APPENDIX H

2020 & 2040 No-Build Synchro Intersection Analysis

Queues

1: SW 12th Avenue & Hillsboro Blvd

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	277	2168	321	1457	495	98	147	196	22	22	22
v/c Ratio	0.89	0.68	0.90	0.51	0.44	0.28	0.77	0.38	0.31	0.30	0.06
Control Delay	102.0	23.3	108.4	19.1	3.1	75.1	102.7	8.1	94.0	93.2	0.3
Queue Delay	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.0	23.3	108.4	19.3	3.3	75.1	102.7	8.1	94.0	93.2	0.3
Queue Length 50th (ft)	320	570	200	294	39	56	172	0	27	27	0
Queue Length 95th (ft)	#473	723	#290	443	102	85	247	67	63	63	0
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	331	3187	356	2859	1254	610	331	514	252	259	387
Starvation Cap Reductn	0	0	0	665	202	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.68	0.90	0.66	0.47	0.16	0.44	0.38	0.09	0.08	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	1830	165	295	1340	455	90	135	180	30	10	20
Future Volume (vph)	255	1830	165	295	1340	455	90	135	180	30	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	5022		3433	5085	1583	3433	1863	1583	1681	1726	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	5022		3433	5085	1583	3433	1863	1583	1681	1726	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	277	1989	179	321	1457	495	98	147	196	33	11	22
RTOR Reduction (vph)	0	4	0	0	0	107	0	0	158	0	0	17
Lane Group Flow (vph)	277	2164	0	321	1457	388	98	147	38	22	22	5
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	1	6		5	2	3	4	4	5	3	3	1
Permitted Phases						2			4			3
Actuated Green, G (s)	29.5	112.0		16.7	99.2	106.9	18.6	18.6	35.3	7.7	7.7	37.2
Effective Green, g (s)	31.5	114.0		18.7	101.2	110.9	18.6	18.6	35.3	7.7	7.7	37.2
Actuated g/C Ratio	0.18	0.63		0.10	0.56	0.62	0.10	0.10	0.20	0.04	0.04	0.21
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5
Lane Grp Cap (vph)	309	3180		356	2858	975	354	192	310	71	73	327
v/s Ratio Prot	c0.16	c0.43		0.09	0.29	c0.02	0.03	c0.08	0.01	0.01	0.01	0.00
v/s Ratio Perm						0.22			0.01			0.00
v/c Ratio	0.90	0.68		0.90	0.51	0.40	0.28	0.77	0.12	0.31	0.30	0.01
Uniform Delay, d1	72.7	21.3		79.7	24.2	17.6	74.5	78.6	59.6	83.6	83.5	56.8
Progression Factor	1.00	1.00		1.05	0.73	0.28	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.0	1.2		22.1	0.6	0.1	0.2	15.0	0.1	0.9	0.8	0.0
Delay (s)	98.6	22.5		106.1	18.2	5.0	74.6	93.6	59.7	84.5	84.4	56.8
Level of Service	F	C		F	B	A	E	F	E	F	F	E
Approach Delay (s)		31.1			27.7			74.3			75.2	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Queues

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1413	779	1505	542	742
v/c Ratio	0.28	0.49	0.51	0.83	0.72
Control Delay	0.1	2.7	17.6	62.1	52.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	2.7	17.6	62.1	52.1
Queue Length 50th (ft)	0	38	389	581	427
Queue Length 95th (ft)	0	62	515	653	448
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)		150			
Base Capacity (vph)	5085	1583	2947	889	1401
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.49	0.51	0.61	0.53

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Traffic Volume (vph)	0	1300	740	0	1385	0	515	0	705	0	0
Future Volume (vph)	0	1300	740	0	1385	0	515	0	705	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
Lane Util. Factor		0.91	1.00		0.91		1.00		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		5085	1583		5085		1770		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		5085	1583		5085		1770		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1413	779	0	1505	0	542	0	742	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1413	779	0	1505	0	542	0	742	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		180.0	180.0		102.3		64.7		64.7		
Effective Green, g (s)		180.0	180.0		104.3		66.7		66.7		
Actuated g/C Ratio		1.00	1.00		0.58		0.37		0.37		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2946		655		1032		
v/s Ratio Prot		0.28			0.30		c0.31		0.27		
v/s Ratio Perm			c0.49								
v/c Ratio		0.28	0.49		0.51		0.83		0.72		
Uniform Delay, d1		0.0	0.0		22.6		51.4		48.6		
Progression Factor		1.00	1.00		0.71		1.00		1.00		
Incremental Delay, d2		0.1	0.8		0.6		8.3		2.3		
Delay (s)		0.1	0.8		16.7		59.7		50.9		
Level of Service		A	A		B		E		D		
Approach Delay (s)		0.4			16.7			54.6		0.0	
Approach LOS		A			B			D		A	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lane Group	EBT	WBT	NBR
Lane Group Flow (vph)	1364	1549	758
v/c Ratio	0.61	0.30	0.58
Control Delay	18.2	0.1	19.4
Queue Delay	0.0	0.0	0.0
Total Delay	18.2	0.1	19.4
Queue Length 50th (ft)	240	0	167
Queue Length 95th (ft)	280	m0	230
Internal Link Dist (ft)	286	256	
Turn Bay Length (ft)			
Base Capacity (vph)	2231	5085	1299
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.61	0.30	0.58

