h	145	0	995	0	0	1008	188	609	636	136	0	620
V/C Ratio(X)	0.15	0.00	1.17	0.00	0.00	0.89	0.69	0.76	0.76	0.71	0.00	0.73
Avail Cap(c_a), veh/h	145	0	995	0	0	1008	188	609	636	136	0	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.09	0.00	0.09
Uniform Delay (d), s/veh	40.3	0.0	23.0	0.0	0.0	20.3	44.5	29.4	29.4	46.4	0.0	29.0
Incr Delay (d2), s/veh	2.2	0.0	86.5	0.0	0.0	11.4	9.9	5.6	5.4	1.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	64.1	0.0	0.0	27.9	6.8	16.1	16.6	3.3	0.0	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	109.5	0.0	0.0	31.7	54.4	35.0	34.7	48.0	0.0	29.4
LnGrp LOS	D	A	F	A	A	C	D	C	C	D	A	C
Approach Vol, veh/h		1184			893			1076			549	
Approach Delay, s/veh		108.3			31.7			37.2			32.6	
Approach LOS		F			C			D			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		40.0		60.0		40.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		54.0		34.0		54.0		34.0				
Max Q Clear Time (g_c+I1), s		56.0		36.0		44.2		36.0				
Green Ext Time (p_c), s		0.0		0.0		4.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			57.9									
HCM 6th LOS			E									

B2. North Hamilton Crossing (NHX)

Traffic Analysis Report

North Hamilton Crossing (NHX) Traffic Analysis

Hamilton County

April 2023

The City of Hamilton Ohio

In partnership with:
Stantec Consulting Services Inc.

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1.0 INITIAL SIMULATION MODEL

As a part of the *North Hamilton Crossing Project*, Stantec developed a traffic simulation model depicting existing peak hour conditions using Caliper's TransModeler (version 6) simulation package. **Figure 1** presents the simulation model study area, which includes major routes US 127, SR 4, and SR 129 in downtown Hamilton, the Dayton Lane Historic District, and the German Village Historic District east of the Great Miami River, and the Rossville Historic District west of the river.

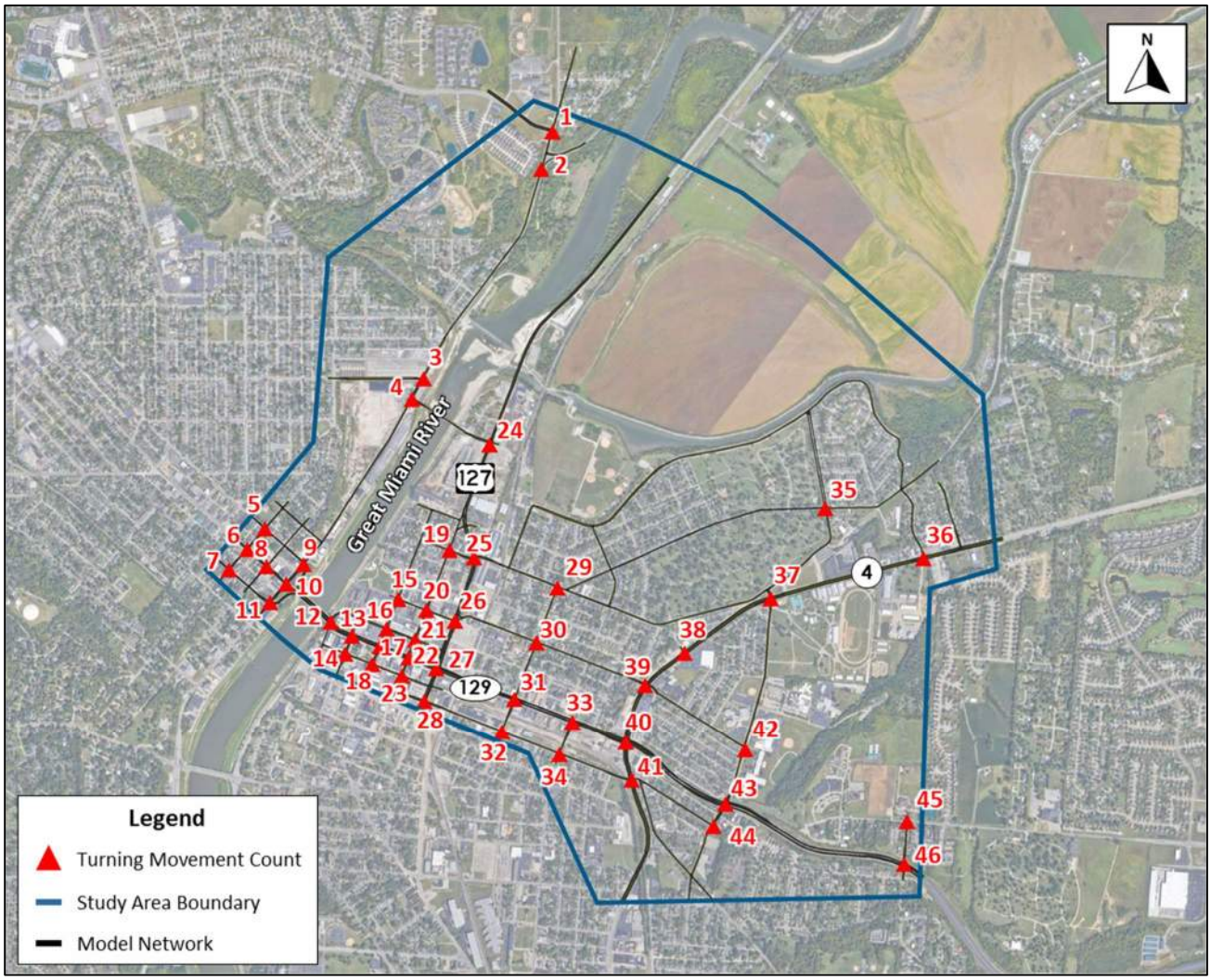

Figure 1: Hamilton Simulation Model Study Area

1.1 MODEL DEVELOPMENT

The simulation model network was initially generated from the Ohio Department of Transportation (ODOT) 'All Roads' shapefile, with roadway names, classifications, and other attributes added to the TransModeler network database. Signal timing plans for the AM and PM peak periods were provided by the City of Hamilton for the 29 signalized intersections in the study area. Additionally,

centroid connectors were created to load traffic to and from internal neighborhood and downtown blocks.

1.2 TURNING MOVEMENT COUNTS

Peak hour turning movement counts were collected in November/December 2020 and November 2021. Some of the counts were specifically taken for this project while others were provided by the City of Hamilton. These counts were analyzed to establish the AM (7:15 a.m. – 8:15 a.m.) and PM (4:45 p.m. – 5:45 p.m.) peak hours. The turning movement counts, as shown in **Figure 1**, were used as inputs for TransModeler's origin-destination matrix estimation procedure to develop trip tables for the AM and PM peak hours. Turning movement counts were taken at the following locations:

1. NW Washington Blvd. at W. Elkton Rd.
2. W. Elkton Rd. at N. B St.
3. N. B St. at Rhea Ave.
4. N. B St. at Black St.
5. Park Ave. at D St
6. Main St. at D St.
7. Ross Ave. at D St.
8. Main St. at C St.
9. Park Ave. at B St.
10. Main St. at B St.
11. Ross Ave. at B St.
12. SR 129 at N. Monument St.
13. SR 129 at S. Front St.
14. Court St. at S. Front St.
15. Dayton St. at N. 2nd St.
16. Market St. at N. 2nd St.
17. SR 129 at N. 2nd St.
18. Court St at S. 2nd St.
19. Village St. at N. 3rd St.
20. Dayton St. at N. 3rd St.
21. Market St. at N. 3rd St.
22. SR 129 at N. 3rd St.
23. Court St. at S. 3rd St.
24. US 127 at Black St.
25. US 127 at Heaton St.
26. US 127 at Dayton St.
27. US 127 at SR 129
28. US 127 at Maple St.
29. Heaton St. at N. 7th St.
30. Dayton St. at N. 7th St.
31. SR 129 at 7th St.
32. Maple Ave. at S. 7th St.
33. SR 129 at East Ave.
34. Maple Ave. at East Ave.
35. Greenwood Ave. at Neal Blvd.
36. SR 4 at Campbell Dr.
37. SR 129 at N. Fair Ave.
38. SR 4 at Butler Co. Educational Service Center
39. SR 4 at Dayton St.
40. SR 4 at SR 129
41. SR 4 at Maple Ave.
42. Dayton St. at N. Fair Ave.
43. SR 4 at N. Fair Ave.
44. Maple Ave. at S. Fair Ave.
45. Princeton Rd. at Hampshire Dr.
46. SR 129 at Hampshire Dr.

1.2.1 Time Distribution

The turning movement counts, which were collected in 15-minute intervals, were analyzed to develop the time distribution curve of traffic in the trip tables. **Table 1** and **Table 2** present the time distribution of traffic for the AM and PM peaks.

Table 1: Time Distribution for AM Peak

Time	% of Total
7:15	24.5%
7:30	25.6%
7:45	25.8%
8:00	24.1%

Table 2: Time Distribution for PM Peak

Time	% of Total
4:45	24.4%
5:00	25.4%
5:15	25.6%
5:30	24.6%

1.2.2 At-Grade Railroad Crossings

There are several at-grade railroad crossings within the simulation study area, including on Maple Avenue, Dayton Street, and Heaton Street. After a review of recent crossing closure data, the modeling project team determined that the at-grade crossings are likely to be closed once per hour for an average of ten minutes. Each model analysis period, therefore, includes one ten-minute period train interruption. TransModeler's 'incidents' function was used to stop traffic at the three locations between 7:35 a.m. – 7:45 a.m. during the AM peak and between 5:00 p.m. – 5:10 p.m. during the PM peak. The time and duration of the closures are parameters within the model that can be changed upon consultation with the project team.

Many local drivers are familiar with these closures and typically divert to SR 129, where a grade separated railroad crossing is present, when a train interruption occurs. To reflect this behavior in the model's operation, "Road Closure Messages" were placed on roads approaching the closures using TransModeler's Traffic Management function. These messages alert drivers of road closures and encourage alternative routes. A compliance rate of 90 percent was used, meaning 90 percent of vehicles divert to another route when alerted of the closures.

1.2.3 Model Validation

To compare traffic flows, link-based trip volumes were compared to actual traffic counts on the segments. Several statistical measures were used to measure model assignment volumes to matched observed counts. The most important of these measures is percent root-mean-square error (RMSE) with a target threshold of 20 percent or lower to confirm the model was sufficiently calibrated for assigned volumes. **Table 3** presents the calibration statistics for both the AM and PM models.

Table 3: Volume Calibration Statistics

Total Volume to Count:	AM Peak	PM Peak
Target: within 5% of count		
Sum of assignment	92,671	110,411
Sum of counts	91,196	114,279
Percent Delta (within +/-5%)	1.62%	-3.38%
Links with <700 vehicle count	92	185
Link assignments within 100 vehicles of count	69	157
Target: within 85% of links	75%	85%
Links between 700 and 2700 count	46	62
Link assignments within 20% of count	42	56
Target: within 85% of links	91%	90%
Percent Root Mean Square Error		
Target: < 20.00%	19.17%	17.89%

The results indicate that all but one of the volume validation targets were met. Less than 85 percent of links with AM count volumes below 700 vehicles per hour had assignments within 100 vehicles of their observed counts. Most of these links did not reach the target range due to centroid connectors loading traffic to and from internal neighborhoods and downtown blocks. These centroid connectors are critical to overall model calibration but create an unavoidable departure from count volumes for several links. By virtue of their lower volumes, particularly in the less intense AM period, these links do not impact on the overall model performance.

1.3 BUILD ALTERNATIVES

Once the existing model was sufficiently calibrated, new model scenarios were developed to analyze the build alternatives. The alternatives included a crossing from B Street to US 127 over the Great Miami River (Phase 1), a connection between US 127 and SR 4 which includes a grade separated railroad crossing (Phase 2), and a connection between SR 4 and SR 129 (Phase 3). The Black Street Bridge was assumed to be closed for all build scenarios. The scenarios were analyzed based on the congestion relief provided to the existing roadway network, especially SR 129.

1.3.1 Spooky Nook Traffic

In addition to the existing traffic from the base model, traffic was added to account for a proposed sports complex on the grounds of the former Champions Paper Mill at the corner of Rhea Avenue and B Street. Assumptions for this sports complex, known as Spooky Nook, were taken from the Spooky Nook Champion Mill Traffic Impact Study (TIS) performed by TEC Engineering in July 2019. **Table 4** presents the expected weekday peak hour trips generated by Spooky Nook.

Table 4: Spooky Nook Weekday Peak Hour Trips

Land Use	Peak	Total trips	Entering Trips	Exiting Trips
Soccer Complex	AM	--	--	--
	PM	33	22	11
Multipurpose Rec Facility	AM	--	--	--
	PM	526	289	237
Recreational Community Center	AM	322	212	110
	PM	538	253	285
Hotel	AM	112	66	46
	PM	150	76	74
Full Development Total	AM	434	278	156
	PM	1247	640	607

Based on the traffic plan presented in the TIS, the existing Rhea Avenue intersection with B Street will be relocated to the north of the existing Warwick Avenue intersection. This new intersection will include a southbound B Street right-turn lane, an eastbound shared left/through lane and right turn lane, and an eastbound right-turn overlap. The site also includes a second entrance to the south. These entrances, along with the recommendations at the N. B Street/Black Street, Black Street/N. 3rd Street, and North B Street/Main Street intersections, were included in the build scenarios.

1.4 MODEL RESULTS

Eleven (11) North Hamilton Crossing build alternatives were analyzed to connect North B Street to SR 129 across the Great Miami River. A summary of the alternatives analyzed are provided below.

Alternative A – this +/-2.5-mile concept, shown in **Figure 2**, includes a river crossing which connects to the NW Washington Boulevard intersection with W. Elkton Road and travels southeast to connect to Neal Boulevard. The concept follows Neal Blvd. to SR 4, where a new route runs parallel to Zoellners Place and connects to SR 129 via Hampshire Drive.

Based on results from the simulation model, Alternative A is expected to slightly decrease traffic on SR 129 in the study area during both the AM (2 percent reduction) and PM (5 percent reduction) peak hours. However, traffic is expected to increase on the portion of SR 129 between B Street and US 127. This is likely due to the removal of the Black Street Bridge and the location of the new crossing to the north. Traffic going to and coming from Rhea Avenue are incentivized to cross the Main Street Bridge rather than traveling a farther distance north to the new crossing. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A is expected to reduce yearly vehicle hours traveled (VHT) during the AM peak by 1,200 VHT and by 900 VHT during the PM peak.

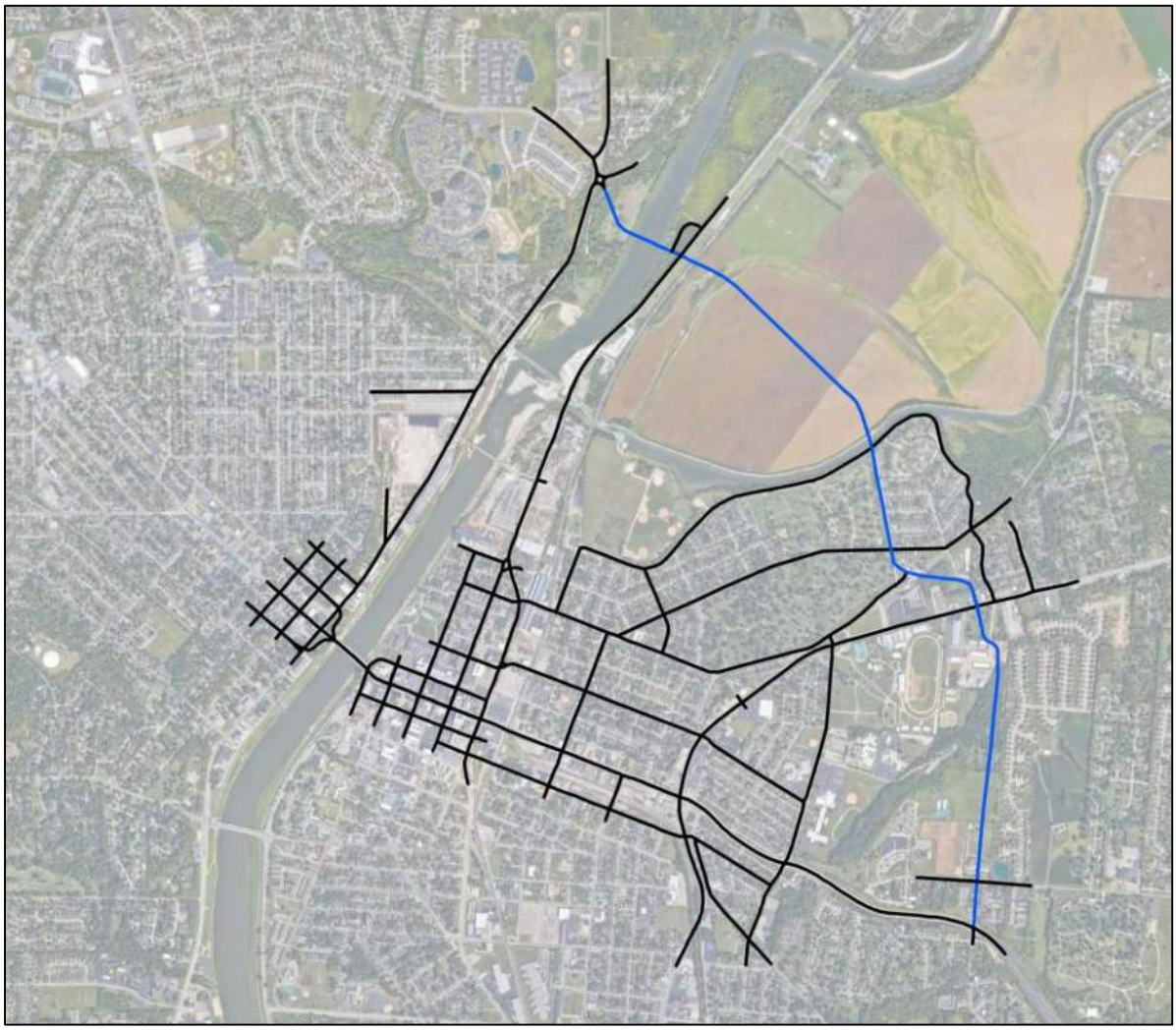

Figure 2: Alternative A Alignment – Initial Simulation Model

Alternative B – this +/-2.6-mile concept, shown in **Figure 3**, includes a river crossing which connects Lagonda Avenue to US 127. The concept then utilizes Joe Nuxhall Boulevard and Neal Boulevard to connect to SR 4, where a new route runs parallel to Zoellners Place and connects to SR 129 via Hampshire Drive.

Results from the simulation model indicate that Alternative B is expected to decrease traffic on SR 129 in the study area during both the AM (5 percent reduction) and PM (6 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative B is expected to reduce yearly VHT during the AM peak by 1,000 VHT and by 1,000 VHT during the PM peak.