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↱↱
Traffic Volume (vph)	1255	0	0	1425	0	720
Future Volume (vph)	1255	0	0	1425	0	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5		4.5
Lane Util. Factor	0.91			0.91		0.88
Frt	1.00			1.00		0.85
Flt Protected	1.00			1.00		1.00
Satd. Flow (prot)	5085			5085		2787
Flt Permitted	1.00			1.00		1.00
Satd. Flow (perm)	5085			5085		2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	1364	0	0	1549	0	758
RTOR Reduction (vph)	0	0	0	0	0	15
Lane Group Flow (vph)	1364	0	0	1549	0	743
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Turn Type	NA			NA		Prot
Protected Phases	6			2		5
Permitted Phases						
Actuated Green, G (s)	37.5			90.0		39.5
Effective Green, g (s)	39.5			90.0		41.5
Actuated g/C Ratio	0.44			1.00		0.46
Clearance Time (s)	6.5			6.5		6.5
Vehicle Extension (s)	3.0			3.0		3.0
Lane Grp Cap (vph)	2231			5085		1285
v/s Ratio Prot	c0.27			0.30		c0.27
v/s Ratio Perm						
v/c Ratio	0.61			0.30		0.58
Uniform Delay, d1	19.4			0.0		17.8
Progression Factor	0.88			1.00		1.00
Incremental Delay, d2	1.2			0.1		0.6
Delay (s)	18.2			0.1		18.5
Level of Service	B			A		B
Approach Delay (s)	18.2			0.1	18.5	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	315	1717	114	76	1902	435	87	147	33	5	71
v/c Ratio	0.96	0.51	0.10	0.60	0.68	1.76	0.35	0.43	0.40	0.08	0.32
Control Delay	98.9	12.7	0.9	100.5	30.4	395.7	76.5	13.6	80.1	87.0	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.9	12.7	0.9	100.5	30.4	395.7	76.5	13.6	80.1	87.0	3.8
Queue Length 50th (ft)	391	297	4	88	578	~697	96	0	33	6	0
Queue Length 95th (ft)	#570	386	9	150	630	#924	160	72	70	22	0
Internal Link Dist (ft)		775			631		513			401	
Turn Bay Length (ft)	300		150	100		125					340
Base Capacity (vph)	331	3393	1099	149	2792	247	558	577	82	393	470
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.51	0.10	0.51	0.68	1.76	0.16	0.25	0.40	0.01	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	290	1580	105	70	1670	80	400	80	135	30	5	65
Future Volume (vph)	290	1580	105	70	1670	80	400	80	135	30	5	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5050		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.41	1.00	1.00	0.70	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5050		767	1863	1583	1305	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	315	1717	114	76	1815	87	435	87	147	33	5	71
RTOR Reduction (vph)	0	0	39	0	2	0	0	0	127	0	0	68
Lane Group Flow (vph)	315	1717	75	76	1900	0	435	87	20	33	5	3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6				4		4	8		8
Actuated Green, G (s)	31.5	117.0	117.0	10.8	96.3		33.2	24.0	24.0	10.4	7.2	7.2
Effective Green, g (s)	33.5	119.0	119.0	12.8	98.3		33.2	24.0	24.0	10.4	7.2	7.2
Actuated g/C Ratio	0.19	0.66	0.66	0.07	0.55		0.18	0.13	0.13	0.06	0.04	0.04
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0		1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	329	3361	1046	125	2757		252	248	211	83	74	63
v/s Ratio Prot	c0.18	0.34		0.04	c0.38		c0.19	0.05		0.01	0.00	
v/s Ratio Perm			0.05				c0.13		0.01	0.02		0.00
v/c Ratio	0.96	0.51	0.07	0.61	0.69		1.73	0.35	0.09	0.40	0.07	0.05
Uniform Delay, d1	72.5	15.6	10.9	81.2	29.7		71.1	70.9	68.4	81.4	83.2	83.1
Progression Factor	0.90	0.80	0.73	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.1	0.5	0.1	5.6	1.4		343.0	0.3	0.1	1.1	0.1	0.1
Delay (s)	98.1	12.9	8.0	86.8	31.2		414.1	71.2	68.5	82.6	83.3	83.2
Level of Service	F	B	A	F	C		F	E	E	F	F	F
Approach Delay (s)		25.2			33.3			293.5			83.0	
Approach LOS		C			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	66.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Queues