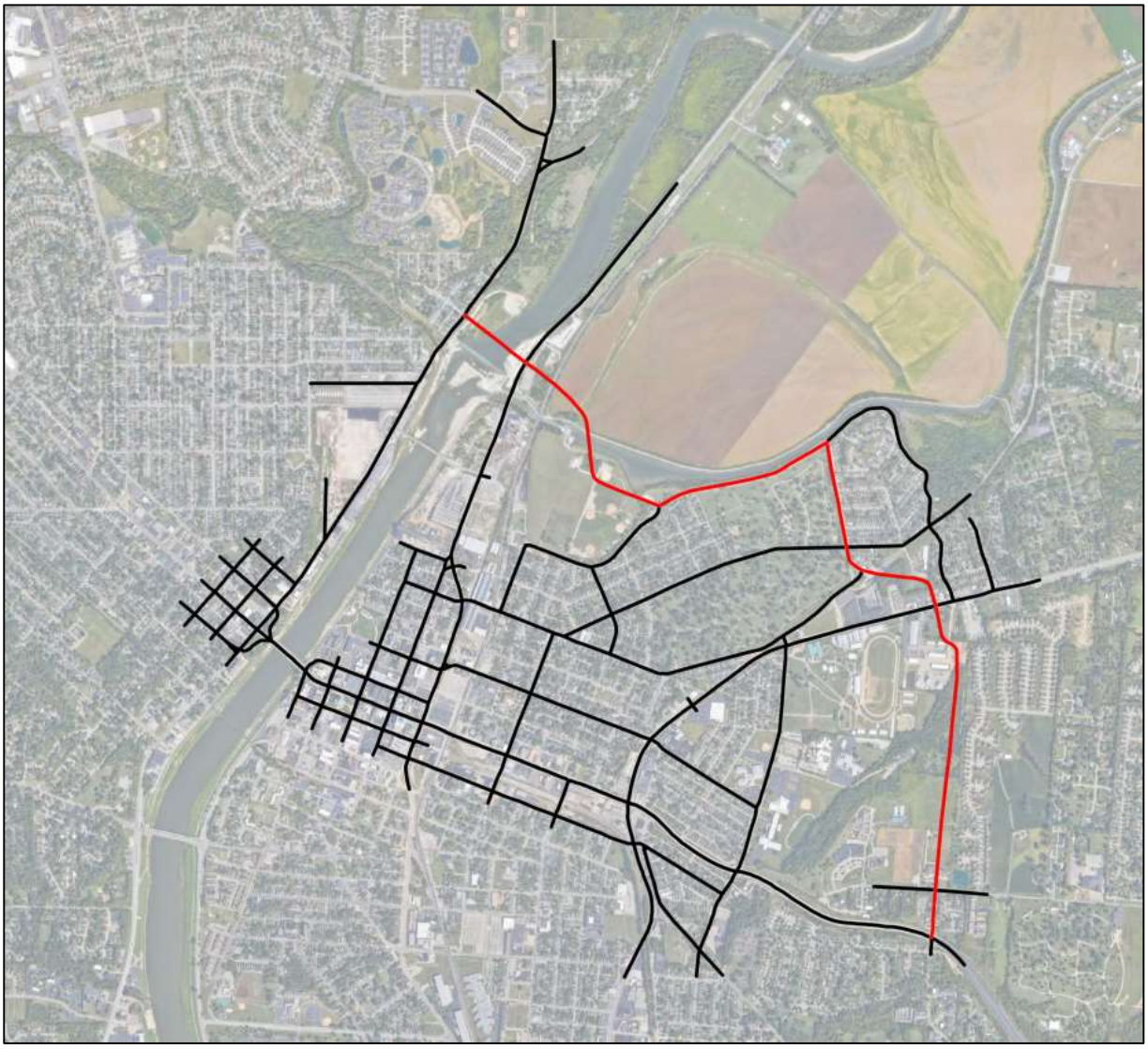

Figure 3: Alternative B Alignment – Initial Simulation Model

Alternative C – this +/-2.6-mile concept, shown in **Figure 4**, includes a river crossing just north of the Black Street Bridge, connecting Gordon Avenue to US 127. The concept then utilizes Joe Nuxhall Boulevard and Neal Boulevard to connect to SR 4, where a new route runs parallel to Zoellners Place and connects to SR 129 via Hampshire Drive.

Results from the simulation model indicate that Alternative C is expected to decrease traffic on SR 129 in the study area during both the AM (8 percent reduction) and PM (7 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative C is expected to reduce yearly VHT during the AM peak by 1,200 VHT and by 2,000 VHT during the PM peak.

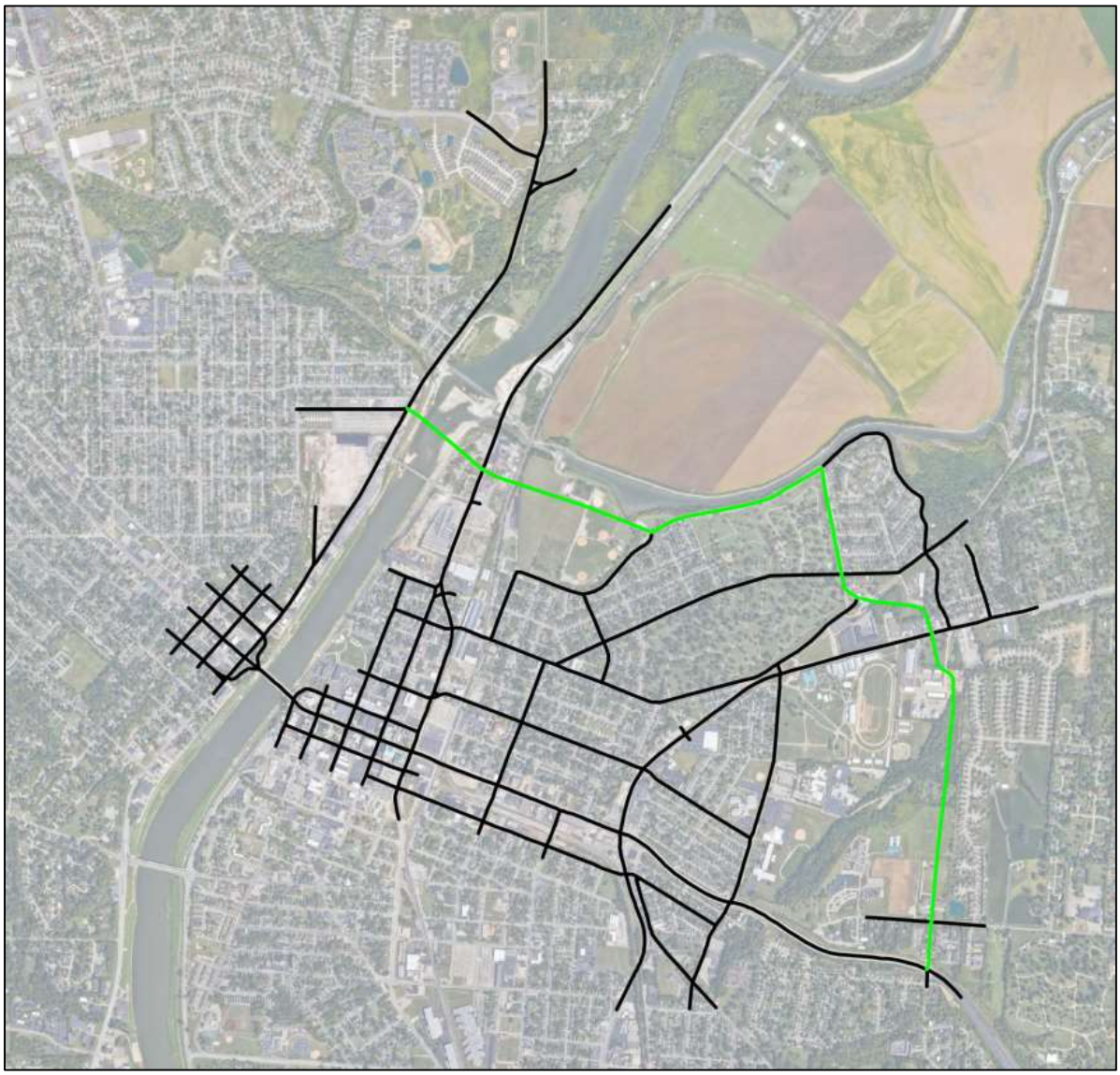

Figure 4: Alternative C Alignment – Initial Simulation Model

Alternative D – this +/-2.9-mile concept, shown in **Figure 5**, includes a river crossing just north of the Black Street Bridge, connecting Gordon Avenue to US 127. The concept then utilizes Joe Nuxhall Blvd. and Neal Boulevard to connect to SR 4, where a new route runs parallel to Zoellners Place and connects to SR 129 via Hampshire Drive.

Results from the simulation model indicate that Alternative D is expected to decrease traffic on SR 129 in the study area during both the AM (5 percent reduction) and PM (5 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative D is expected to reduce yearly VHT during the AM peak by 1,000 VHT and by 2,500 VHT during the PM peak.

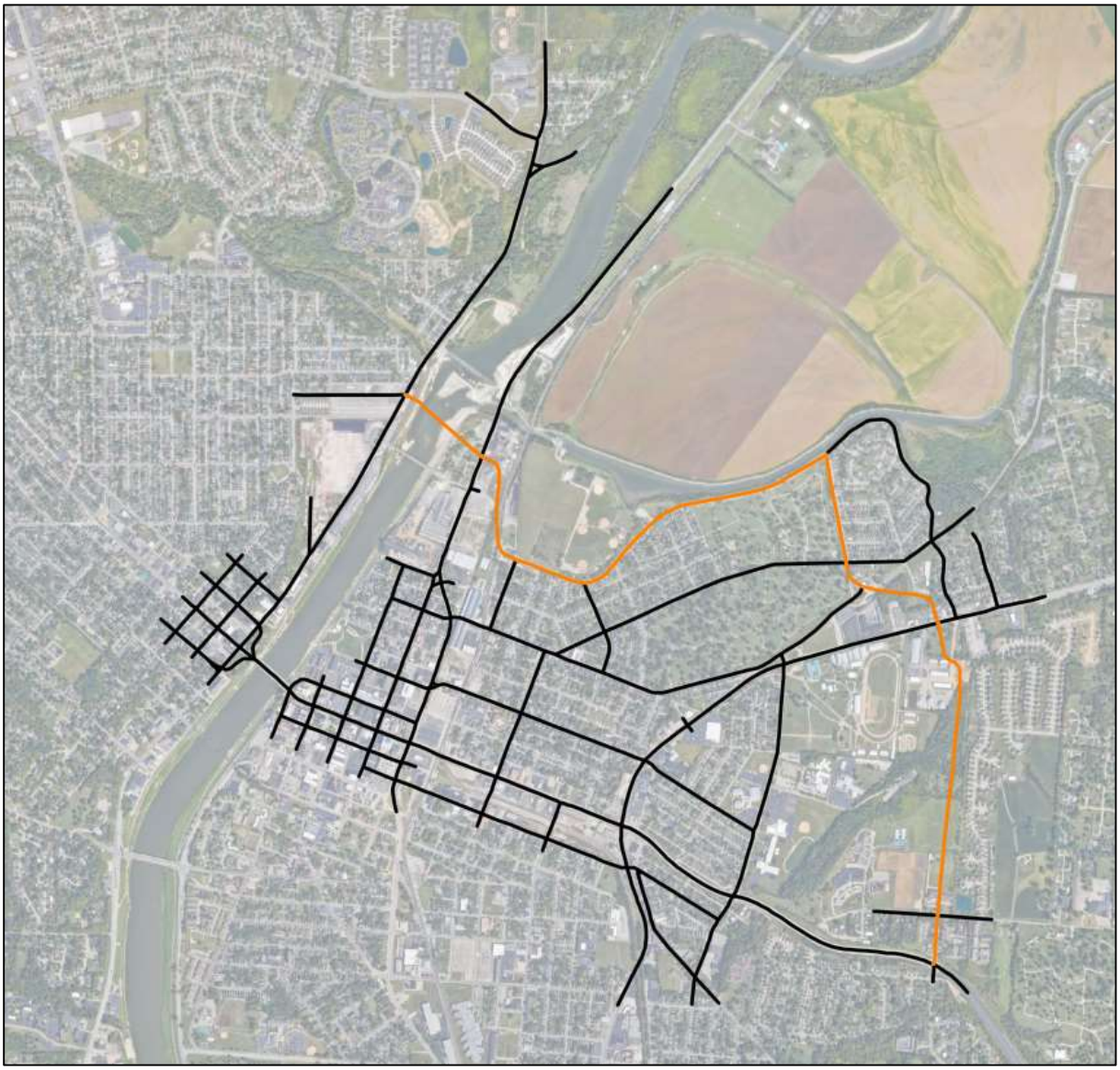

Figure 5: Alternative D Alignment – Initial Simulation Model

Alternative E – this +/-2.2-mile concept, shown in **Figure 6**, includes a river crossing just north of the Black Street Bridge, connecting Gordon Avenue to US 127. The concept then utilizes Joe Nuxhall Boulevard, N. 9th Street, and Heaton Street to connect to SR 4, where a new route connects to SR 129 via Hampshire Drive.

Results from the simulation model indicate that Alternative E is expected to significantly decrease traffic on SR 129 in the study area during both the AM (16 percent reduction) and PM (16 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative E is expected to reduce yearly VHT during the AM peak by 2,700 VHT and by 6,100 VHT during the PM peak.

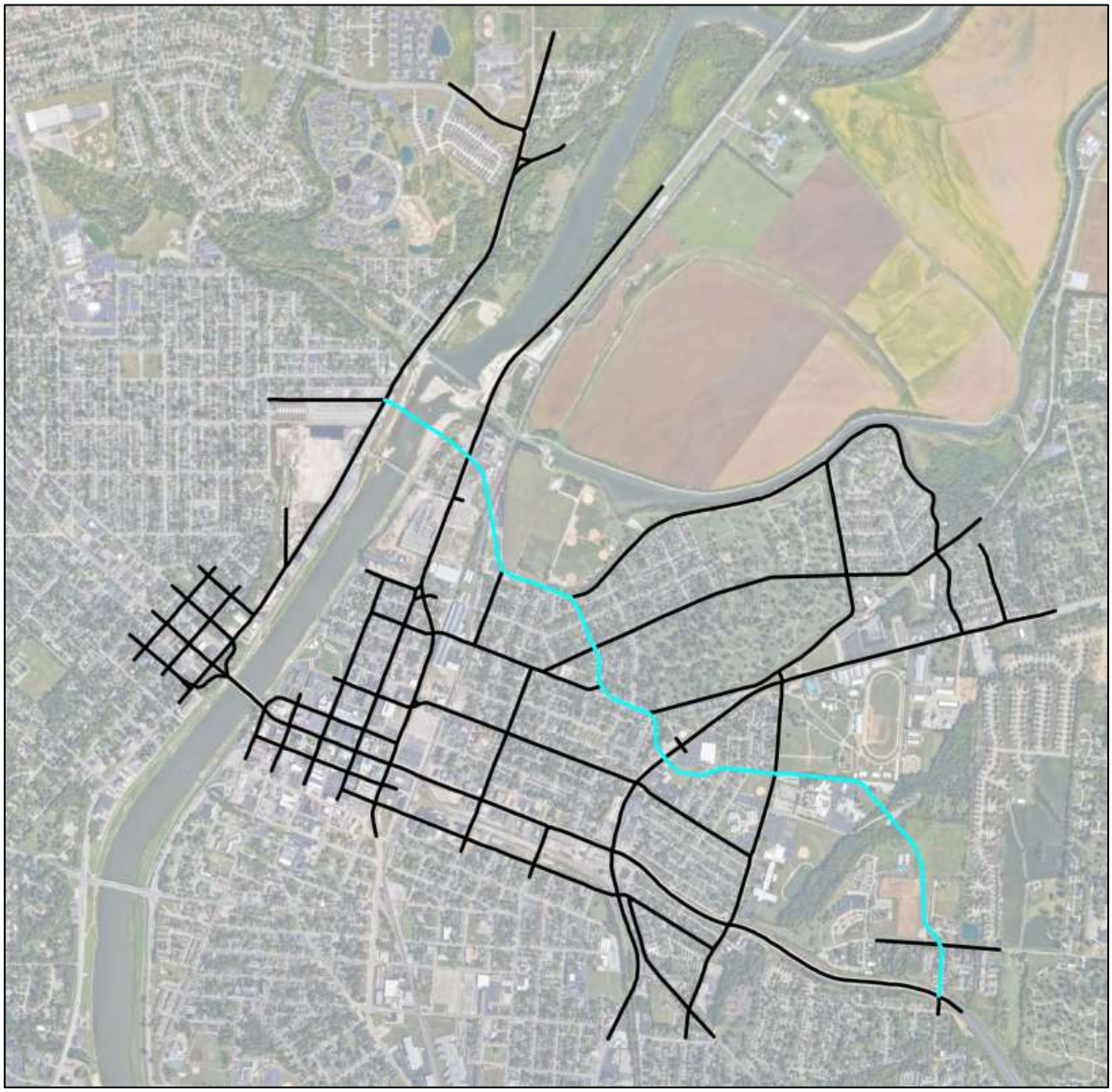

Figure 6: Alternative E Alignment – Initial Simulation Model

Alternative F – this +/-2.1-mile concept, shown in **Figure 7**, includes a river crossing between the Black Street Bridge and the High Street Bridge, connecting to US 127 via Village Street. The concept then utilizes Heaton Street to connect to SR 4, where a new route connects to SR 129 via Hampshire Drive.

Results from the simulation model indicate that Alternative F is expected to significantly decrease traffic on SR 129 in the study area during both the AM (17 percent reduction) and PM (17 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative F is expected to reduce yearly VHT during the AM peak by 2,800 VHT and by 6,300 VHT during the PM peak.

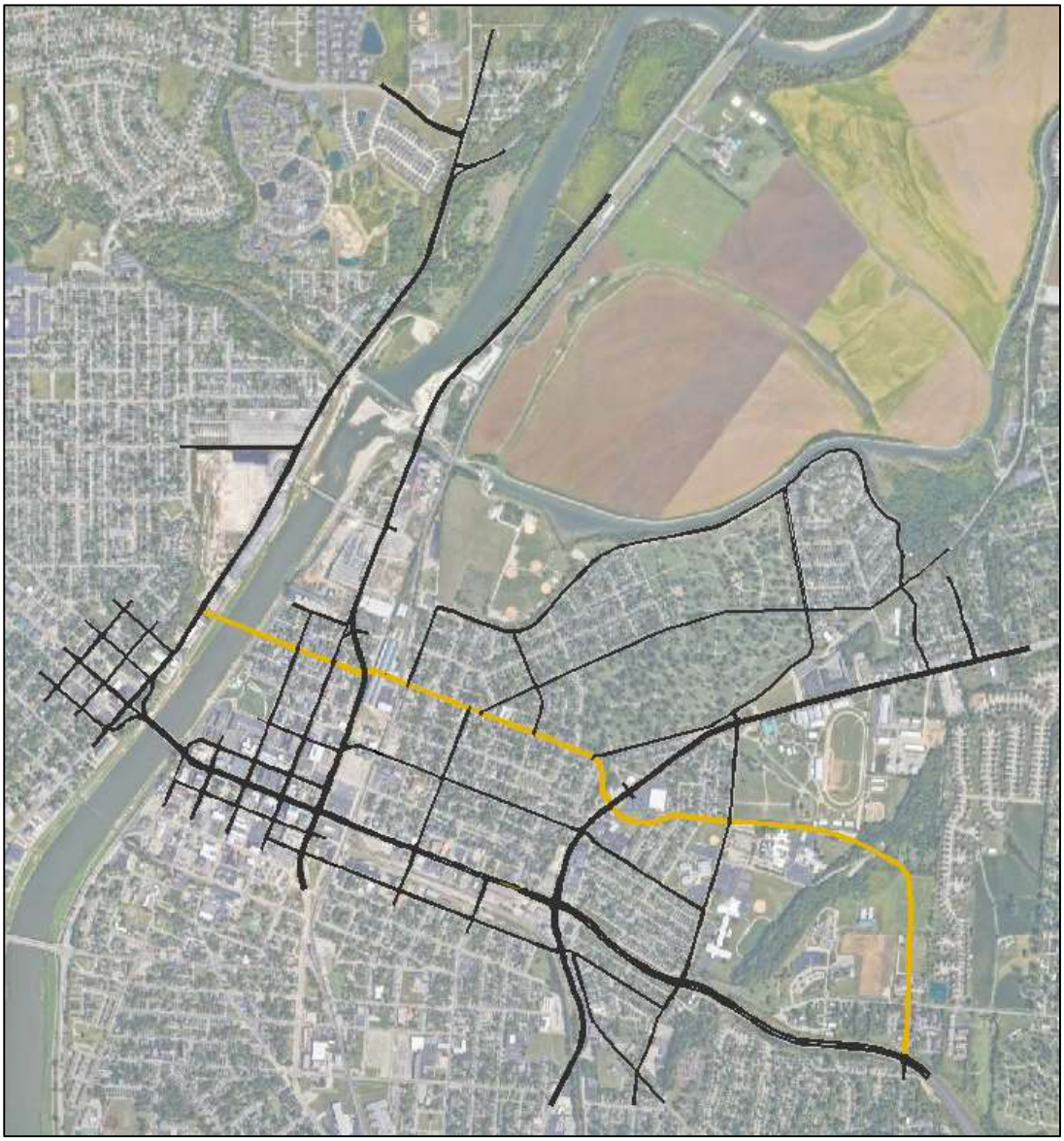

Figure 7: Alternative F Alignment – Initial Simulation Model

Alternative G – this +/-1.5-mile concept, shown in **Figure 8**, includes a river crossing just north of the High Street Bridge, connecting across the river to Wayne Avenue. The concept then utilizes Buckeye Street to connect to US 127, where a new segment then connects to Dayton Street. Dayton Street is utilized to connect to SR 4 and SR 129.

Results from the simulation model indicate that Alternative G is expected to significantly decrease traffic on SR 129 in the study area during both the AM (18 percent reduction) and PM (17 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative G is expected to reduce yearly VHT during the AM peak by 2,900 VHT and by 6,400 VHT during the PM peak.