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	2059	250	2234	54	223	11	332	268	276	337
v/c Ratio	0.42	0.86	1.25	0.93	0.05	0.64	0.06	0.89	0.83	0.84	0.67
Control Delay	67.2	33.8	195.0	27.9	0.1	60.0	47.6	59.8	68.4	69.0	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	33.8	195.0	27.9	0.1	60.0	47.6	59.8	68.4	69.0	17.9
Queue Length 50th (ft)	33	517	~128	579	0	87	8	192	208	215	69
Queue Length 95th (ft)	72	#701	m#213	#784	m0	124	26	#324	306	313	146
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	103	2391	200	2410	1213	915	496	375	378	385	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.86	1.25	0.93	0.04	0.24	0.02	0.89	0.71	0.72	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	1765	130	230	2055	50	205	10	305	410	90	310
Future Volume (vph)	40	1765	130	230	2055	50	205	10	305	410	90	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	5033		3433	5085	1583	3433	1863	1583	1681	1714	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1770	5033		3433	5085	1583	3433	1863	1583	1681	1714	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1918	141	250	2234	54	223	11	332	446	98	337
RTOR Reduction (vph)	0	5	0	0	0	17	0	0	74	0	0	144
Lane Group Flow (vph)	43	2054	0	250	2234	37	223	11	258	268	276	193
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	1	6		5	2	3	4	4	5	3	3	1
Permitted Phases						2			4			3
Actuated Green, G (s)	5.0	54.9		5.0	54.9	77.8	12.2	12.2	17.2	22.9	22.9	27.9
Effective Green, g (s)	7.0	56.9		7.0	56.9	81.8	12.2	12.2	17.2	22.9	22.9	27.9
Actuated g/C Ratio	0.06	0.47		0.06	0.47	0.68	0.10	0.10	0.14	0.19	0.19	0.23
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5
Lane Grp Cap (vph)	103	2386		200	2411	1079	349	189	226	320	327	368
v/s Ratio Prot	0.02	0.41		c0.07	c0.44	0.01	0.06	0.01	c0.05	0.16	c0.16	0.02
v/s Ratio Perm						0.02			0.12			0.10
v/c Ratio	0.42	0.86		1.25	0.93	0.03	0.64	0.06	1.14	0.84	0.84	0.52
Uniform Delay, d1	54.5	28.0		56.5	29.6	6.2	51.8	48.7	51.4	46.8	46.8	40.2
Progression Factor	1.00	1.00		1.28	0.67	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	4.4		139.8	6.0	0.0	2.8	0.0	103.8	16.4	17.1	0.6
Delay (s)	55.5	32.4		212.0	25.8	0.0	54.6	48.8	155.2	63.2	63.9	40.9
Level of Service	E	C		F	C	A	D	D	F	E	E	D
Approach Delay (s)		32.9			43.6			113.5			54.9	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	48.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1924	747	1978	574	542
v/c Ratio	0.38	0.47	0.72	0.85	0.51
Control Delay	0.1	0.7	17.2	45.9	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	0.7	17.2	45.9	29.5
Queue Length 50th (ft)	0	0	263	395	177
Queue Length 95th (ft)	0	m0	402	499	213
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)		150			
Base Capacity (vph)	5085	1583	2757	789	1242
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.47	0.72	0.73	0.44

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱		↑↑↑		↰		↱↱		
Traffic Volume (vph)	0	1770	710	0	1820	0	545	0	515	0	0
Future Volume (vph)	0	1770	710	0	1820	0	545	0	515	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
Lane Util. Factor		0.91	1.00		0.91		1.00		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		5085	1583		5085		1770		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		5085	1583		5085		1770		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1924	747	0	1978	0	574	0	542	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1924	747	0	1978	0	574	0	542	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		120.0	120.0		63.1		43.9		43.9		
Effective Green, g (s)		120.0	120.0		65.1		45.9		45.9		
Actuated g/C Ratio		1.00	1.00		0.54		0.38		0.38		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2758		677		1066		
v/s Ratio Prot		0.38			c0.39		c0.32		0.19		
v/s Ratio Perm			0.47								
v/c Ratio		0.38	0.47		0.72		0.85		0.51		
Uniform Delay, d1		0.0	0.0		20.6		33.9		28.4		
Progression Factor		1.00	1.00		0.71		1.00		1.00		
Incremental Delay, d2		0.1	0.5		1.6		9.5		0.3		
Delay (s)		0.1	0.5		16.3		43.4		28.7		
Level of Service		A	A		B		D		C		
Approach Delay (s)		0.2			16.3			36.2		0.0	
Approach LOS		A			B			D		A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lane Group	EBT	WBT	NBR
Lane Group Flow (vph)	1832	2152	716
v/c Ratio	0.76	0.42	0.68
Control Delay	16.1	0.2	19.6
Queue Delay	0.0	0.0	0.0
Total Delay	16.1	0.2	19.6
Queue Length 50th (ft)	224	0	118
Queue Length 95th (ft)	275	m0	177
Internal Link Dist (ft)	286	256	
Turn Bay Length (ft)			
Base Capacity (vph)	2415	5085	1050
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.76	0.42	0.68