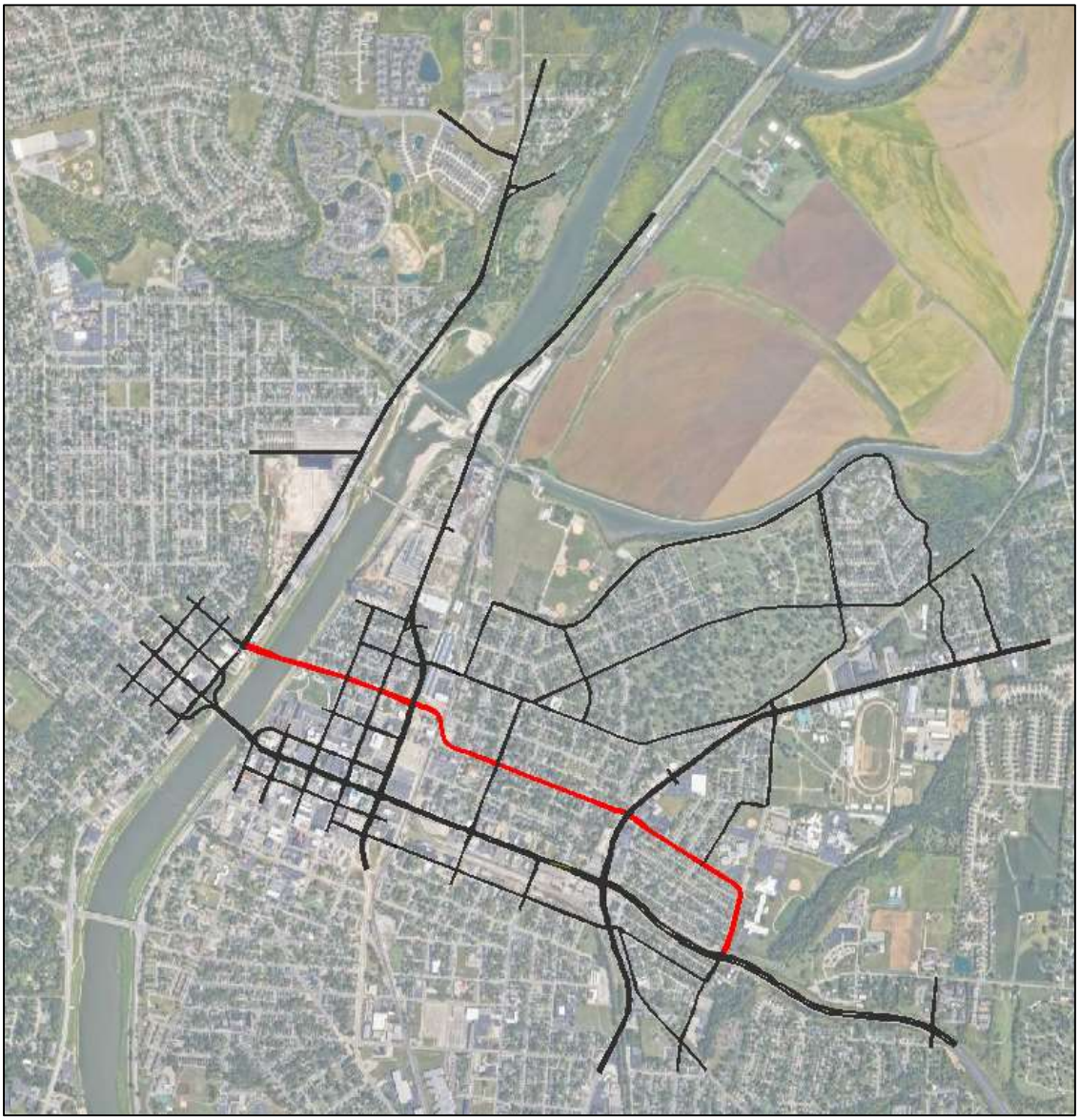

Figure 8: Alternative G Alignment – Initial Simulation Model

Alternative A-C – this +/-3.3-mile concept, shown in **Figure 9**, combines Phase 1 of Alternative A with Phases 2 & 3 of Alternative C.

Results from the simulation model indicate that Alternative A-C is expected to increase traffic on SR 129 in the study area during both the AM and PM peak hours. The location of the Alternative A crossing to the north causes more vehicles to use the Main Street Bridge, and in turn increases traffic on SR 129. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A-C is not expected to reduce yearly VHT during the AM or PM peaks.

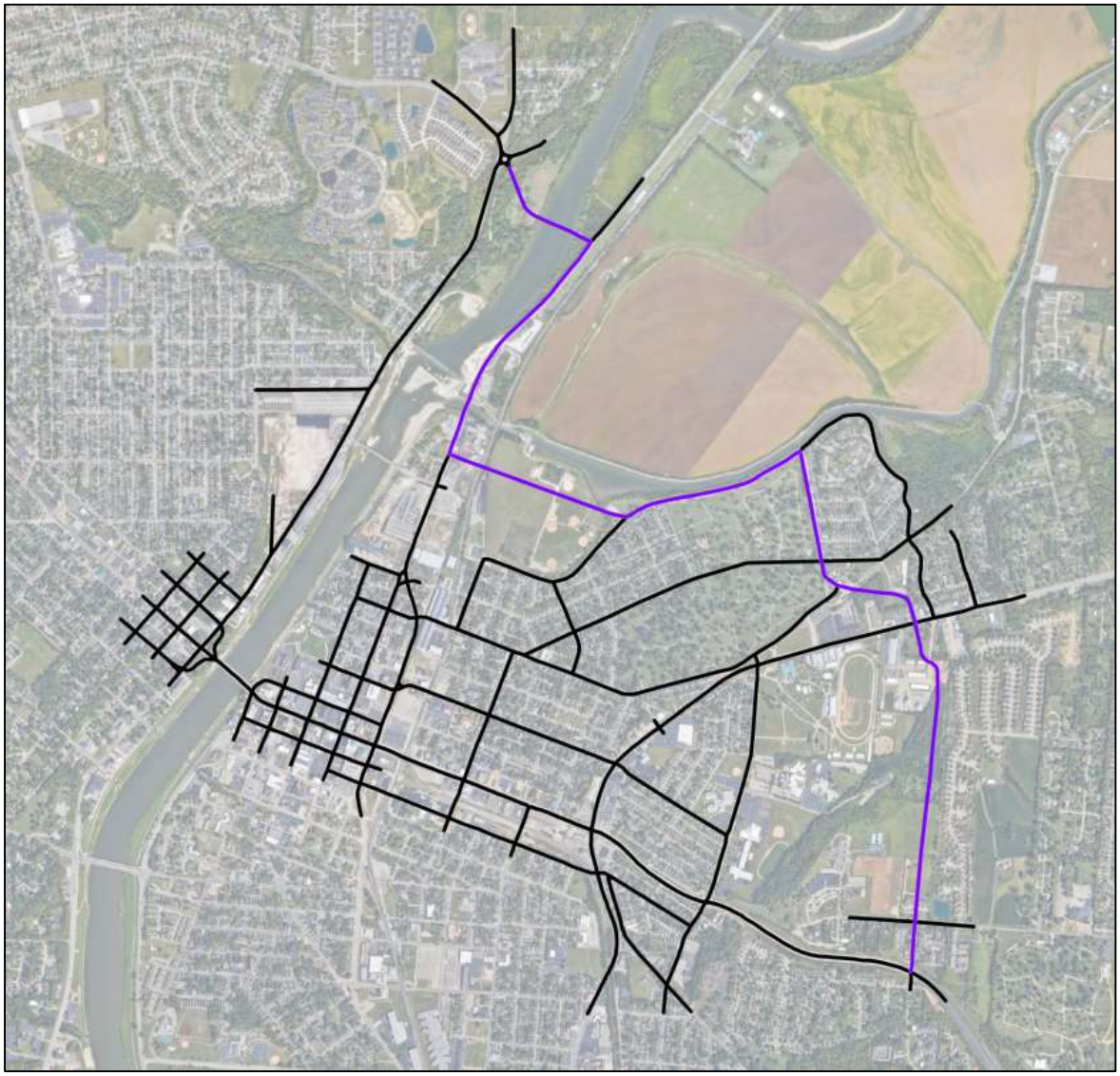

Figure 9: Alternative A-C Alignment – Initial Simulation Model

Alternative A-D – this +/-3.6-mile concept, shown in **Figure 10**, combines Phase 1 of Alternative A with Phases 2 & 3 of Alternative D.

Results from the simulation model indicate that Alternative A-D is expected to increase traffic on SR 129 in the study area during both the AM and PM peak hours. Once again, the location of the Alternative A crossing to the north causes more vehicles to use the Main Street Bridge, and in turn, increases traffic on SR 129. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A-D is not expected to reduce yearly VHT during the AM or PM peaks.

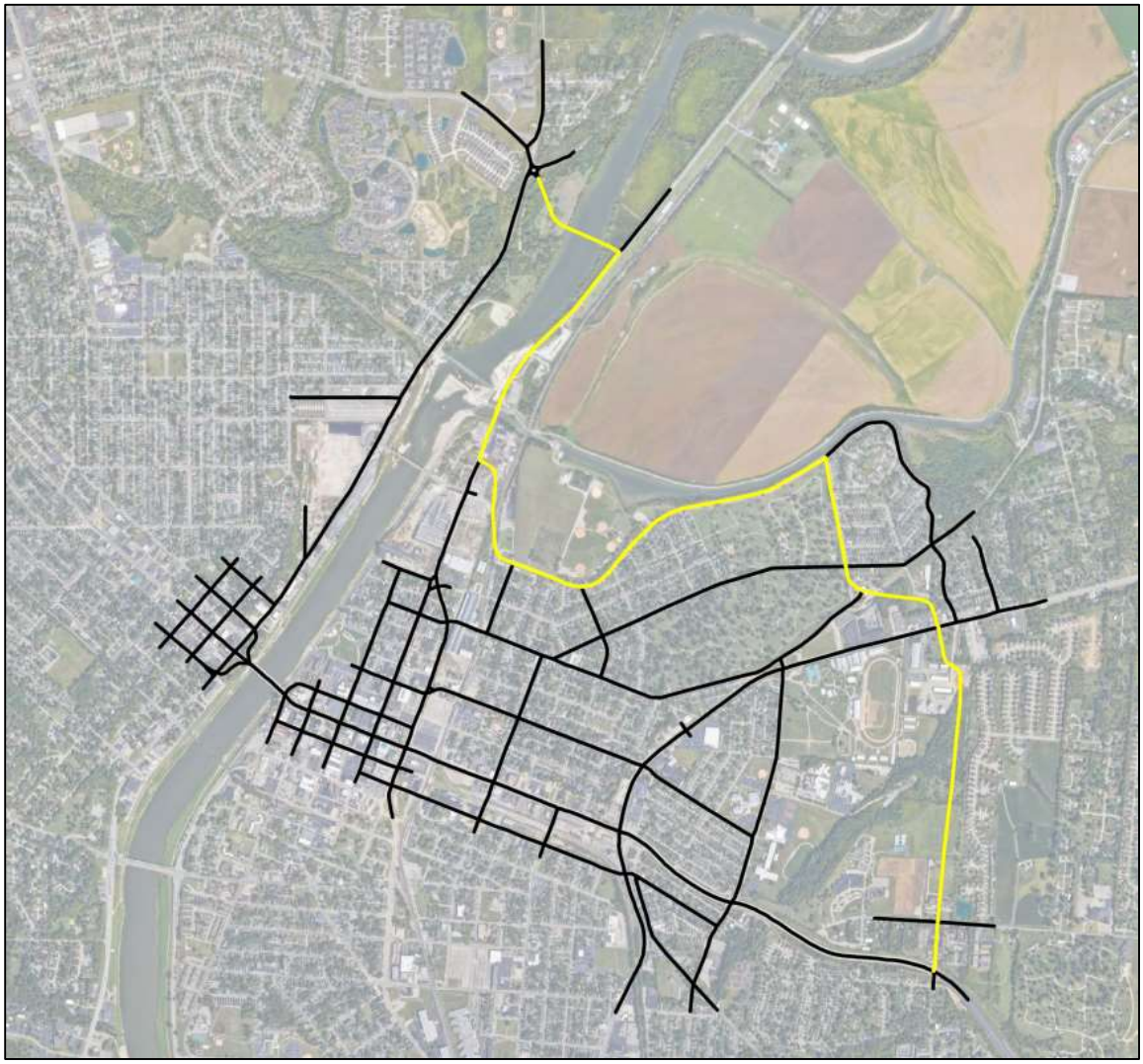

Figure 10: Alternative A-D Alignment – Initial Simulation Model

Alternative A-E – this +/-2.9-mile concept, shown in **Figure 11**, combines Phase 1 of Alternative A with Phases 2 & 3 of Alternative E.

Results from the simulation model indicate that Alternative A-E is expected to decrease traffic on SR 129 in the study area during both the AM (8 percent reduction) and PM (10 percent reduction) peak hours. The location of the Alternative A crossing to the north causes more vehicles to use the Main Street Bridge and increases traffic on SR 129 between B Street and US 127. However, the centralized location of Phases 2 and 3 of Alternative E are heavily utilized and reduce traffic on SR 129 east of US 127. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A-E is expected to reduce yearly VHT during the AM peak by 1,000 VHT and by 1,000 VHT during the PM peak.

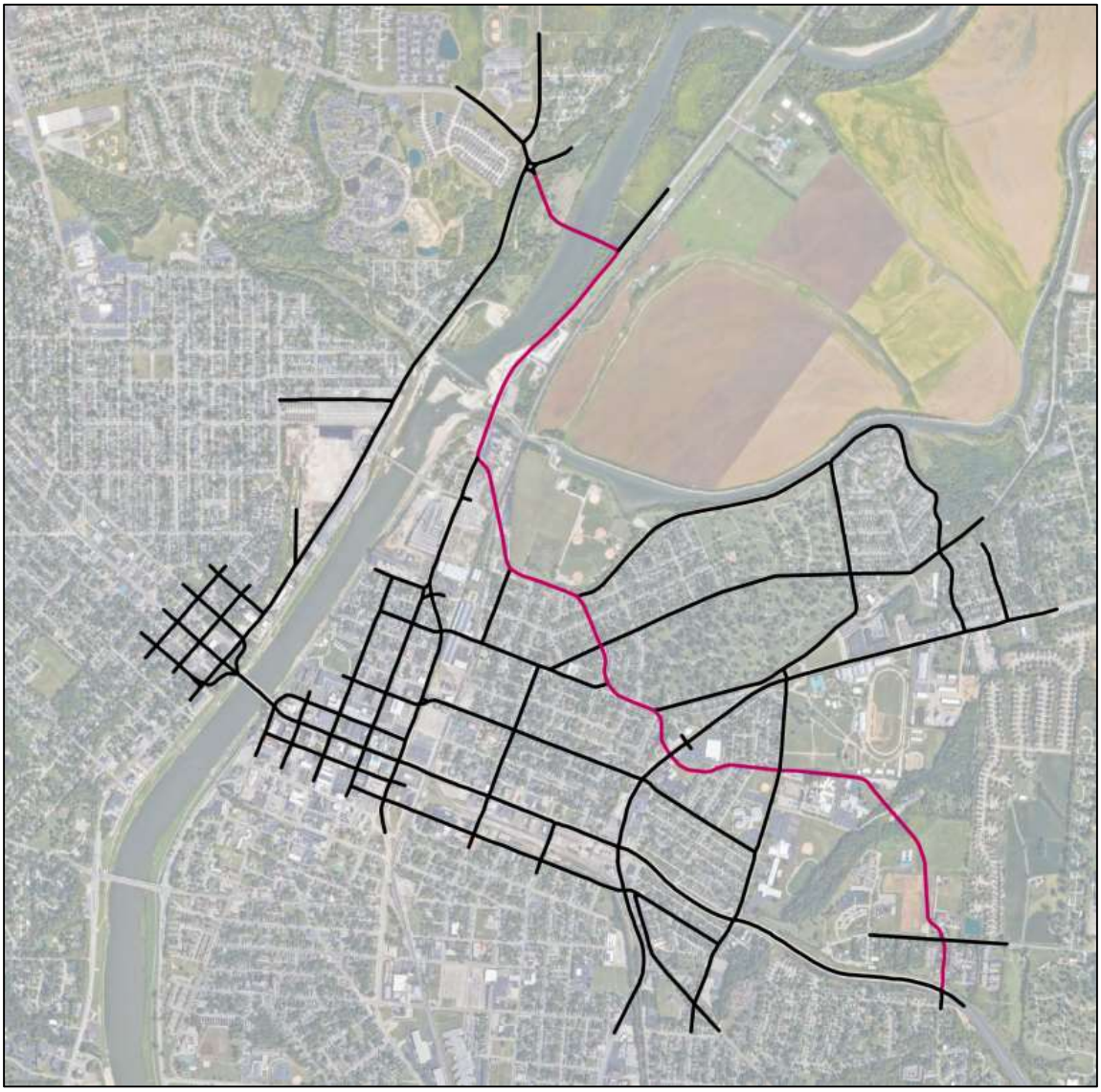

Figure 11: Alternative A-E Alignment – Initial Simulation Model

Alternative B-C – this +/-2.7-mile concept, shown in **Figure 12**, combines Phase 1 of Alternative B with Phases 2 & 3 of Alternative C.

Results from the simulation model indicate that Alternative B-C is expected to decrease traffic on SR 129 in the study area during both the AM (1 percent reduction) and PM (2 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative B-C is expected to reduce yearly VHT during the AM peak by 400 VHT and by 800 VHT during the PM peak.

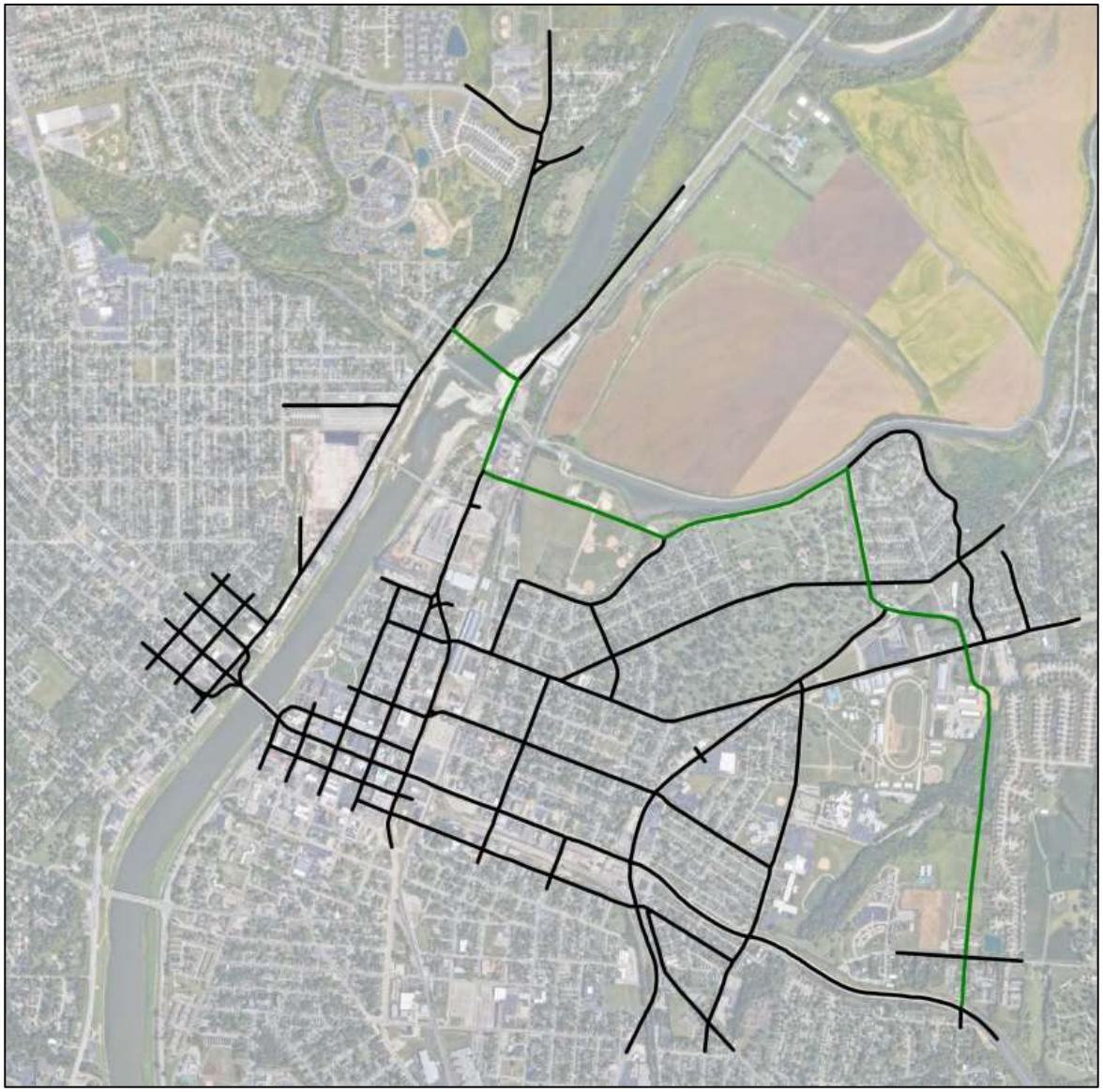

Figure 12: Alternative B-C Alignment – Initial Simulation Model

Alternative B-D – this +/-3.0-mile concept, shown in **Figure 13**, combines Phase 1 of Alternative B with Phases 2 & 3 of Alternative D.

Results from the simulation model indicate that Alternative B-D is not expected to significantly decrease traffic on SR 129 in the study area during the AM or PM peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative B-D is expected to reduce yearly VHT during the AM peak by 200 VHT. Alternative B-D is not expected to reduce VHT on SR 129 during the PM peak.

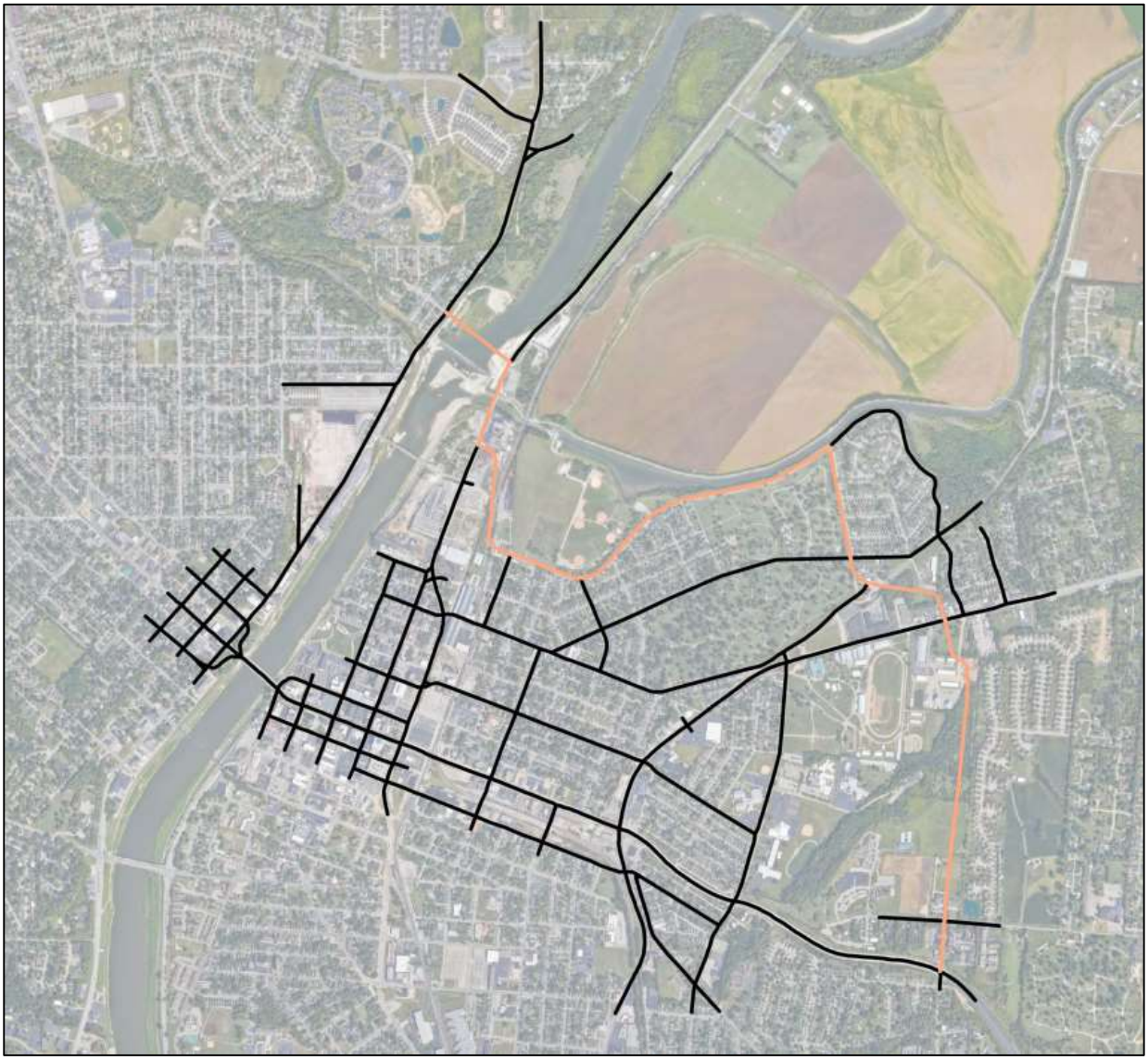

Figure 13: Alternative B-D Alignment – Initial Simulation Model

Alternative B-E – this +/-2.3-mile concept, shown in **Figure 14**, combines Phase 1 of Alternative B with Phases 2 & 3 of Alternative E.

Results from the simulation model indicate that Alternative B-E is expected to decrease traffic on SR 129 in the study area during both the AM (8 percent reduction) and PM (8 percent reduction) peak hours. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative B-E is expected to reduce yearly VHT during the AM peak by 1,300 VHT and by 2,300 VHT during the PM peak.

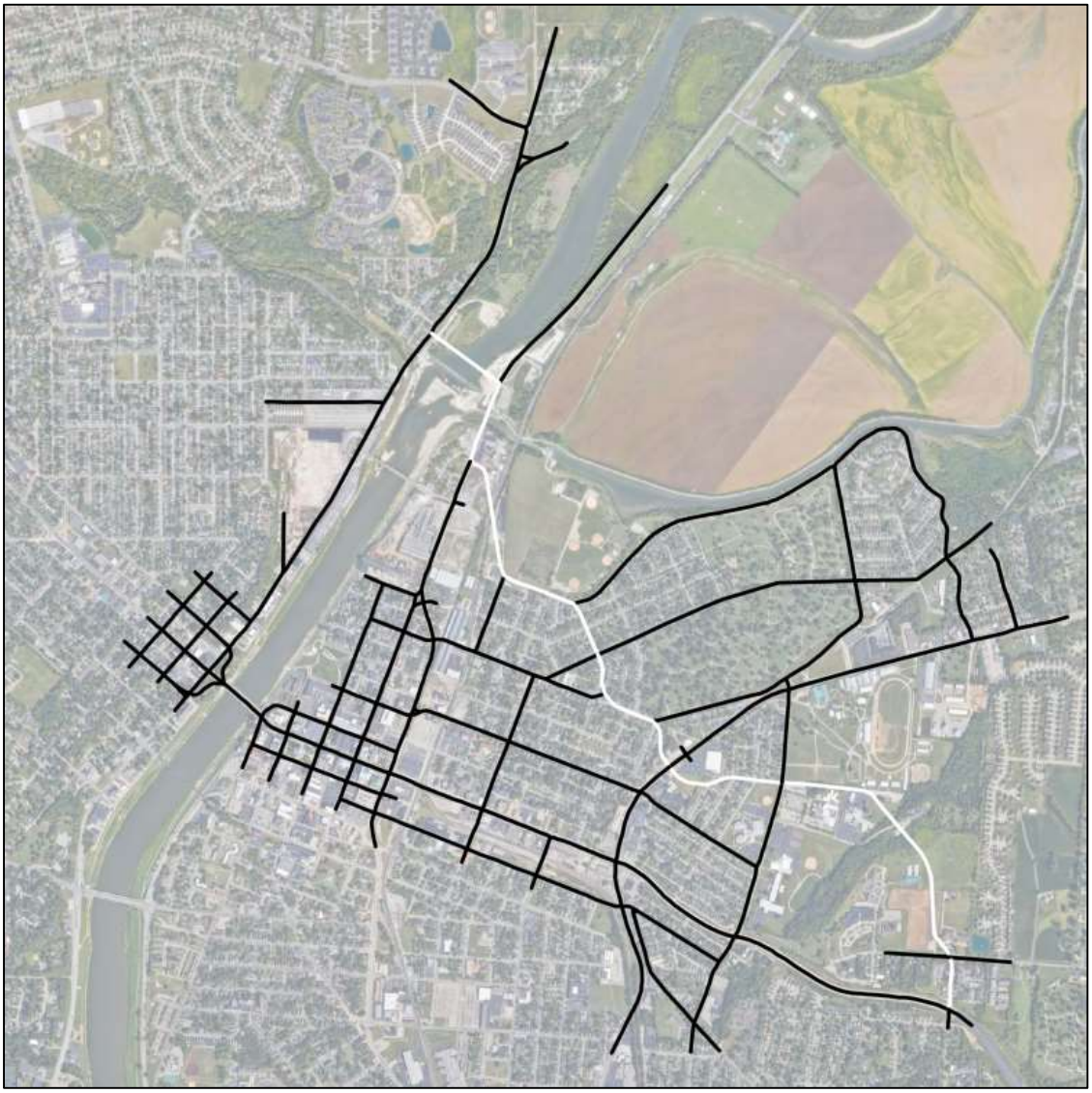

Figure 14: Alternative B-E Alignment – Initial Simulation Model

1.4.1 Phase 1 & 2 Only

Alternatives A, B, C, D, E, A-E, and B-E were also analyzed without Phase 3, the connection between SR 4 and SR 129. Based on results from the model, all seven alternatives are expected to provide less congestion relief without Phase 3. Drivers traveling northwest from SR 129 to Spooky Nook and NW Washington Boulevard no longer have a connection to SR 4 via Hampshire and are forced to continue on SR 129. Turning right onto SR 4 to connect to Phase 2 increases travel distance and travel time so most of these drivers continue on SR 129 to reach the Main Street Bridge or they turn right onto US 127 to access the new crossing.

Alternative E was also analyzed with a Phase 3 connection from SR 4 to Fair Avenue rather than SR 129. Once again, this alternative provided less congestion relief without the full Phase 3 connecting to SR 129.

1.4.2 Rhea Traffic Diversion

As shown in **Figure 1**, the initial model network terminates just west of North B Street in the northwest portion of the study area. Due to the limits of the network, there was concern that the model was not able to properly capture the diversion of traffic from Rhea Avenue to NW Washington Boulevard for Alternative A, the northernmost river crossing. Rather than assuming a certain percentage of diversion, a scenario in which 100 percent of non-Spooky Nook traffic entering and exiting the model at Rhea Avenue was moved to NW Washington Boulevard. This scenario is likely an overestimation of diversion. **Figure 15** shows the existing peak hour turning movements at Rhea Avenue and NW Washington Boulevard.

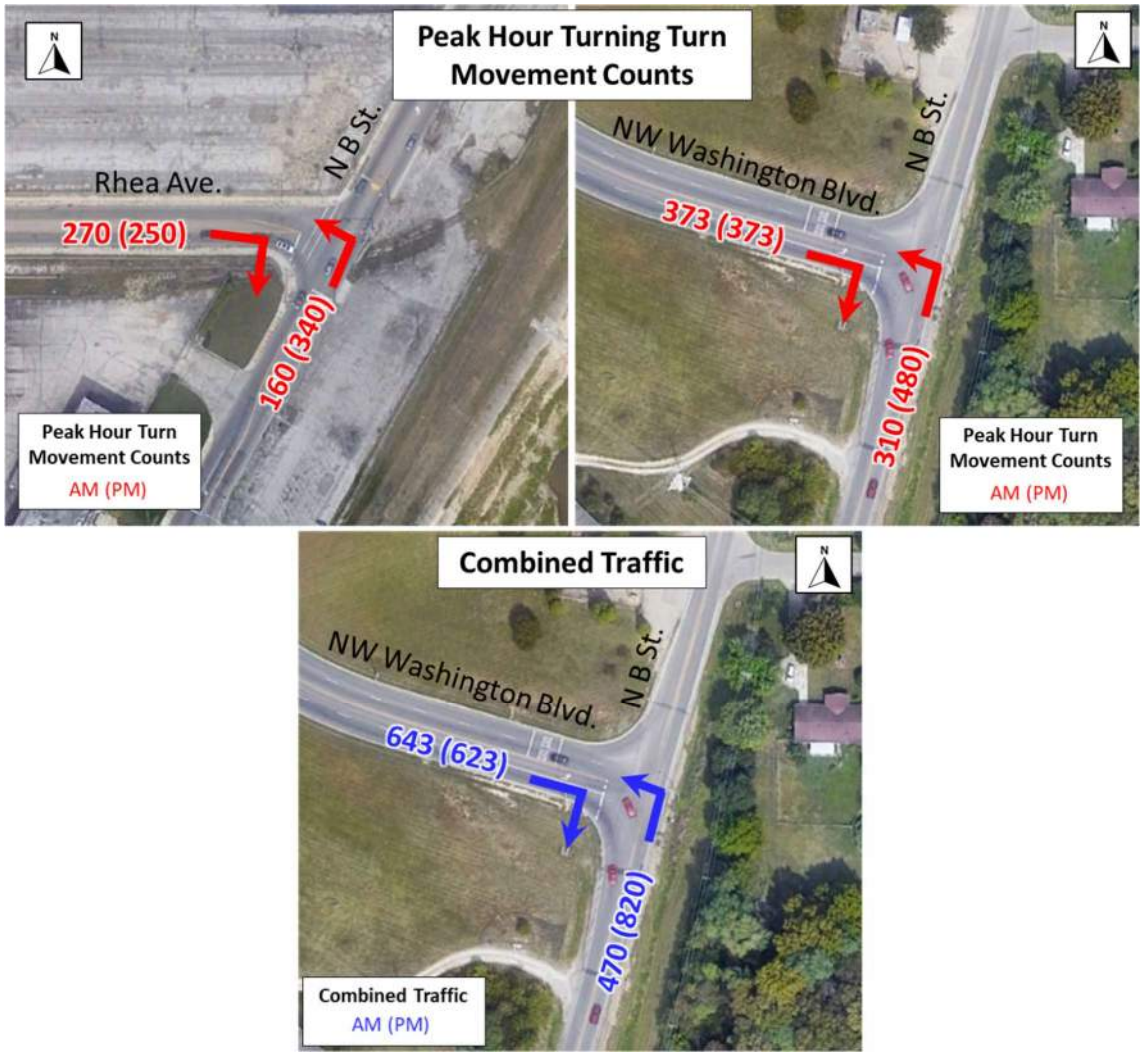

Figure 15: Rhea Avenue Traffic Diversion

This diversion of traffic from Rhea Avenue to NW Washington Boulevard was applied to several alternatives, including Alternative A, A-E, A (Phase 1 & 2), and A-E (Phase 1 & 2). Results from the model show that the diversion increases traffic on the river crossing (Phase 1) portion of Alternative A and provides more congestion relief for SR 129. Even with this diversion, Alternative A does not provide as much congestion relief as Alternative E.

Table 5 presents more detailed traffic operations information for each alternative for the AM peak and **Table 6** presents the PM peak. Of the 13 alternatives evaluated in the initial model, Alternative E, Alternative F, and Alternative G are the most effective at reducing traffic volumes on SR 129 and Alternative A-C, Alternative A-D, and Alternative B-D are the least effective.

Table 5: Initial AM Peak-Hour Simulation Model Results

Alternative	Length (mi.)	AM Peak										
		Volume	NW Travel Time (min.)	SE Travel Time (min.)	B St. @ Main St. LOS	SR 127 @ SR 129 LOS	SR 4 @ SR 129 LOS	SR 129 VHT Savings per year	SR 129 % Reduction (Between B St. & MLK Jr.)	SR 129 % Reduction (Between MLK Jr. & SR 4)	SR 129 % Reduction (Between SR 4 & Hampshire)	SR 129 % Reduction in Volume
No-Build					D	E	D		1,500 - 2,700 vph	3,000 - 3,200 vph	2,600 - 2,900 vph	1,500 - 3,200 vph
Phases 1, 2 & 3												
A	2.47	1,241	4.58	5.74	E	E	D	1,200	-4%	5%	5%	2%
A (w/ Rhea traffic)	2.47	1,434	4.46	5.36	D	E	D	1,300	2%	6%	7%	5%
B	2.64	1,315	6.29	6.36	E	E	C	1,000	0%	8%	8%	5%
C	2.59	1,538	6.47	6.58	D	E	C	1,200	7%	9%	8%	8%
D	2.85	1,562	5.91	6.36	D	E	D	1,000	7%	4%	3%	5%
E	2.18	1,586	3.93	5.97	D	D	D	2,700	9%	21%	19%	16%
F	2.10	1,671	3.76	5.92	D	D	D	2,800	10%	22%	20%	17%
G	1.51	1,698	3.75	5.83	D	D	D	2,900	13%	26%	15%	18%
AC	3.28	1,895	6.38	6.94	F	E	C	N/A	-5%	3%	1%	0%
AD	3.55	1,869	7.17	7.56	F	E	C	N/A	-4%	2%	3%	0%
AE	2.86	1,880	4.62	5.21	F	D	D	1,000	-4%	15%	14%	8%
AE (w/ Rhea traffic)	2.86	2,030	4.61	5.22	D	E	D	1,000	2%	17%	16%	11%
BC	2.74	1,952	6.74	6.55	E	E	C	400	0%	2%	1%	1%
BD	3.03	1,652	8.73	8.85	D	E	C	200	0%	0%	2%	0%
BE	2.31	2,039	5.38	5.99	D	D	D	1,300	0%	11%	15%	8%
Phases 1 & 2 Only												
A	1.60	1,213	2.56	3.16	E	E	D	800	-5%	11%	0%	3%
A (w/ Rhea traffic)	1.60	1,441	2.59	3.28	D	F	D	800	1%	12%	1%	5%
B	1.77	1,301	4.04	4.34	E	E	D	N/A	-1%	2%	0%	1%
C	1.72	1,538	3.68	4.17	D	E	D	900	7%	0%	0%	2%
D	1.98	1,566	4.14	4.56	D	E	D	800	7%	1%	1%	3%
E	1.12	1,576	2.78	3.83	D	D	D	1,000	8%	16%	-1%	9%
AE	1.81	1,877	3.91	4.64	F	D	D	400	-5%	6%	-1%	1%
AE (w/ Rhea traffic)	1.81	2,070	3.85	4.57	D	E	D	400	2%	8%	0%	4%
BE	1.27	2,016	3.78	3.63	D	D	D	700	-1%	1%	-3%	-1%
Terminate at Fair Ave.												
E	1.40	1,563	2.77	3.49	D	D	D	1,000	7%	16%	-2%	8%

Table 6: Initial PM Peak-Hour Simulation Model Results

Alternative	Length (mi.)	PM Peak										
		Volume	NW Travel Time (min.)	SE Travel Time (min.)	B St. @ Main St. LOS	SR 127 @ SR 129 LOS	SR 4 @ SR 129 LOS	SR 129 VHT Savings per year	SR 129 % Reduction (Between B St. & MLK Jr.)	SR 129 % Reduction (Between MLK Jr. & SR 4)	SR 129 % Reduction (Between SR 4 & Hampshire)	SR 129 % Reduction in Volume
No-Build					E	E	F		1,600 - 3,200 vph	3,700 - 4,000 vph	3,100 - 3,600 vph	1,600 - 4,000 vph
Phases 1, 2 & 3												
A	2.47	1,712	5.59	8.00	F	E	D	900	-9%	9%	8%	3%
A (w/ Rhea traffic)	2.47	2,042	2.71	3.89	E	E	D	1,000	-6%	13%	12%	6%
B	2.64	1,581	6.55	6.12	E	E	D	1,000	-4%	9%	9%	5%
C	2.59	1,897	7.06	6.34	E	E	D	2,000	5%	9%	7%	7%
D	2.85	1,916	5.79	6.57	E	E	E	2,500	6%	5%	4%	5%
E	2.18	1,974	4.07	4.40	D	D	D	6,100	5%	22%	19%	16%
F	2.10	2,107	3.91	4.44	D	D	D	6,300	7%	23%	20%	17%
G	1.51	2,144	3.89	4.32	D	D	D	6,400	8%	28%	14%	17%
AC	3.28	2,425	6.91	7.80	F	E	E	N/A	-7%	2%	3%	-1%
AD	3.55	2,216	7.29	8.31	E	E	E	N/A	-7%	2%	2%	-1%
AE	2.86	2,336	6.40	5.58	F	D	E	1,000	-5%	19%	15%	10%
AE (w/ Rhea traffic)	2.86	2,421	6.35	5.58	F	E	D	1,100	-3%	20%	17%	12%
BC	2.74	2,177	6.54	7.34	F	E	E	800	-2%	4%	3%	2%
BD	3.03	1,777	5.55	7.48	F	E	E	N/A	-2%	-1%	3%	0%
BE	2.31	2,418	5.97	5.85	F	D	D	2,300	-2%	9%	18%	8%
Phases 1 & 2 Only												
A	1.60	1,771	2.61	4.12	F	E	D	600	-9%	13%	0%	2%
A (w/ Rhea traffic)	1.60	2,045	2.69	4.12	E	E	E	400	-5%	15%	2%	5%
B	1.77	1,561	4.13	4.82	F	E	E	400	-2%	1%	0%	0%
C	1.72	1,897	4.44	4.51	E	E	E	1,400	7%	1%	-1%	2%
D	1.98	1,904	4.27	4.86	E	E	E	1,600	7%	3%	1%	3%
E	1.12	1,947	2.90	4.99	D	D	E	4,200	6%	19%	-2%	9%
AE	1.81	2,268	4.32	6.13	F	D	E	600	-6%	7%	-1%	0%
AE (w/ Rhea traffic)	1.81	2,420	4.27	6.24	E	E	E	800	-3%	7%	-2%	1%
BE	1.27	2,418	3.61	4.92	F	D	D	600	-2%	2%	-1%	0%
Terminate at Fair Ave.												
E	1.40	1,932	2.73	4.36	D	D	E	4,100	5%	19%	-1%	9%

2.0 EXPANDED SIMULATION MODEL

After the initial model analysis was completed, the simulation model network was expanded west of the river to include Main Street and NW Washington Boulevard to their intersection northwest of Hamilton, as shown in **Figure 16**. Additional turning movement counts were collected and signal timing plans were included in the model.