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↱↱
Traffic Volume (vph)	1685	0	0	1980	0	680
Future Volume (vph)	1685	0	0	1980	0	680
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5		4.5
Lane Util. Factor	0.91			0.91		0.88
Frt	1.00			1.00		0.85
Flt Protected	1.00			1.00		1.00
Satd. Flow (prot)	5085			5085		2787
Flt Permitted	1.00			1.00		1.00
Satd. Flow (perm)	5085			5085		2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	1832	0	0	2152	0	716
RTOR Reduction (vph)	0	0	0	0	0	6
Lane Group Flow (vph)	1832	0	0	2152	0	710
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Turn Type	NA			NA		Prot
Protected Phases	6			2		5
Permitted Phases						
Actuated Green, G (s)	26.5			60.0		20.5
Effective Green, g (s)	28.5			60.0		22.5
Actuated g/C Ratio	0.48			1.00		0.38
Clearance Time (s)	6.5			6.5		6.5
Vehicle Extension (s)	3.0			3.0		3.0
Lane Grp Cap (vph)	2415			5085		1045
v/s Ratio Prot	c0.36			0.42		c0.25
v/s Ratio Perm						
v/c Ratio	0.76			0.42		0.68
Uniform Delay, d1	12.9			0.0		15.7
Progression Factor	1.08			1.00		1.00
Incremental Delay, d2	2.1			0.2		1.8
Delay (s)	16.0			0.2		17.5
Level of Service	B			A		B
Approach Delay (s)	16.0			0.2	17.5	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	2207	277	130	2283	288	11	125	120	54	310
v/c Ratio	0.81	0.77	0.29	1.01	0.78	1.14	0.04	0.36	0.44	0.19	0.85
Control Delay	94.2	18.2	6.2	136.9	23.2	141.6	39.3	7.1	42.1	42.4	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.2	18.2	6.2	136.9	23.2	141.6	39.3	7.1	42.1	42.4	46.3
Queue Length 50th (ft)	67	376	24	~103	471	~238	7	0	77	37	129
Queue Length 95th (ft)	m#103	540	m120	#234	660	#294	23	36	116	68	215
Internal Link Dist (ft)		775			631		513			403	
Turn Bay Length (ft)	300		150	100		125					340
Base Capacity (vph)	107	2876	956	129	2934	253	574	588	275	589	600
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.77	0.29	1.01	0.78	1.14	0.02	0.21	0.44	0.09	0.52

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	2030	255	120	2070	30	265	10	115	110	50	285
Future Volume (vph)	80	2030	255	120	2070	30	265	10	115	110	50	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5074		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.72	1.00	1.00	0.71	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5074		1345	1863	1583	1321	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	2207	277	130	2250	33	288	11	125	120	54	310
RTOR Reduction (vph)	0	0	61	0	1	0	0	0	107	0	0	123
Lane Group Flow (vph)	87	2207	216	130	2282	0	288	11	18	120	54	187
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6				4		4	8		8
Actuated Green, G (s)	5.3	65.9	65.9	6.8	67.4		21.3	17.3	17.3	23.3	18.3	18.3
Effective Green, g (s)	7.3	67.9	67.9	8.8	69.4		21.3	17.3	17.3	23.3	18.3	18.3
Actuated g/C Ratio	0.06	0.57	0.57	0.07	0.58		0.18	0.14	0.14	0.19	0.15	0.15
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0		1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	107	2877	895	129	2934		252	268	228	275	284	241
v/s Ratio Prot	0.05	0.43		c0.07	c0.45		c0.04	0.01		0.02	0.03	
v/s Ratio Perm			0.14				c0.16		0.01	0.07		0.12
v/c Ratio	0.81	0.77	0.24	1.01	0.78		1.14	0.04	0.08	0.44	0.19	0.78
Uniform Delay, d1	55.7	20.0	13.1	55.6	19.4		48.8	44.2	44.5	42.1	44.4	48.9
Progression Factor	1.07	0.77	0.75	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.8	1.4	0.4	81.3	2.1		100.7	0.0	0.1	0.4	0.1	13.3
Delay (s)	84.3	16.8	10.2	136.9	21.5		149.6	44.2	44.5	42.5	44.5	62.2
Level of Service	F	B	B	F	C		F	D	D	D	D	E
Approach Delay (s)		18.4			27.7			115.9			55.3	
Approach LOS		B			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Queues

5: S Military Trail & SR 869/SW 10th Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	342	2413	109	332	1516	326	201	870	630	478	598	310
v/c Ratio	1.18	1.11	0.14	1.20	1.01	0.42	0.67	0.96	1.15	1.34	0.62	0.54
Control Delay	167.1	96.4	0.4	162.1	53.2	11.9	77.7	75.5	120.0	219.1	51.0	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	167.1	96.4	0.4	162.1	53.2	11.9	77.7	75.5	120.0	219.1	51.0	20.9
Queue Length 50th (ft)	~205	~984	0	~196	~279	34	99	444	~574	~313	272	96
Queue Length 95th (ft)	#310	#1069	0	#301	#934	138	144	#578	#819	#429	339	197
Internal Link Dist (ft)		880			1200			569			457	
Turn Bay Length (ft)	280		500	275			300		300	300		200
Base Capacity (vph)	290	2176	777	276	1500	778	311	910	549	357	968	572
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	1.11	0.14	1.20	1.01	0.42	0.65	0.96	1.15	1.34	0.62	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	315	2220	100	305	1395	300	185	800	580	440	550	285
Future Volume (vph)	315	2220	100	305	1395	300	185	800	580	440	550	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	4.8	4.8	5.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	342	2413	109	332	1516	326	201	870	630	478	598	310
RTOR Reduction (vph)	0	0	62	0	0	108	0	0	143	0	0	139
Lane Group Flow (vph)	342	2413	47	332	1516	218	201	870	487	478	598	171
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	10.7	62.2	62.2	10.1	61.6	61.6	11.1	36.6	36.6	13.6	39.1	39.1
Effective Green, g (s)	12.7	64.2	64.2	12.1	63.6	63.6	13.1	38.6	38.6	15.6	41.1	41.1
Actuated g/C Ratio	0.08	0.43	0.43	0.08	0.42	0.42	0.09	0.26	0.26	0.10	0.27	0.27
Clearance Time (s)	8.3	6.8	6.8	7.9	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	290	2176	677	276	1500	671	299	910	407	357	969	433
v/s Ratio Prot	0.10	c0.47		0.10	c0.43		0.06	0.25		c0.14	0.17	
v/s Ratio Perm			0.03			0.14			c0.31			0.11
v/c Ratio	1.18	1.11	0.07	1.20	1.01	0.33	0.67	0.96	1.20	1.34	0.62	0.39
Uniform Delay, d1	68.7	42.9	25.3	69.0	43.2	28.9	66.4	54.9	55.7	67.2	47.6	44.3
Progression Factor	1.00	1.00	1.00	0.82	0.69	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	110.5	56.3	0.2	114.4	22.8	1.0	4.6	19.8	110.5	170.4	1.2	0.6
Delay (s)	179.1	99.2	25.5	171.3	52.7	26.1	71.0	74.7	166.2	237.6	48.8	44.9
Level of Service	F	F	C	F	D	C	E	E	F	F	D	D
Approach Delay (s)		106.0			66.8			108.1			113.0	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	97.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Queues

6: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	304	3217	391	2033	359	32	33	103	24	25	87
v/c Ratio	0.82	0.95	0.91	0.67	0.35	0.48	0.49	0.60	0.40	0.38	0.55
Control Delay	54.6	12.4	97.3	14.8	2.2	93.5	93.8	24.4	89.6	87.1	18.4
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	12.4	97.3	15.0	2.2	93.5	93.8	24.4	89.6	87.1	18.4
Queue Length 50th (ft)	242	328	384	535	7	32	33	0	24	25	0
Queue Length 95th (ft)	m195	m285	#548	635	21	#77	#78	54	60	62	31
Internal Link Dist (ft)		700		595			420			170	
Turn Bay Length (ft)	600		550		295	100					
Base Capacity (vph)	447	3398	443	3053	1029	67	68	171	61	66	158
Starvation Cap Reductn	0	0	0	255	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.95	0.88	0.73	0.35	0.48	0.49	0.60	0.39	0.38	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	2465	495	360	1870	330	50	10	95	35	10	80
Future Volume (vph)	280	2465	495	360	1870	330	50	10	95	35	10	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	6.0	6.0	6.0	5.7	5.7	5.7
Lane Util. Factor	1.00	0.86		1.00	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.97	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1736	6247		1770	5085	1524	1681	1713	1583	1453	1582	1154
Flt Permitted	0.06	1.00		0.95	1.00	1.00	0.95	0.97	1.00	0.95	0.97	1.00
Satd. Flow (perm)	108	6247		1770	5085	1524	1681	1713	1583	1453	1582	1154
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	304	2679	538	391	2033	359	54	11	103	38	11	87
RTOR Reduction (vph)	0	23	0	0	0	115	0	0	99	0	0	83
Lane Group Flow (vph)	304	3194	0	391	2033	244	32	33	4	24	25	4
Heavy Vehicles (%)	4%	2%	2%	2%	2%	6%	2%	2%	2%	18%	2%	40%
Turn Type	pm+pt	NA		Prot	NA	Perm	Split	NA	Prot	Split	NA	Prot
Protected Phases	1	6		5	2		3	3	3	4	4	4
Permitted Phases	6					2						
Actuated Green, G (s)	104.2	79.0		34.3	88.1	88.1	6.0	6.0	6.0	6.2	6.2	6.2
Effective Green, g (s)	108.2	81.0		36.3	90.1	90.1	6.0	6.0	6.0	6.2	6.2	6.2
Actuated g/C Ratio	0.72	0.54		0.24	0.60	0.60	0.04	0.04	0.04	0.04	0.04	0.04
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	6.0	6.0	6.0	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	373	3373		428	3054	915	67	68	63	60	65	47
v/s Ratio Prot	0.15	c0.51		c0.22	0.40		0.02	c0.02	0.00	c0.02	0.02	0.00
v/s Ratio Perm	0.44					0.16						
v/c Ratio	0.82	0.95		0.91	0.67	0.27	0.48	0.49	0.07	0.40	0.38	0.08
Uniform Delay, d1	43.5	32.5		55.3	19.9	14.2	70.5	70.5	69.3	70.1	70.0	69.1
Progression Factor	1.23	0.34		1.33	0.66	0.39	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.8		22.2	1.1	0.7	1.9	2.0	0.2	1.6	1.4	0.3
Delay (s)	54.9	11.8		95.7	14.2	6.2	72.4	72.5	69.5	71.7	71.4	69.4
Level of Service	D	B		F	B	A	E	E	E	E	E	E
Approach Delay (s)		15.5			24.6			70.6			70.2	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	2130	690	636	2783
v/c Ratio	0.76	0.44	1.00	0.43
Control Delay	9.6	0.3	55.7	0.2
Queue Delay	0.0	0.0	3.0	0.0
Total Delay	9.6	0.3	58.7	0.2
Queue Length 50th (ft)	301	0	~257	0
Queue Length 95th (ft)	m335	m0	#675	0
Internal Link Dist (ft)	595			250
Turn Bay Length (ft)				
Base Capacity (vph)	2813	1583	633	6408
Starvation Cap Reductn	0	0	7	0
Spillback Cap Reductn	0	0	0	169
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.76	0.44	1.02	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑↑		
Traffic Volume (vph)	1960	635	585	2560	0	0
Future Volume (vph)	1960	635	585	2560	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	2.0		
Lane Util. Factor	0.91	1.00	1.00	0.86		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	5085	1583	1770	6408		
Flt Permitted	1.00	1.00	0.05	1.00		
Satd. Flow (perm)	5085	1583	95	6408		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2130	690	636	2783	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	2130	690	636	2783	0	0
Turn Type	NA	Free	D.P+P	NA		
Protected Phases	1 2 4		3 5	Free		
Permitted Phases		Free	1 2 4			
Actuated Green, G (s)	79.1	150.0	124.7	150.0		
Effective Green, g (s)	83.1	150.0	128.2	150.0		
Actuated g/C Ratio	0.55	1.00	0.85	1.00		
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	2817	1583	635	6408		
v/s Ratio Prot	0.42		c0.33	0.43		
v/s Ratio Perm		0.44	c0.53			
v/c Ratio	0.76	0.44	1.00	0.43		
Uniform Delay, d1	25.7	0.0	45.3	0.0		
Progression Factor	0.59	1.00	0.61	1.00		
Incremental Delay, d2	0.4	0.3	33.0	0.2		
Delay (s)	15.5	0.3	60.5	0.2		
Level of Service	B	A	E	A		
Approach Delay (s)	11.8			11.4	0.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2130	2484	348	924
v/c Ratio	0.60	0.56	0.54	0.58
Control Delay	5.7	9.0	39.9	1.6
Queue Delay	0.6	0.1	0.0	0.0
Total Delay	6.3	9.1	39.9	1.6
Queue Length 50th (ft)	116	220	120	0
Queue Length 95th (ft)	179	289	159	0
Internal Link Dist (ft)	250	635	1117	
Turn Bay Length (ft)			500	500
Base Capacity (vph)	3525	4442	640	1583
Starvation Cap Reductn	894	636	0	0
Spillback Cap Reductn	71	77	0	45
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.81	0.65	0.54	0.60