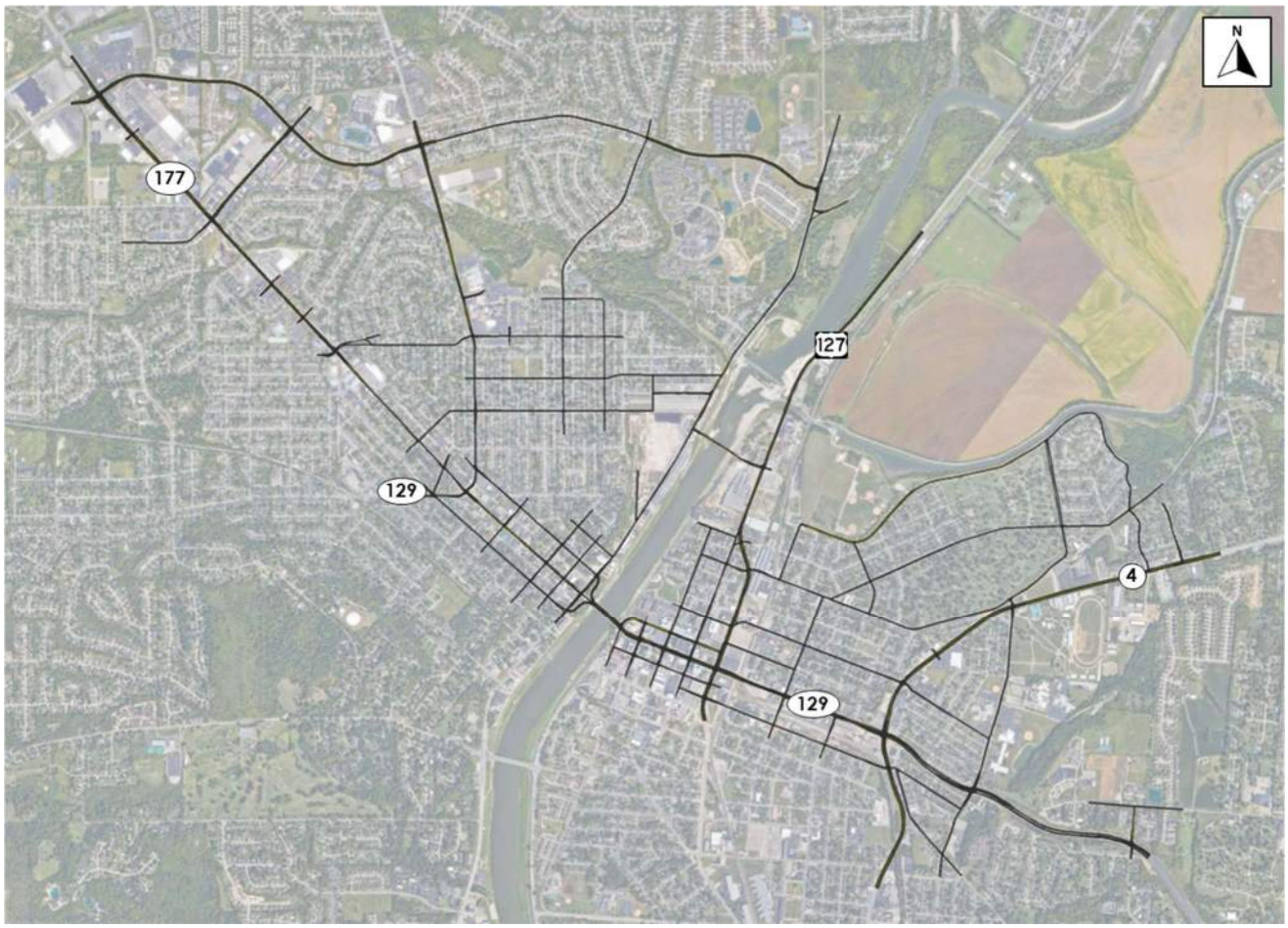

Figure 16: Expanded Simulation Model Network

Additional turning movement counts were collected at the following intersections:

- Cleveland Ave. at Cereal Ave.
- Cleveland Ave. at Gray Ave.
- Cleveland Ave. at Haldimand Ave.
- NW Washington Ave. at Cleveland Ave.
- Cleveland Ave. at Rhea Ave.
- Eaton Ave. at Gray Ave.
- NW Washington Ave. at Eaton Ave.
- MLK Jr. Blvd. at Butler St.
- Progress Ave. at Cereal Ave.
- Prytania Ave. at Cereal Ave.
- Prytania Ave. at Gordon Ave.
- Prytania Ave. at Rhea Ave.

The most recent counts available were provided for the following intersections:

- Main St. at Dick Ave.
- Ross Ave. at Dick Ave.
- Ross Ave. at C St.
- Park Ave. at C St.
- Main St. at Eaton Ave.
- Eaton Ave. at Rhea Ave.
- NW Washington Ave. at Eaton Ave.
- Hampshire Dr. at Princeton Rd.
- Eaton Ave. at Cereal Ave.
- NW Washington Blvd. at Eaton Ave.
- Eaton Ave. at Park Ave.
- Eaton Ave. at Wilson School Dr.
- Main St. at AMC Shopping Center
- Main St. at Brockwood Ave.
- Main St. at Carmen Ave.
- Main St. at Cereal Ave,
- Main St. at Dick Ave.
- Main St. at Eaton Ave.
- Main St. at Edgewood Ave.
- Main St. at NW Washington Blvd.
- Main St. at Plaza West
- Main St. at Victory Dr.
- NW Washington at Brockwood Ave.

2.1 EXPANDED MODEL VALIDATION

To compare traffic flows, link-based trip volumes were compared to actual traffic counts on the segments. Several statistical measures were used to measure model assignment volumes to matched observed counts. The most important of these measures is percent RMSE with a target threshold of 20 percent or lower to confirm the model was sufficiently calibrated for assigned volumes. **Table 7** presents the calibration statistics for both the AM and PM models. The results indicate that all of the volume validation targets were met.

Table 7: Expanded Model Volume Calibration Statistics

Total Volume to Count:	AM Peak	PM Peak
Target: within 5% of count		
Sum of assignment	108,517	140,805
Sum of counts	110,761	141,762
Percent Delta (within +/-5%)	2.03%	0.68%
Links with <700 vehicle count	248	255
Link assignments within 100 vehicles of count	214	221
Target: within 85% of links	86%	87%
Links between 700 and 2700 count	47	77
Link assignments within 20% of count	43	62
Target: within 85% of links	91%	81%
Percent Root Mean Square Error		
Target: < 20.00%	18.43%	18.14%

2.2 ADDITIONAL EXPECTED DEVELOPMENTS

In addition to Spooky Nook, there are several traffic-generating developments expected to be constructed in Hamilton, as shown in **Figure 17**. These developments, not including Spooky Nook, are expected to produce 1,650 trips during the AM peak hour and 2,700 trips during the PM peak hour. New peak-hour trips were estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual 11th Edition (2021)* based on development information provided by the City of Hamilton. The developments are listed below with the number of anticipated AM and (PM) trips:

- Beckett Paper Redevelopment – 100 (128)
- Rossville Flats Redevelopment – 46 (53)
- Ohio Casualty Redevelopment – 62 (74)
- 550 N. 3rd St. Supermarket – 286 (495)
- Cohen Redevelopment – 394 (375)
- 6.6 Acre Development North of Cohen – 145 (139)
- 8.8 Acre Development North of Supermarket – 187 (179)

Figure 17: Expected Developments

2.3 EXPECTED DEMAND FOR IMPROVEMENT ALTERNATIVES

The expected trips from the additional developments were then added to the calibrated expanded model. There were also two network changes including a new entrance to Spooky Nook on B Street south of the development and the relocation of the B Street intersection with Rhea Avenue to the north.

2.3.1 No Build & Existing + Committed (E+C) Networks

The No-Build alternative was first developed and calibrated to existing conditions as detailed above. An Existing + Committed (E+C) alternative was then developed and run as a basis of comparison for the build alternatives. The E+C included the development trips and the roadway changes near Spooky Nook. The Black Street Bridge was left unchanged. Level of service (LOS) is a qualitative measure to describe the operating conditions of a roadway. LOS A represents free flow conditions while LOS F represents gridlock. Under the E+C scenario, all major intersections along Main Street (B Street, MLK Jr. Boulevard, and Erie Boulevard) operate at LOS E or F during the PM peak.

2.3.2 Build Alternatives

Four build alternatives that were previously run in the initial model, Alternative A, Alternative B, Alternative B-E, and Alternative E, were rerun with the expanded model. Alternative A was rerun to capture the diversion of traffic from Rhea Avenue to NW Washington Boulevard. Alternative B and Alternative B-E were rerun as the only alternatives that have a terminus point at Lagonda Avenue. Alternative E was rerun due to it being the most effective alternative for reducing traffic on SR 129 as well as the most effective alternative that had a terminus point at Gordon Ave. Two additional alternatives, Alternative A-B-E and Alternative E-B-E, that were not contemplated as part of the initial model runs were also analyzed. A summary of the alternatives analyzed are provided below.

2.3.2.1 Alternative A

Results from the simulation model indicate that Alternative A is expected to carry hourly traffic volumes up to 1,700 vehicles per hour (VPH), as shown in **Figure 18**. Alternative A is also expected to decrease traffic by 2 percent on SR 129 during the AM peak hour. However, this alternative is not expected to reduce traffic on SR 129 during the PM peak hour. These results are slightly worse than the results produced by the initial model. This is due to the extended model network and additional expected developments added to the expanded model. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A is expected to reduce yearly vehicle hours traveled (VHT) during the AM peak by 1,900 VHT. Alternative A is not expected to reduce VHT on SR 129 during the PM peak.

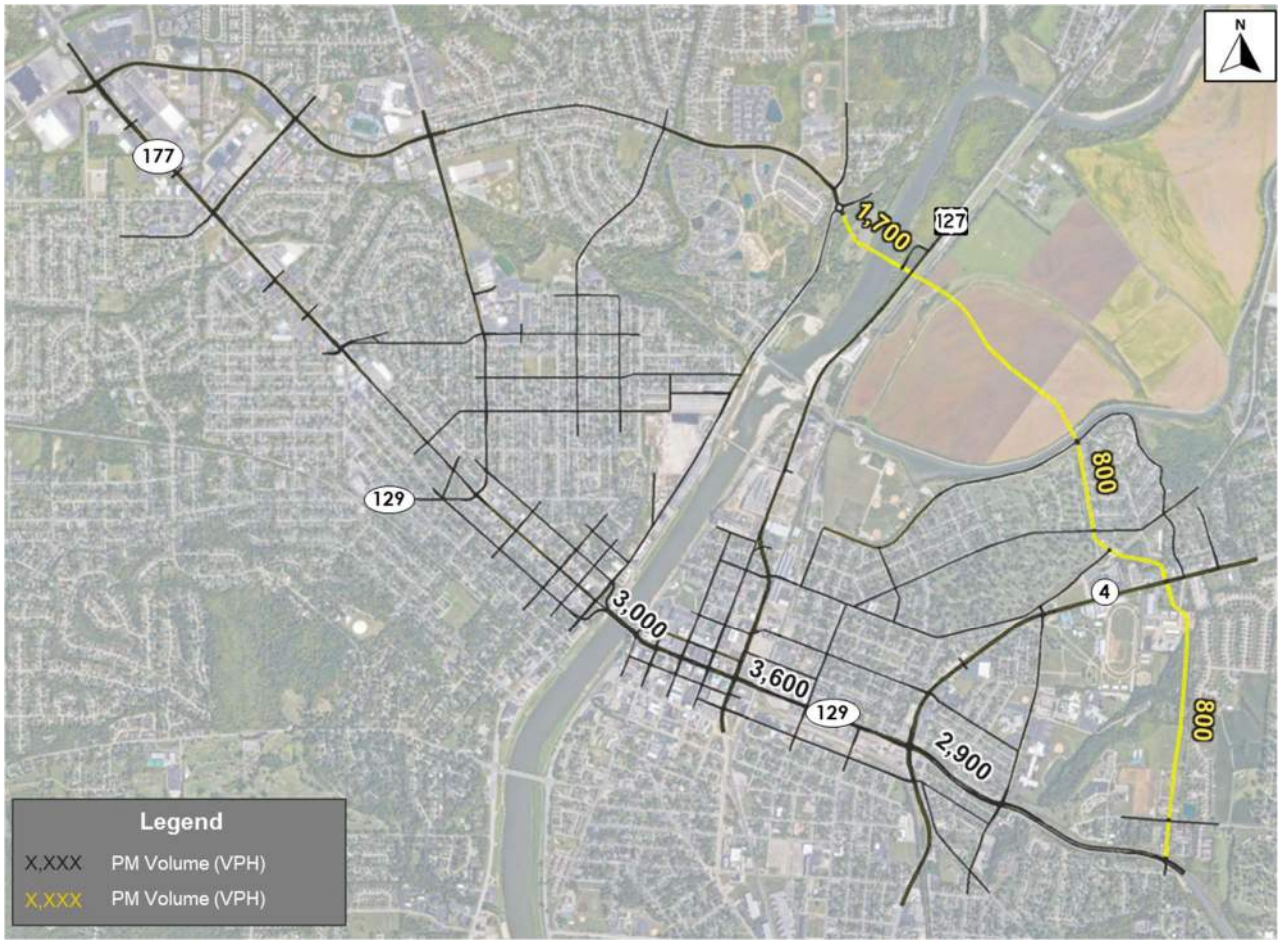

Figure 18: Alternative A Alignment – Expanded Simulation Model

2.3.2.2 Alternative B

Results from the simulation model indicate that Alternative B is expected to carry hourly traffic volumes up to 1,600 VPH, as shown in **Figure 19**. Alternative B is also expected to decrease traffic by 2 percent on SR 129 during the AM peak hour. However, this alternative is not expected to reduce traffic on SR 129 during the PM peak hour. These results are slightly worse than the results produced by the initial model. This is due to the extended model network and additional expected developments added to the expanded model. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative B is expected to reduce yearly VHT during the AM peak by 1,900 VHT. Alternative B is not expected to reduce VHT on SR 129 during the PM peak.

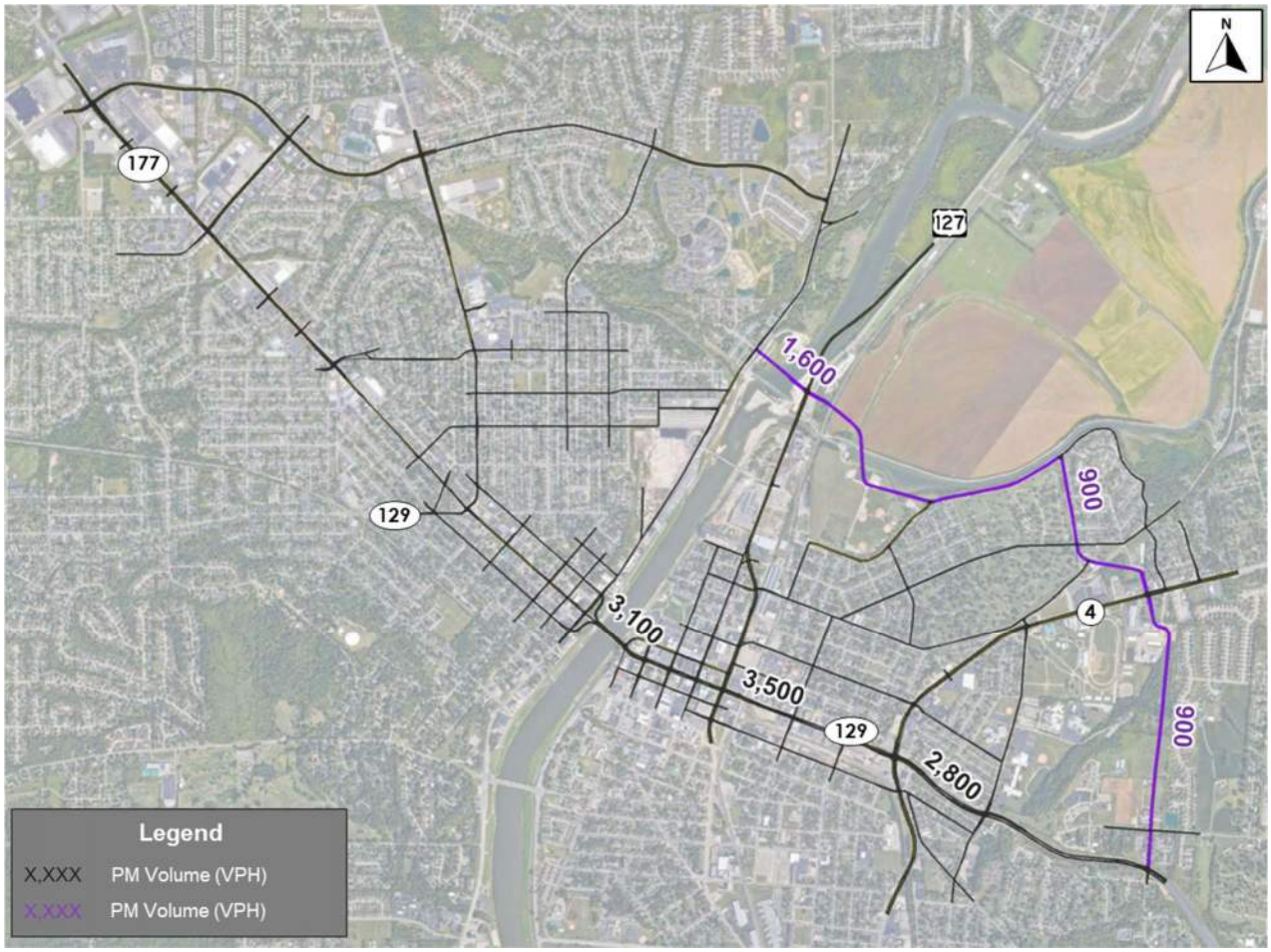

Figure 19: Alternative B Alignment – Expanded Simulation Model

2.3.2.3 Alternative B-E

Results from the simulation model indicate that Alternative B-E is expected to carry hourly traffic volumes up to 1,600 VPH, as shown in **Figure 20**. Alternative B-E is also expected to decrease traffic by 5 percent on SR 129 during the AM peak hour and by 5 percent during the PM peak hour. These results are slightly worse than the results produced by the initial model. This is due to the extended model network and additional expected developments added to the expanded model. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative B-E is expected to reduce yearly VHT during the AM peak by 3,600 VHT and by 9,900 VHT during the PM peak.