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑↑		↰↰	↱
Traffic Volume (vph)	0	1960	2285	0	320	850
Future Volume (vph)	0	1960	2285	0	320	850
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	2.0
Lane Util. Factor		0.91	0.86		0.97	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5085	6408		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5085	6408		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2130	2484	0	348	924
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2130	2484	0	348	924
Confl. Peds. (#/hr)					410	
Turn Type		NA	NA		Prot	Free
Protected Phases		2 3 4	2 3 4		1 5	
Permitted Phases						Free
Actuated Green, G (s)		100.1	100.1		24.5	150.0
Effective Green, g (s)		99.7	99.7		28.5	150.0
Actuated g/C Ratio		0.66	0.66		0.19	1.00
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)		3379	4259		652	1583
v/s Ratio Prot		0.42	0.39		0.10	
v/s Ratio Perm						c0.58
v/c Ratio		0.63	0.58		0.53	0.58
Uniform Delay, d1		14.5	13.8		54.8	0.0
Progression Factor		0.84	1.47		1.00	1.00
Incremental Delay, d2		0.2	0.1		0.4	1.6
Delay (s)		12.4	20.3		55.2	1.6
Level of Service		B	C		E	A
Approach Delay (s)		12.4	20.3		16.2	
Approach LOS		B	C		B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1185	1293	293	1777	803	361
v/c Ratio	0.87	0.82	0.66	0.63	0.85	0.90
Control Delay	34.8	18.1	48.6	18.7	61.2	78.9
Queue Delay	3.9	0.0	0.0	0.2	0.0	0.0
Total Delay	38.7	18.1	48.6	18.9	61.2	78.9
Queue Length 50th (ft)	492	1031	256	372	385	376
Queue Length 95th (ft)	686	1090	m377	410	468	#586
Internal Link Dist (ft)	635			630	537	
Turn Bay Length (ft)			275		200	200
Base Capacity (vph)	1356	1583	443	2830	942	399
Starvation Cap Reductn	110	0	0	337	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.82	0.66	0.71	0.85	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1090	1190	270	1635	650	420
Future Volume (vph)	1090	1190	270	1635	650	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	4.5	4.4	4.4
Lane Util. Factor	0.95	1.00	1.00	0.91	0.97	0.91
Frt	1.00	0.85	1.00	1.00	0.98	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (prot)	3539	1583	1770	5085	3399	1441
Flt Permitted	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (perm)	3539	1583	1770	5085	3399	1441
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1185	1293	293	1777	707	457
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1185	1293	293	1777	803	361
Turn Type	NA	Free	Prot	NA	Prot	Prot
Protected Phases	1 2 5		3	1 2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	55.5	150.0	35.6	81.6	39.6	39.6
Effective Green, g (s)	53.5	150.0	37.6	83.6	41.6	41.6
Actuated g/C Ratio	0.36	1.00	0.25	0.56	0.28	0.28
Clearance Time (s)			6.4		6.4	6.4
Vehicle Extension (s)			2.0		3.5	3.5
Lane Grp Cap (vph)	1262	1583	443	2834	942	399
v/s Ratio Prot	c0.33		0.17	0.35	0.24	c0.25
v/s Ratio Perm		c0.82				
v/c Ratio	0.94	0.82	0.66	0.63	0.85	0.90
Uniform Delay, d1	46.7	0.0	50.5	22.6	51.3	52.3
Progression Factor	0.65	1.00	0.85	0.79	1.00	1.00
Incremental Delay, d2	11.0	3.9	1.8	0.2	7.7	23.7
Delay (s)	41.3	3.9	44.9	18.0	59.0	76.0
Level of Service	D	A	D	B	E	E
Approach Delay (s)	21.8			21.8	64.3	
Approach LOS	C			C	E	