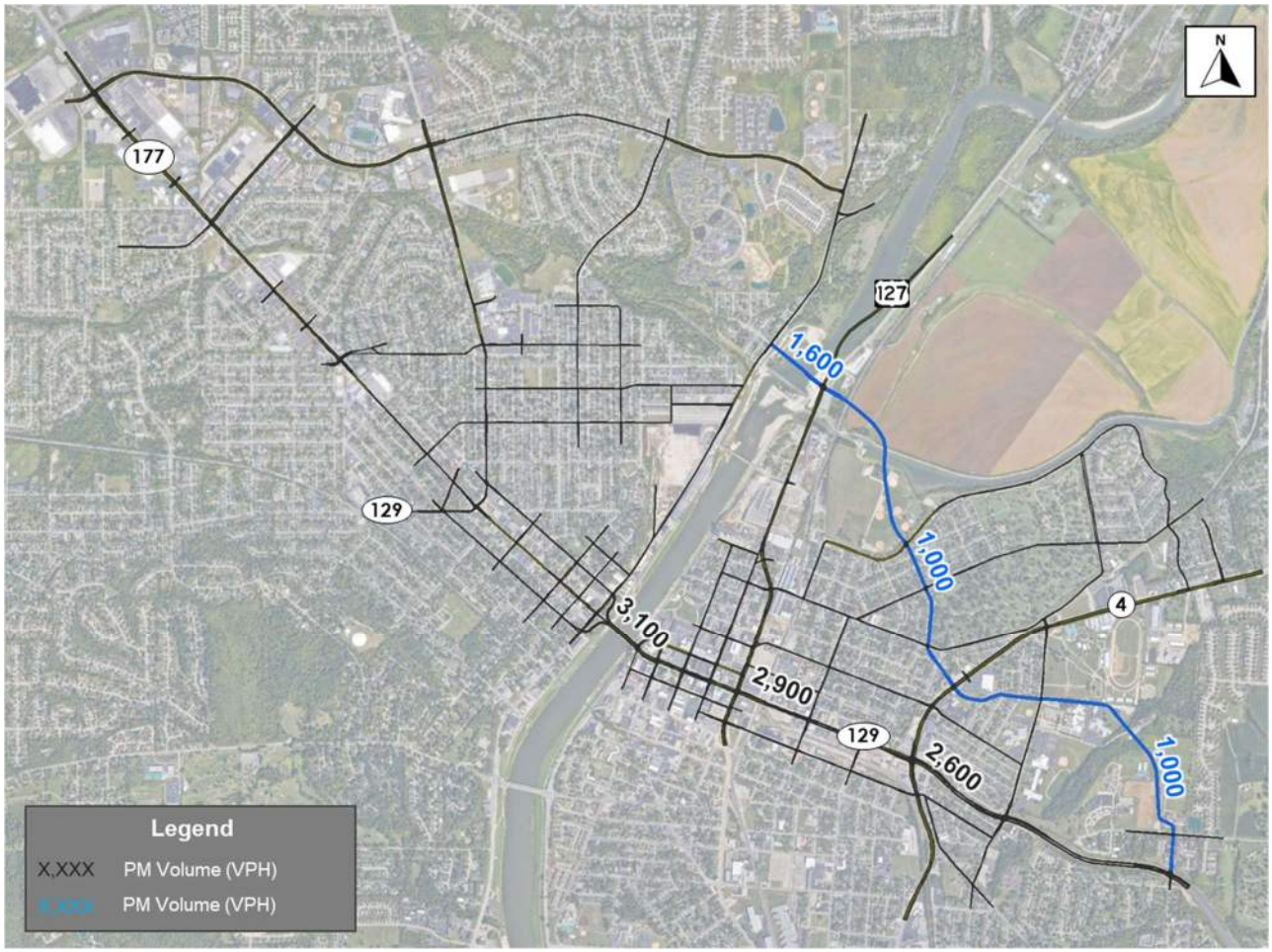

Figure 20: Alternative B-E Alignment – Expanded Simulation Model

2.3.2.4 Alternative E

Results from the simulation model indicate that Alternative E is expected to carry hourly traffic volumes up to 2,100 VPH, as shown in **Figure 21**. Alternative E is also expected to decrease traffic by 14 percent on SR 129 during the AM peak hour and by 15 percent during the PM peak hour. These results are similar to the results produced by the initial model. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative E is expected to reduce yearly VHT during the AM peak by 10,000 VHT and by 22,600 VHT during the PM peak.

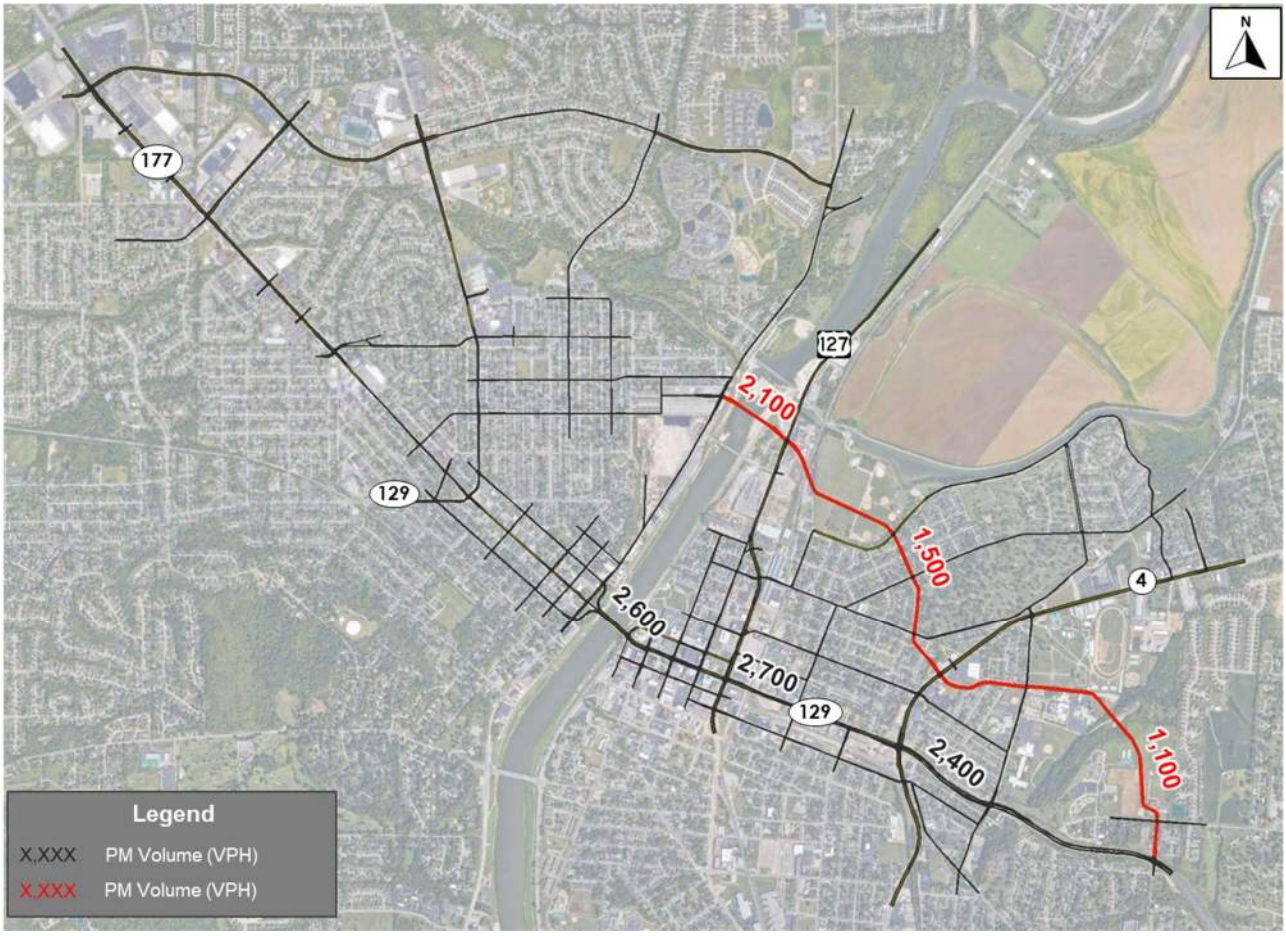

Figure 21: Expanded Model Alternative E

2.3.2.5 Alternative A-B-E

Alternative A-B-E was not analyzed with the initial simulation model. This new scenario combines phase 1 of Alternative A, phase 2 of Alternative B, and phase 3 of Alternative E.

Results from the simulation model indicate that Alternative A-B-E is expected to carry hourly traffic volumes up to 1,700 VPH, as shown in **Figure 22**. Alternative A-B-E is also expected to decrease traffic by 2 percent on SR 129 during the AM peak hour. However, this alternative is not expected to reduce traffic on SR 129 during the PM peak hour. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A-B-E is expected to reduce yearly VHT during the AM peak by 2,100 VHT. Alternative A-B-E is not expected to reduce VHT on SR 129 during the PM peak.

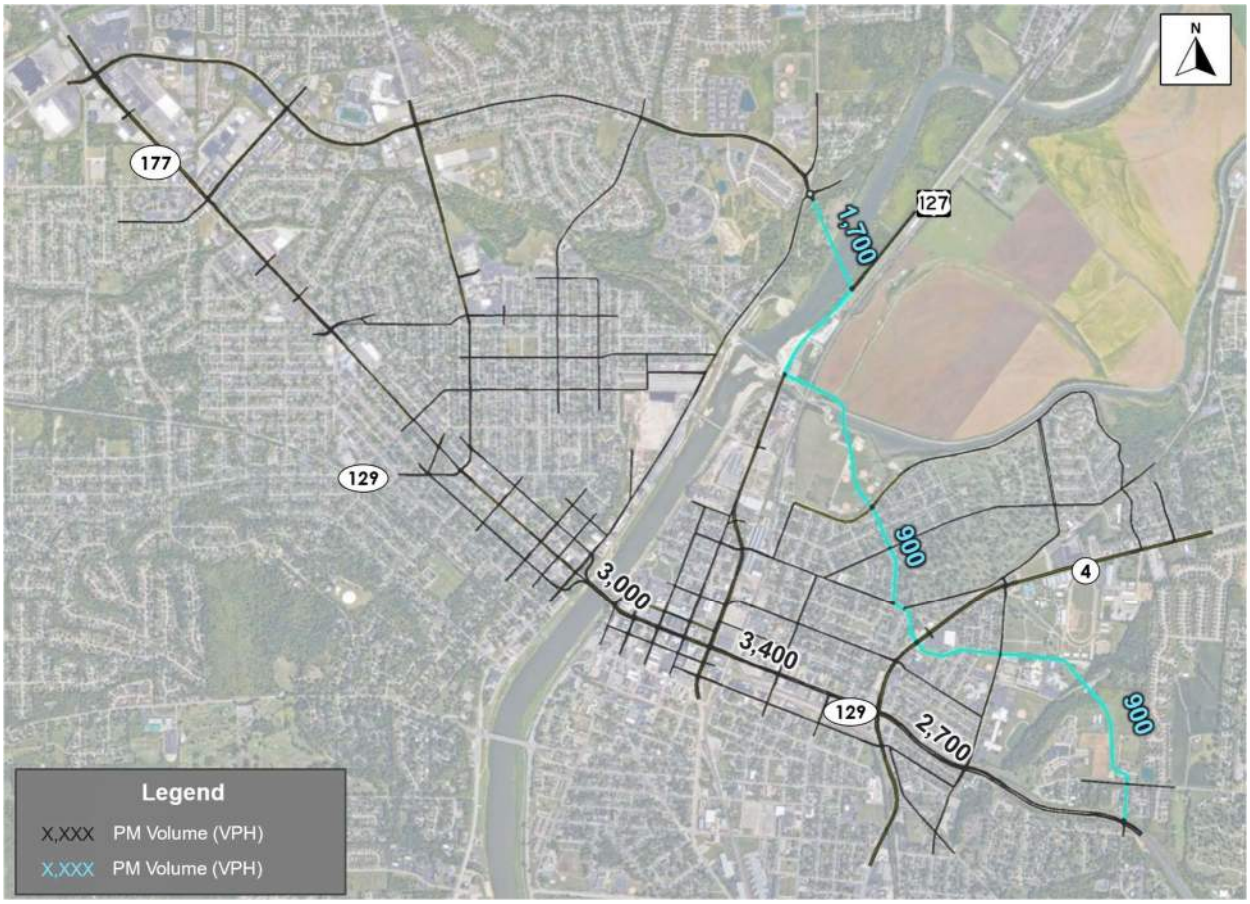

Figure 22: Alternative A-B-E Alignment – Expanded Simulation Model

2.3.2.6 Alternative E-B-E

Alternative E-B-E was not analyzed with the initial simulation model. This new scenario combines phase 1 of Alternative E, phase 2 of Alternative B, and phase 3 of Alternative E.

Results from the simulation model indicate that Alternative E-B-E is expected to carry hourly traffic volumes up to 1,700 VPH, as shown in **Figure 23**. Alternative E-B-E is also expected to decrease traffic by 10 percent on SR 129 during the AM peak hour and by 10 percent during the PM peak hour. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative E-B-E is expected to reduce yearly VHT during the AM peak by 7,500 VHT and by 16,800 VHT during the PM peak.

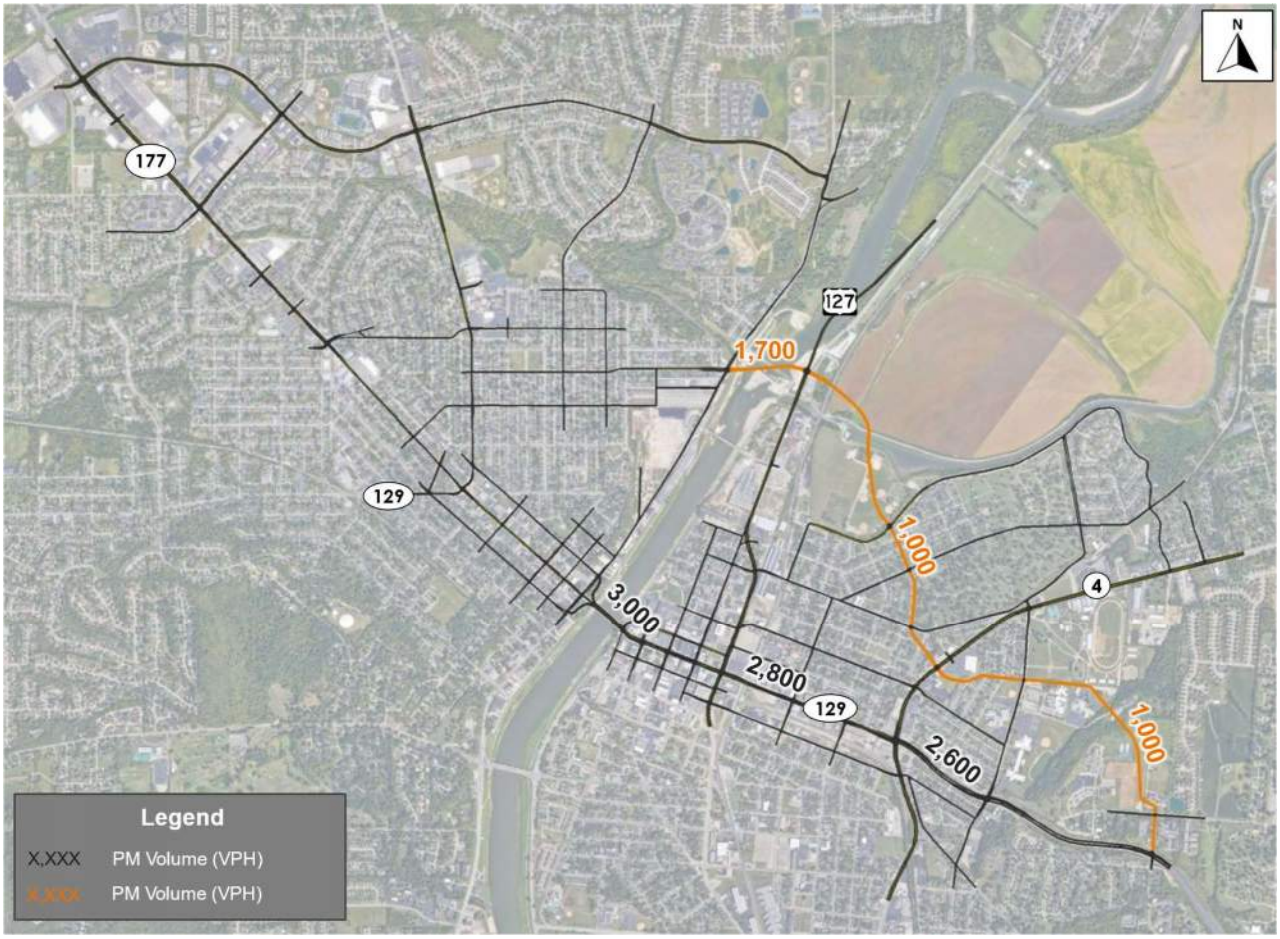

Figure 23: Alternative E-B-E Alignment – Expanded Simulation Model

Comparisons of the expanded AM and PM models are shown in **Table 8** and **Table 9.** Of the six alternatives evaluated in the expanded model, Alternative E is the most effective at reducing traffic volumes on SR 129 and Alternative A and Alternative B are the least effective.

Table 8: SR 129 Traffic Demand Reduction (AM Peak-Hour)

Concept	SR 129 AM Volume						
	Eaton to B St.	B St. to US 127	US 127 to SR 4	SR 4 to Hampshire	Total	% Reduction	SR 129 VHT Savings per year
No-Build	1,700	2,600	3,100	2,800	10,200		
Alt A	1,800	2,500	3,000	2,700	10,000	2%	1,900
Alt B	1,800	2,500	3,000	2,700	10,000	2%	1,900
Alt B-E	1,600	2,500	3,000	2,700	9,800	4%	3,600
Alt E	1,500	2,200	2,700	2,400	8,800	14%	10,000
Alt A-B-E	1,800	2,500	3,000	2,700	10,000	2%	2,100
Alt E-B-E	1,500	2,300	2,800	2,500	9,100	11%	7,500

Table 9: SR 129 Traffic Demand Reduction (PM Peak-Hour)

Concept	SR 129 PM Volume						
	Eaton to B St.	B St. to US 127	US 127 to SR 4	SR 4 to Hampshire	Total	% Reduction	SR 129 VHT Savings per year
No-Build	2,000	2,900	3,300	3,100	11,300		
Alt A	2,700	3,000	3,600	2,900	12,200	-8%	N/A
Alt B	2,800	3,000	3,500	2,800	12,100	-7%	N/A
Alt B-E	2,200	3,100	2,900	2,600	10,800	4%	9,900
Alt E	1,900	2,600	2,700	2,400	9,600	15%	22,600
Alt A-B-E	2,800	3,000	3,400	2,700	11,900	-5%	N/A
Alt E-B-E	1,900	3,000	2,800	2,600	10,300	9%	16,800

2.4 DYNAMIC TRAFFIC ASSIGNMENT

A review of the expanded models indicated that several of the scenarios did not result in traffic pattern changes as expected. The congestion on SR 129 will only worsen with the introduction of Spooky Nook and other development traffic. Local drivers will have knowledge of the congested routes and make informed decisions based on previous experiences. Additionally, regional traffic patterns could also shift with the introduction of a new route. Regional "through" trips often use navigation tools to help determine the best route possible. To reflect the traffic pattern changes due to these informed drivers, dynamic traffic assignment (DTA) was implemented. DTA is tool in TransModeler used to produce a set of time-period specific congested travel times and turning delays that reflect recurring congestion patterns. Whereas in a static assignment each set of drivers has a pre-defined shortest path based on travel time (as shown in **Figure 24**), drivers using DTA incorporate knowledge of the congested travel times and delays of alternative routes over a series of simulations (50 runs) and make incrementally informed route choices until they can no longer reduce travel time, as shown in **Figure 25**. The simulation runs conclude when a convergence rate of 1.5 percent is reached, meaning the travel times changed less than 1.5 percent from the previous run.