Intersection Summary			
HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	1435	103	1549	87	217	141	130	239	163	304
v/c Ratio	0.74	0.64	0.41	0.76	0.11	0.74	0.40	0.36	0.68	0.67	0.76
Control Delay	28.7	20.8	13.7	22.7	0.3	39.2	35.0	3.1	31.8	44.7	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	20.8	13.7	22.7	0.3	39.2	35.0	3.1	31.8	44.7	22.5
Queue Length 50th (ft)	86	390	21	226	0	78	32	0	87	72	34
Queue Length 95th (ft)	m98	440	44	285	0	#157	59	4	147	131	#136
Internal Link Dist (ft)		630		1233			420			420	
Turn Bay Length (ft)	140		200		200	185		185	170		
Base Capacity (vph)	278	2240	255	2039	763	293	391	375	365	280	429
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.64	0.40	0.76	0.11	0.74	0.36	0.35	0.65	0.58	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1070	250	95	1425	80	200	130	120	220	150	280
Future Volume (vph)	190	1070	250	95	1425	80	200	130	120	220	150	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4941		1770	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.13	1.00		0.13	1.00	1.00	0.65	1.00	1.00	0.50	1.00	1.00
Satd. Flow (perm)	234	4941		248	5085	1583	1218	3539	1583	935	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1163	272	103	1549	87	217	141	130	239	163	304
RTOR Reduction (vph)	0	49	0	0	0	52	0	0	117	0	0	195
Lane Group Flow (vph)	207	1386	0	103	1549	35	217	141	13	239	163	109
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8
Actuated Green, G (s)	35.5	29.9		31.7	28.0	28.0	14.8	7.5	7.5	19.6	9.9	9.9
Effective Green, g (s)	39.5	31.9		35.7	30.0	30.0	14.8	7.5	7.5	19.6	9.9	9.9
Actuated g/C Ratio	0.53	0.43		0.48	0.40	0.40	0.20	0.10	0.10	0.26	0.13	0.13
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	278	2101		233	2034	633	294	353	158	352	245	208
v/s Ratio Prot	c0.08	0.28		0.03	0.30		0.07	0.04		c0.09	0.09	
v/s Ratio Perm	c0.32			0.18		0.02	0.07		0.01	c0.09		0.07
v/c Ratio	0.74	0.66		0.44	0.76	0.05	0.74	0.40	0.08	0.68	0.67	0.52
Uniform Delay, d1	13.1	17.2		12.1	19.4	13.8	27.6	31.6	30.6	23.7	31.0	30.3
Progression Factor	1.72	1.26		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.3	0.7		0.5	2.8	0.2	8.1	0.3	0.1	4.1	5.2	1.1
Delay (s)	26.8	22.4		12.6	22.2	14.0	35.6	31.9	30.7	27.8	36.2	31.4
Level of Service	C	C		B	C	B	D	C	C	C	D	C
Approach Delay (s)		22.9			21.2			33.3			31.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	20.2
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Queues

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	375	1848	207	418	2397	500	152	658	332	245	897	495
v/c Ratio	1.22	0.81	0.25	0.79	1.32	0.54	0.76	1.02	0.66	1.08	1.34	1.03
Control Delay	172.3	34.5	3.7	55.7	173.3	14.0	83.8	93.9	18.9	138.3	204.0	78.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	172.3	34.5	3.7	55.7	173.3	14.0	83.8	93.9	18.9	138.3	204.0	78.4
Queue Length 50th (ft)	~198	478	2	167	~1362	143	66	~310	53	~118	~517	~285
Queue Length 95th (ft)	#302	542	47	m177	m#1421	m137	#119	#433	160	#206	#650	#505
Internal Link Dist (ft)		880			1200			569			457	
Turn Bay Length (ft)	280		500	275			300		300	300		200
Base Capacity (vph)	308	2315	830	529	1813	924	200	642	500	227	669	479
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.80	0.25	0.79	1.32	0.54	0.76	1.02	0.66	1.08	1.34	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	345	1700	190	385	2205	460	140	605	305	225	825	455
Future Volume (vph)	345	1700	190	385	2205	460	140	605	305	225	825	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	4.8	4.8	5.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	375	1848	207	418	2397	500	152	658	332	245	897	495
RTOR Reduction (vph)	0	0	111	0	0	114	0	0	213	0	0	180
Lane Group Flow (vph)	375	1848	96	418	2397	386	152	658	119	245	897	315
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	9.7	56.3	56.3	18.0	64.6	64.6	5.6	21.6	21.6	6.6	22.6	22.6
Effective Green, g (s)	11.7	58.3	58.3	20.0	66.6	66.6	7.6	23.6	23.6	8.6	24.6	24.6
Actuated g/C Ratio	0.09	0.45	0.45	0.15	0.51	0.51	0.06	0.18	0.18	0.07	0.19	0.19
Clearance Time (s)	8.3	6.8	6.8	7.9	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	308	2280	709	528	1813	810	200	642	287	227	669	299
v/s Ratio Prot	c0.11	0.36		0.12	c0.68		0.04	c0.19		0.07	c0.25	
v/s Ratio Perm			0.06			0.24			0.08			0.20
v/c Ratio	1.22	0.81	0.13	0.79	1.32	0.48	0.76	1.02	0.42	1.08	1.34	1.05
Uniform Delay, d1	59.1	31.1	21.0	53.0	31.7	20.5	60.3	53.2	47.1	60.7	52.7	52.7
Progression Factor	1.00	1.00	1.00	0.97	0.88	1.24	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	123.8	3.3	0.4	2.5	146.2	0.6	14.1	42.0	1.0	82.4	163.3	66.8
Delay (s)	182.9	34.3	21.4	53.7	174.3	25.9	74.4	95.2	48.1	143.1	216.0	119.5
Level of Service	F	C	C	D	F	C	E	F	D	F	F	F
Approach Delay (s)		56.2			136.7			78.7			175.9	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	113.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Queues