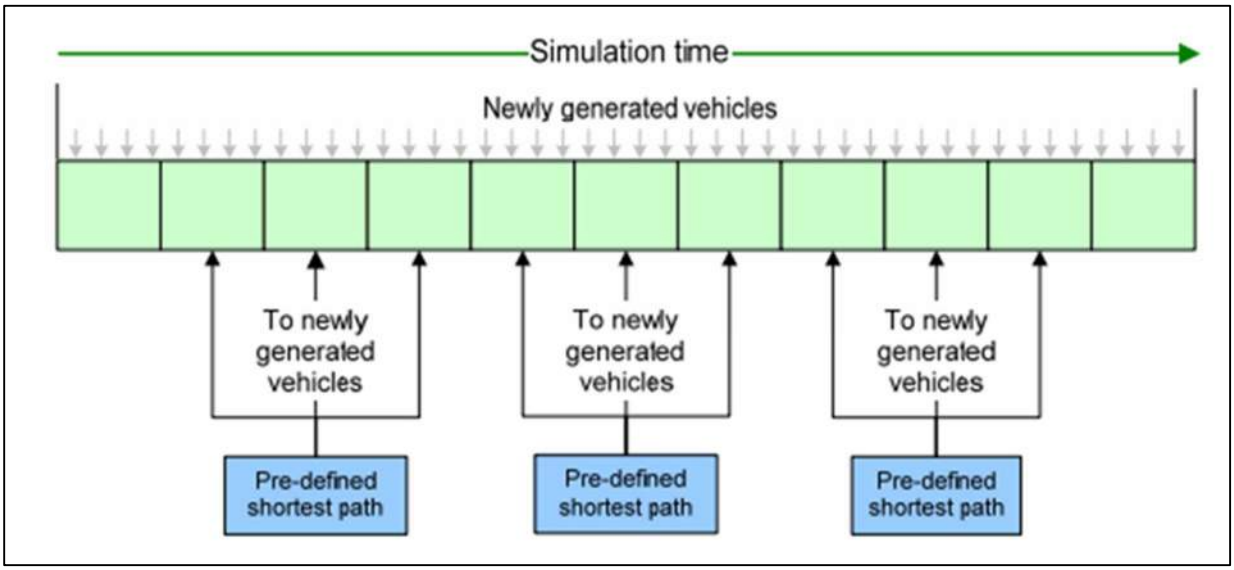

Figure 24: Static Traffic Assignment Flow Chart

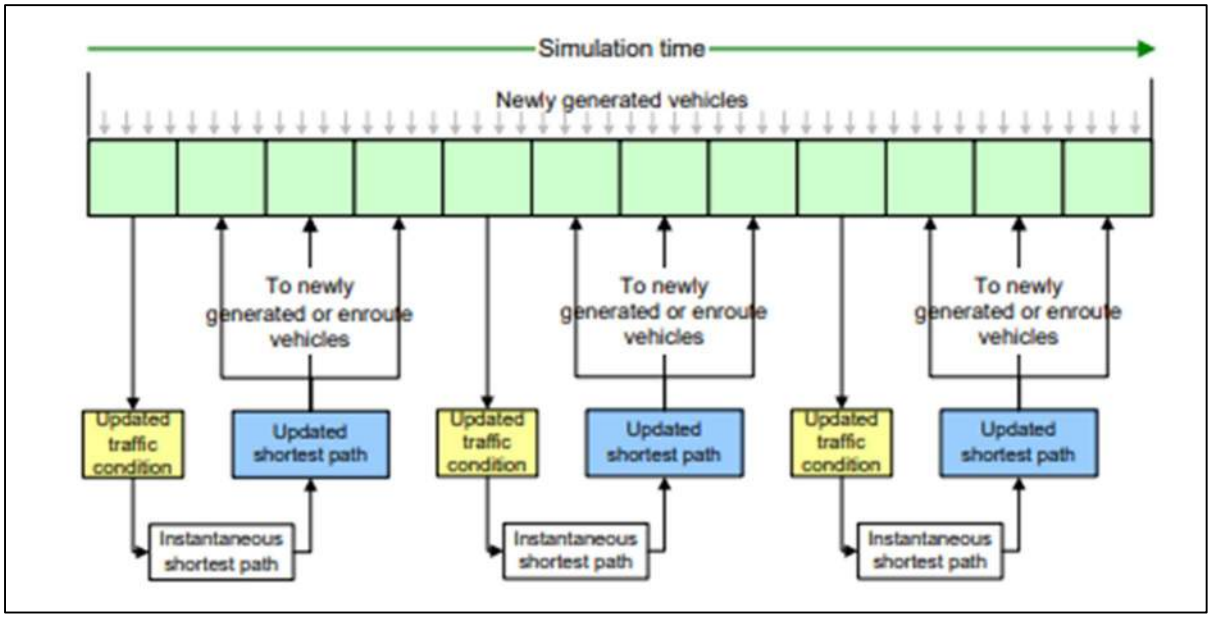

Figure 25: Dynamic Traffic Assignment Flow Chart

2.4.1 Dynamic Traffic Assignment (DTA) Results

The three most effective expanded model alternatives, Alternative E, Alternative E-B-E, and Alternative A-B-E, were run with DTA to determine the impacts of regional traffic changes.

2.4.1.1 Alternative E

Results from the Alternative E run with DTA did not reveal significant changes from the run without DTA.

2.4.1.2 Alternative E-B-E

Results from the simulation model indicate that with DTA, Alternative E-B-E is expected to carry hourly traffic volumes up to 1,900 vehicles per hour (VPH), as shown in **Figure 26**. Alternative E-B-E is also expected to decrease traffic by 11 percent on SR 129 during the AM peak hour and by 12 percent during the PM peak hour. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative E-B-E is expected to reduce yearly VHT during the AM peak by 8,100 VHT and by 17,900 VHT during the PM peak.

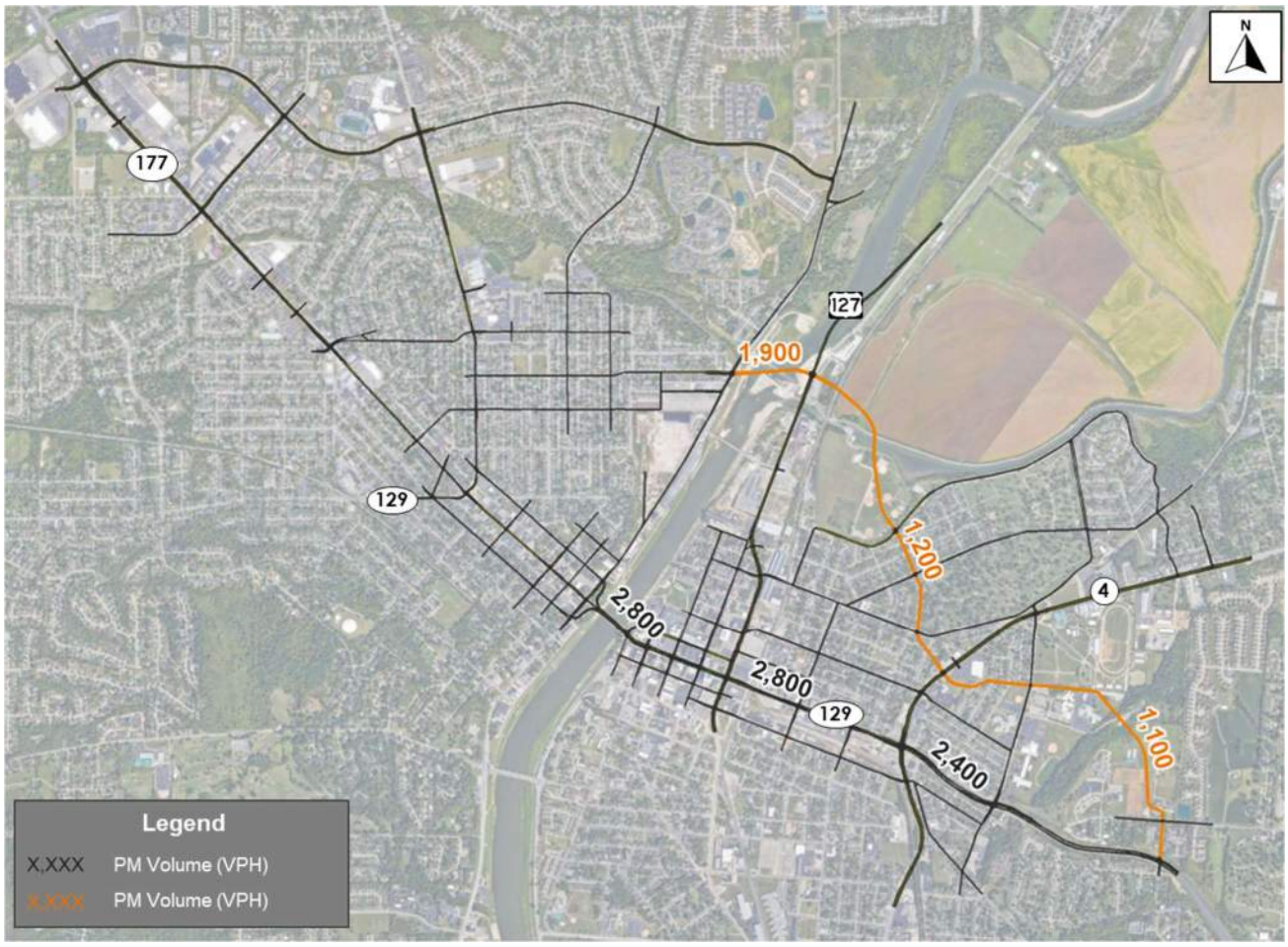

Figure 26: Expanded Model with DTA Alternative E-B-E

2.4.1.3 Alternative A-B-E

Results from the simulation model indicate that with DTA, Alternative A-B-E is expected to carry hourly traffic volumes up to 2,100 vehicles per hour (VPH), as shown in **Figure 27**. Alternative A-B-E is expected to decrease traffic by 6 percent on SR 129 during the AM peak hour and by 6 percent during the PM peak hour. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A-B-E is expected to reduce yearly VHT during the AM peak by 5,700 VHT and by 13,600 VHT during the PM peak.

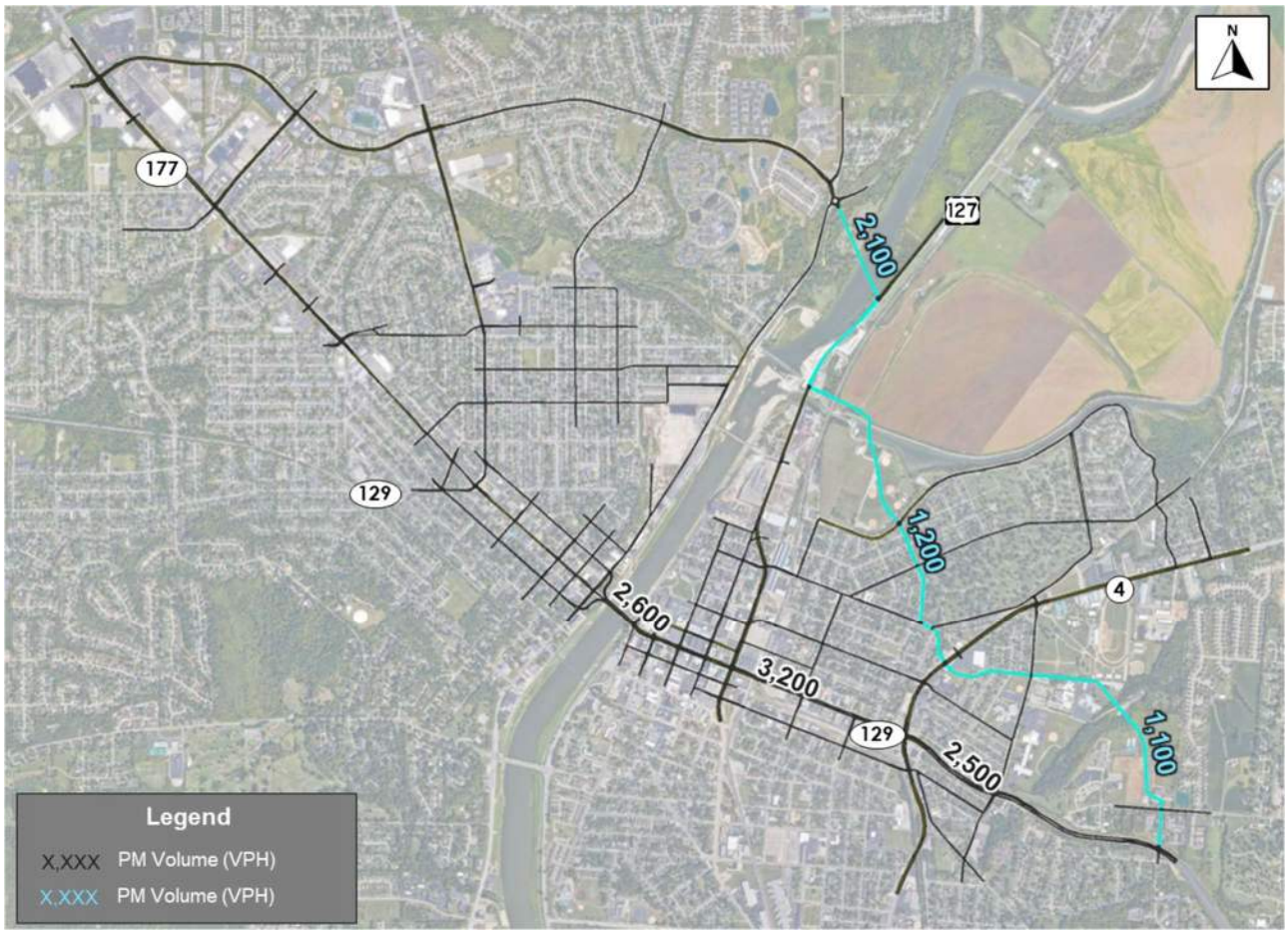

Figure 27: Expanded Model with DTA Alternative A-B-E

2.4.2 Additional Analyses

Two additional alternatives were analyzed with DTA to determine the feasibility of a new Phase 2 alignment: Alternative E-F1 and Alternative A-F1.

2.4.2.1 Alternative E-F1

Alternative E-F1 combines phase 1 of Alternative E, phase 3 of Alternative E, and a new phase 2 (F1) which uses Heaton Street, North 8th Street, and Vine Street to connect SR 4 to US 127 south of the existing Black Street Bridge.

Results from the simulation model indicate that with DTA, Alternative E-F1 is expected to carry hourly traffic volumes up to 1,900 vehicles per hour (VPH), as shown in **Figure 28**. Alternative E-F1 is also expected to decrease traffic by 12 percent on SR 129 during the AM peak hour and by 13 percent during the PM peak hour. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative E-F1 is expected to reduce yearly VHT during the AM peak by 8,700 VHT and by 18,400 VHT during the PM peak.

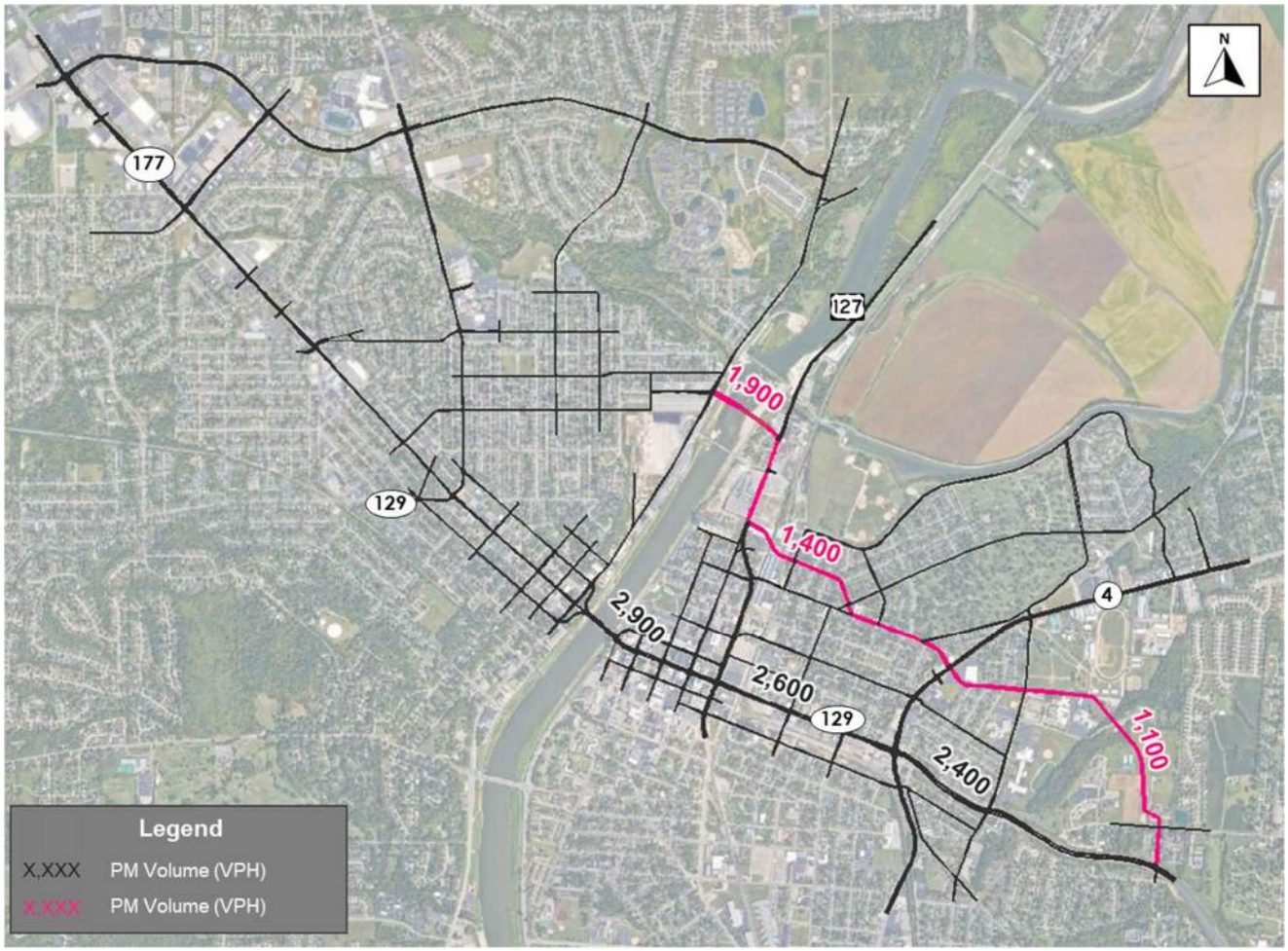

Figure 28: Expanded Model with DTA Alternative E-F1

2.4.2.2 Alternative A-F1

Alternative A-F1 combines phase 1 of Alternative A, phase 2 of F1 as discussed above, and phase 3 of Alternative E.

Results from the simulation model indicate that with DTA, Alternative A-F1 is expected to carry hourly traffic volumes up to 2,100 vehicles per hour (VPH), as shown in **Figure 29**. Alternative A-F1 is also expected to decrease traffic by seven percent on SR 129 during the AM peak hour and by seven percent during the PM peak hour. Based on travel time savings on SR 129 compared to the E+C Alternative, Alternative A-F1 is expected to reduce yearly VHT during the AM peak by 6,200 VHT and by 14,800 VHT during the PM peak.

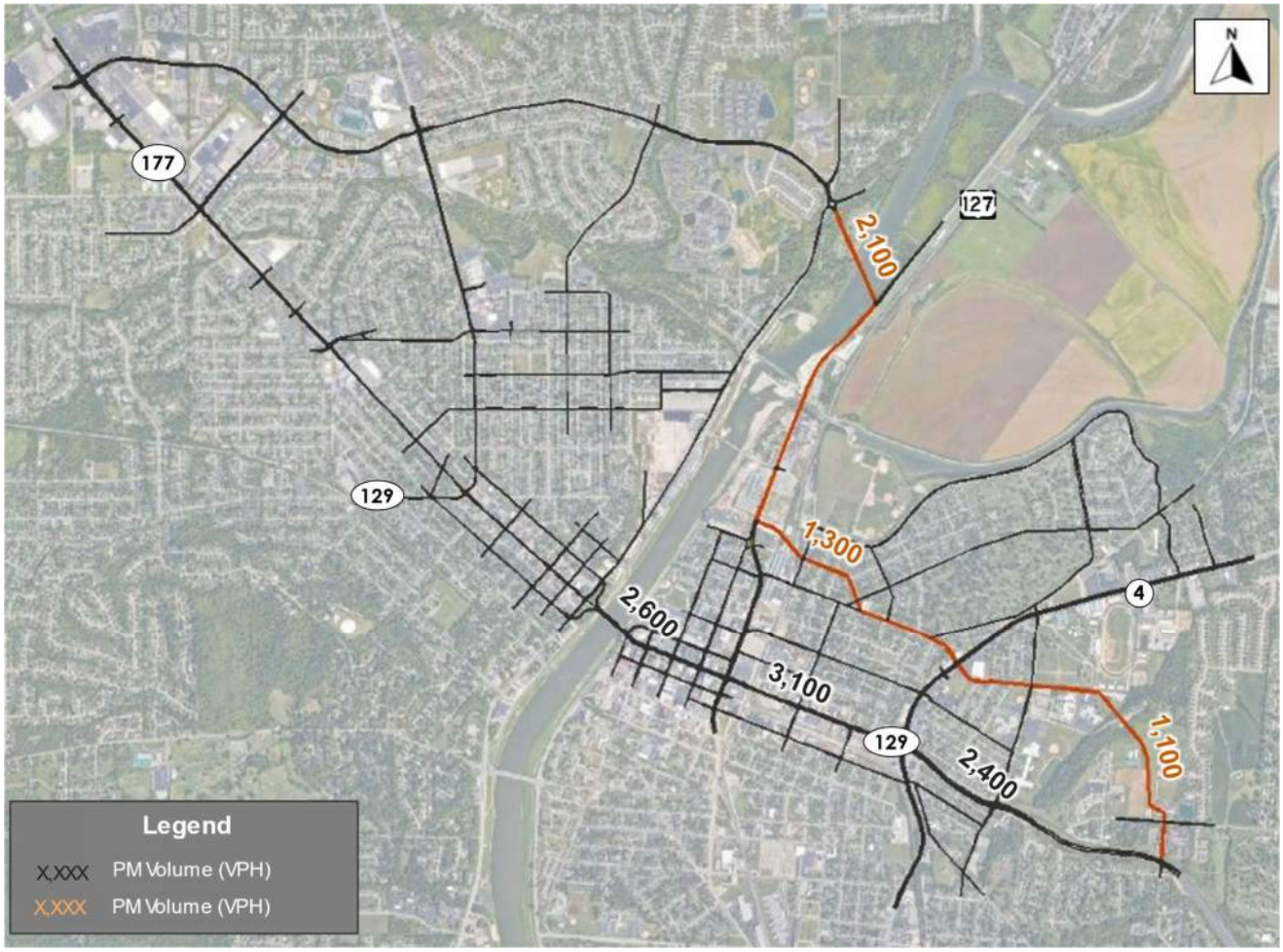

Figure 29: Expanded Model with DTA Alternative A-F1

Comparisons of the expanded AM and PM models run with DTA are shown in **Table 10** and **Table 11.** Of the alternatives evaluated with DTA, Alternative E is the most effective at reducing traffic volumes on SR 129 followed by Alternative E-F1.

Table 10: SR 129 Traffic Demand Reduction with DTA (AM Peak-Hour)

Concept	SR 129 AM Volume						
	Eaton to B St.	B St. to US 127	US 127 to SR 4	SR 4 to Hampshire	Total	% Reduction	SR 129 VHT Savings per year
No-Build	1,700	2,600	3,100	2,800	10,200		
Alt E	1,500	2,200	2,700	2,400	8,800	14%	10,000
Alt E-B-E	1,600	2,300	2,700	2,500	9,100	11%	8,100
Alt A-B-E	1,700	2,400	2,900	2,700	9,700	6%	5,700
Alt E-F1	1,600	2,300	2,700	2,500	9,100	12%	8,700
Alt A-F1	1,700	2,400	2,800	2,600	9,500	7%	6,200

Table 11: SR 129 Traffic Demand Reduction with DTA (PM Peak-Hour)

Concept	SR 129 PM Volume						
	Eaton to B St.	B St. to US 127	US 127 to SR 4	SR 4 to Hampshire	Total	% Reduction	SR 129 VHT Savings per year
No-Build	2,000	2,900	3,300	3,100	11,300		
Alt E	1,900	2,600	2,700	2,400	9,600	15%	22,600
Alt E-B-E	1,900	2,900	2,700	2,500	10,000	12%	17,900
Alt A-B-E	2,400	2,600	3,200	2,500	10,700	6%	13,600
Alt E-F1	1,900	2,900	2,600	2,400	9,800	13%	18,400
Alt A-F1	2,400	2,600	3,100	2,400	10,500	7%	14,800

2.5 EXPECTED TRAVEL TIME SAVINGS

The expanded model alternatives were also analyzed to determine how they reduce the expected travel time (TT) from various points in and around the City of Hamilton. The percent reduction in TT was computed from the High Street intersection with Hampshire Drive to Spooky Nook, Kettering Health Hamilton Hospital, Hamilton High School, north of B Street/Elkton Road intersection, and the Main Street intersection with NW Washington Boulevard.

2.5.1 Hampshire to Spooky Nook

The following presents travel time changes between each alternative and the E+C scenario between Hampshire and Spooky Nook, as shown in **Figure 30**. The new crossing for Alternative E provides the most travel time savings, followed by Alternative E-F1 and Alternative E-B-E.

Alternative E

58% TT Reduction (New Crossing)

26% TT Reduction (Main St. Crossing)

Alternative E-B-E

53% TT Reduction (New Crossing)

9% TT Reduction (Main St. Crossing)

Alternative E-F1

55% TT Reduction (New Crossing)

10% TT Reduction (Main St. Crossing)

Alternative A-B-E

2% TT Increase (New Crossing)

9% TT Reduction (Main St. Crossing)

Alternative A-F1

2% TT Increase (New Crossing)

10% TT Reduction (Main St. Crossing)

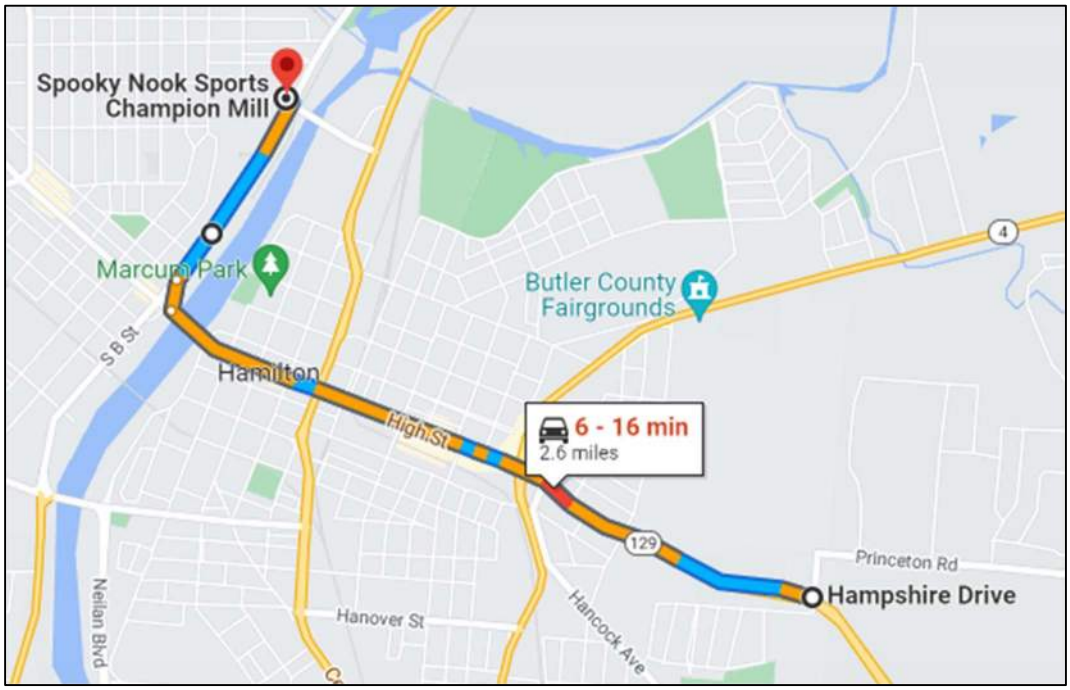

Figure 30: Existing Travel Time to Spooky Nook (Google Maps)

2.5.2 Hampshire to Kettering Health Hospital Hamilton

The following presents travel time changes between each alternative and the E+C scenario between Hampshire and Kettering Health Hospital Hamilton, as shown in **Figure 31**. The new crossing for Alternative E provides the most travel time savings, followed by Alternative E-F1 and Alternative E-B-E.

Alternative E

34% TT Reduction (New Crossing)

26% TT Reduction (Main St. Crossing)

Alternative E-B-E

29% TT Reduction (New Crossing)

7% TT Reduction (Main St. Crossing)

Alternative E-F1

31% TT Reduction (New Crossing)

9% TT Reduction (Main St. Crossing)

Alternative A-B-E

23% TT Increase (New Crossing)

7% TT Reduction (Main St. Crossing)

Alternative A-F1

23% TT Increase (New Crossing)

7% TT Reduction (Main St. Crossing)

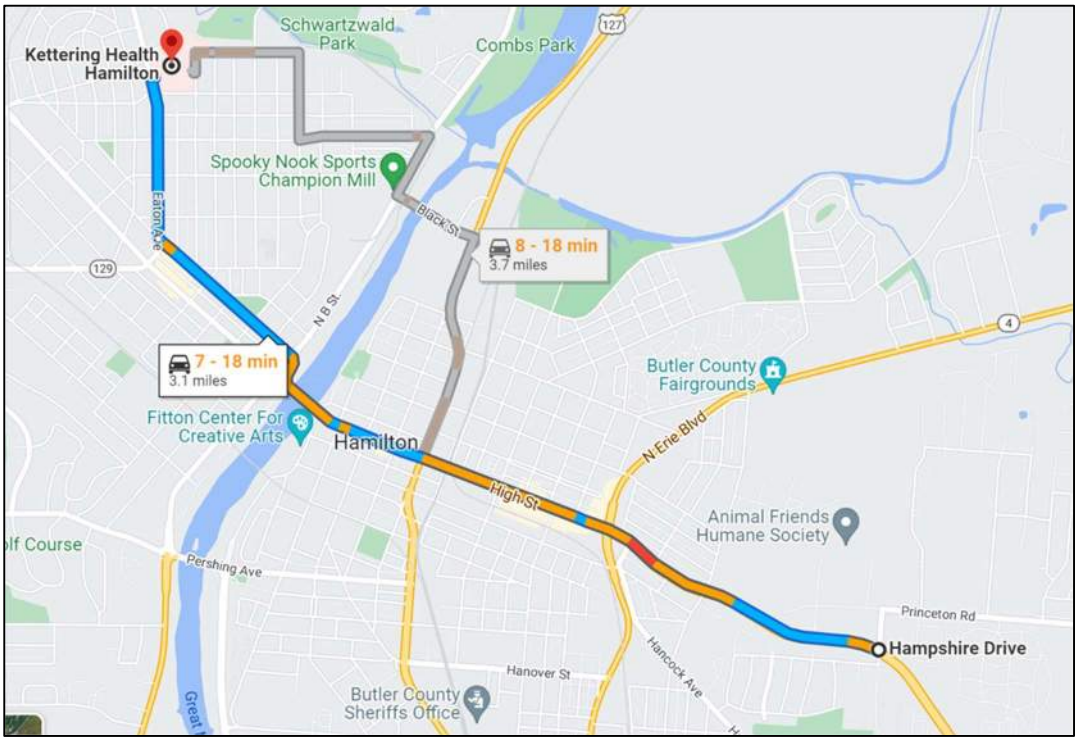

Figure 31: Existing Travel Time to Kettering Health Hospital (Google Maps)

2.5.3 Hampshire to Hamilton High School

The following presents travel time changes between each alternative and the E+C scenario between Hampshire and Hamilton High School, as shown in **Figure 32**. The new crossing for Alternatives A-B-E and Alternative A-F1 provide the most travel time savings. Alternative E provides the most travel time savings across the Main Street bridge.

Alternative E

27% TT Reduction (New Crossing)

21% TT Reduction (Main St. Crossing)

Alternative E-B-E

23% TT Reduction (New Crossing)

7% TT Reduction (Main St. Crossing)

Alternative E-F1

25% TT Reduction (New Crossing)

10% TT Reduction (Main St. Crossing)

Alternative A-B-E

33% TT Reduction (New Crossing)

7% TT Reduction (Main St. Crossing)

Alternative A-F1

33% TT Reduction (New Crossing)

8% TT Reduction (Main St. Crossing)

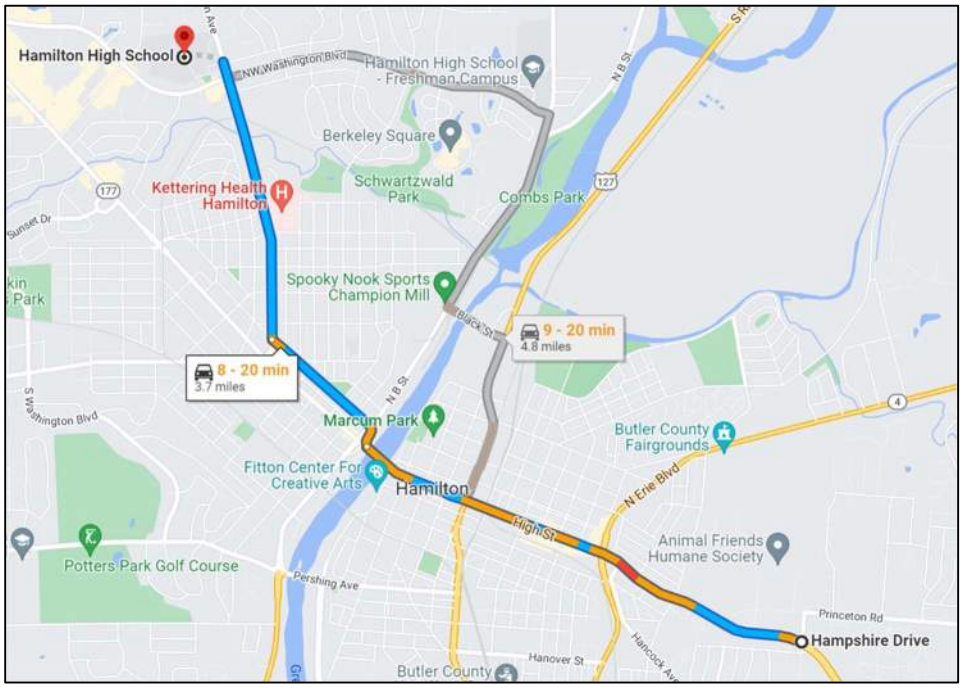

Figure 32: Existing Travel Time to Hamilton High School (Google Maps)

2.5.4 Hampshire to North of B St./Elkton Rd. Intersection

The following presents travel time changes between each alternative and the E+C scenario between Hampshire and north of the B St. intersection with Elkton Rd., as shown in **Figure 33**. The new crossing for Alternative A-B-E and Alternative A-F1 provide the most travel time savings. Alternative E provides the most travel time savings across the Main Street bridge.

Alternative E

44% TT Reduction (New Crossing)

22% TT Reduction (Main St. Crossing)

Alternative E-B-E

47% TT Reduction (New Crossing)

8% TT Reduction (Main St. Crossing)

Alternative E-F1

44% TT Reduction (New Crossing)

10% TT Reduction (Main St. Crossing)

Alternative A-B-E

51% TT Reduction (New Crossing)

10% TT Reduction (Main St. Crossing)

Alternative A-F1

51% TT Reduction (New Crossing)

10% TT Increase (Main St. Crossing)

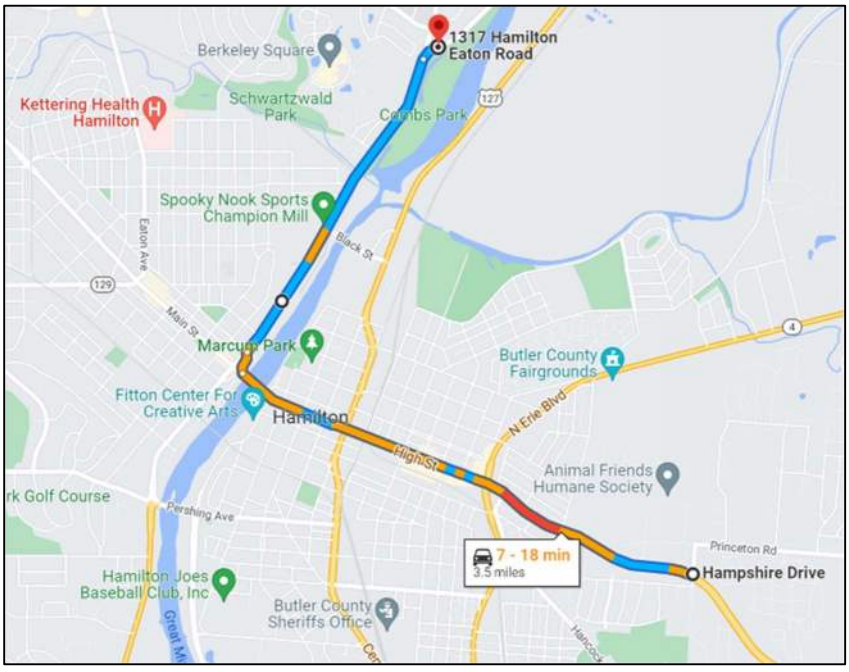

Figure 33: Existing Travel Time to B St./Elkton Rd. (Google Maps)

2.5.5 Hampshire to North of NW Washington/Main St. Intersection

The following presents travel time changes between each alternative and the E+C scenario between Hampshire and north of the NW Washington intersection with Main Street, as shown in **Figure 34**. The new crossing for Alternative A-B-E and Alternative A-F1 provide the most travel time savings. Alternative E provides the most travel time savings across the Main Street bridge.

Alternative E

20% TT Reduction (New Crossing)

25% TT Reduction (Main St. Crossing)

Alternative E-B-E

6% TT Reduction (New Crossing)

8% TT Reduction (Main St. Crossing)

Alternative E-F1

9% TT Reduction (New Crossing)

9% TT Reduction (Main St. Crossing)

Alternative A-B-E

23% TT Reduction (New Crossing)

10% TT Reduction (Main St. Crossing)

Alternative A-F1

23% TT Reduction (New Crossing)

10% TT Reduction (Main St. Crossing)

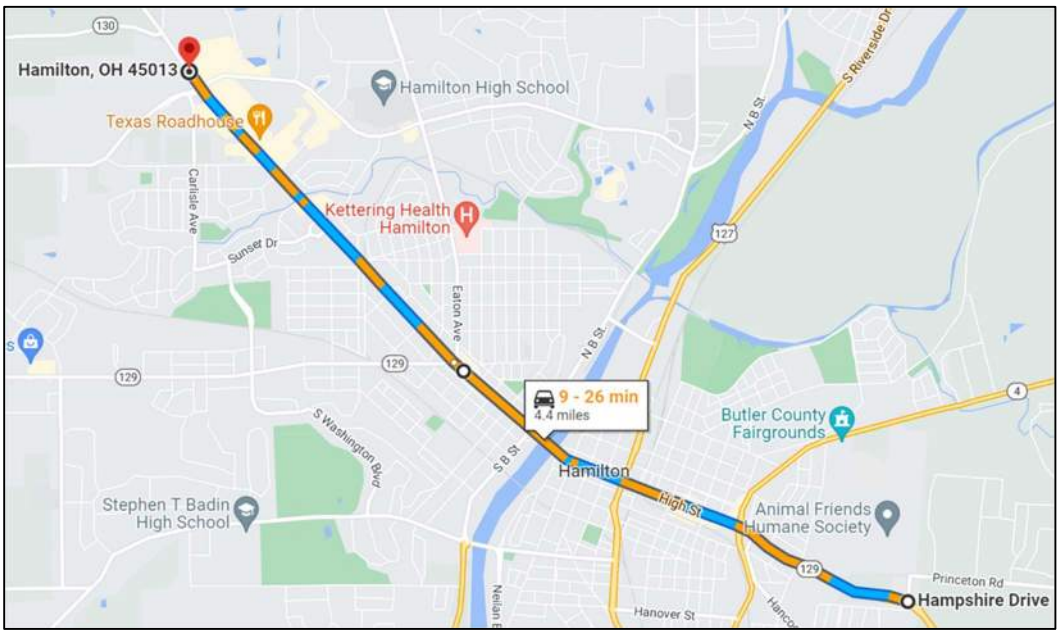

Figure 34: Existing Travel Time to Main St. at NW Washington Blvd. (Google Maps)

2.6 CONCLUSION

Alternatives closer to SR 129 and the Black Street bridge's river crossing, which will be replaced as part of this project, generally performed better than alternatives that were further north. Based on results from both the initial and expanded models, Alternative E is the most effective alternative and provides the most traffic relief on congested routes in the study area such as SR 129. Alternative E is expected to carry the highest traffic volume of the alternatives, up to 2,100 vehicles per hour (VPH), and is expected to divert 14 to 15 percent of peak-hour traffic off of SR 129. Alternative E-F1 is the second most effective alternative, carrying up to 1,900 VPH and diverting 12 to 13 percent of traffic from SR 129 during the peak hours. Alternative E-B-E was found to be the third most effective alternative, carrying up to 1,900 VPH and providing an 11 to 12 percent reduction in traffic on SR 129. Alternative A-F1 was the next most effective alternative, with up to 2,100 VPH using the new route and seven percent diversion from SR 129.