6: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	2348	109	2598	87	178	175	418	51	52	375
v/c Ratio	0.57	0.80	0.61	0.97	0.11	0.73	0.71	1.08	0.23	0.23	1.07
Control Delay	38.3	10.9	84.6	32.7	0.6	70.8	69.4	97.0	53.5	53.5	96.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	10.9	84.6	32.7	0.6	70.8	69.4	97.0	53.5	53.5	96.1
Queue Length 50th (ft)	23	149	95	761	1	152	149	~251	41	42	~205
Queue Length 95th (ft)	m38	m211	159	#919	1	#260	#253	#461	85	85	#408
Internal Link Dist (ft)		700		595			420			170	
Turn Bay Length (ft)	600		550		295	100					
Base Capacity (vph)	133	2943	198	2691	784	245	247	388	221	223	349
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	3	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.80	0.55	0.97	0.11	0.73	0.71	1.08	0.23	0.23	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	2095	65	100	2390	80	315	10	385	90	5	345
Future Volume (vph)	70	2095	65	100	2390	80	315	10	385	90	5	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	6.0	6.0	6.0	5.7	5.7	5.7
Lane Util. Factor	1.00	0.86		1.00	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.96	1.00	0.95	0.96	1.00
Satd. Flow (prot)	1597	6379		1770	5085	1369	1681	1690	1583	1665	1678	1417
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	0.96	1.00	0.95	0.96	1.00
Satd. Flow (perm)	112	6379		1770	5085	1369	1681	1690	1583	1665	1678	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	2277	71	109	2598	87	342	11	418	98	5	375
RTOR Reduction (vph)	0	3	0	0	0	42	0	0	157	0	0	161
Lane Group Flow (vph)	76	2345	0	109	2598	45	178	175	261	51	52	214
Heavy Vehicles (%)	13%	2%	2%	2%	2%	18%	2%	2%	2%	3%	2%	14%
Turn Type	pm+pt	NA		Prot	NA	Perm	Split	NA	Prot	Split	NA	Prot
Protected Phases	1	6		5	2		3	3	3	4	4	4
Permitted Phases	6					2						
Actuated Green, G (s)	61.6	57.9		11.3	65.5	65.5	19.0	19.0	19.0	17.3	17.3	17.3
Effective Green, g (s)	65.6	59.9		13.3	67.5	67.5	19.0	19.0	19.0	17.3	17.3	17.3
Actuated g/C Ratio	0.50	0.46		0.10	0.52	0.52	0.15	0.15	0.15	0.13	0.13	0.13
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	6.0	6.0	6.0	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	121	2939		181	2640	710	245	247	231	221	223	188
v/s Ratio Prot	0.03	0.37		c0.06	c0.51		0.11	0.10	c0.16	0.03	0.03	c0.15
v/s Ratio Perm	0.29					0.03						
v/c Ratio	0.63	0.80		0.60	0.98	0.06	0.73	0.71	1.13	0.23	0.23	1.14
Uniform Delay, d1	29.3	29.9		55.8	30.7	15.5	53.0	52.9	55.5	50.4	50.4	56.4
Progression Factor	1.46	0.32		1.28	0.72	0.41	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	1.3		4.3	13.4	0.2	8.7	7.4	98.5	0.2	0.2	107.3
Delay (s)	46.8	10.8		75.7	35.6	6.6	61.8	60.2	154.0	50.6	50.6	163.6
Level of Service	D	B		E	D	A	E	E	F	D	D	F
Approach Delay (s)		11.9			36.3			111.4			139.3	
Approach LOS		B			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	43.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	2092	701	625	2793
v/c Ratio	0.71	0.44	1.10	0.44
Control Delay	8.1	1.1	89.6	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.1	1.1	89.6	0.2
Queue Length 50th (ft)	162	1	~381	0
Queue Length 95th (ft)	m181	m11	#615	0
Internal Link Dist (ft)	595			250
Turn Bay Length (ft)				
Base Capacity (vph)	2933	1583	567	6408
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	667
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.71	0.44	1.10	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑↑		
Traffic Volume (vph)	1925	645	575	2570	0	0
Future Volume (vph)	1925	645	575	2570	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	2.0		
Lane Util. Factor	0.91	1.00	1.00	0.86		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	5085	1583	1770	6408		
Flt Permitted	1.00	1.00	0.06	1.00		
Satd. Flow (perm)	5085	1583	106	6408		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2092	701	625	2793	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	2092	701	625	2793	0	0
Turn Type	NA	Free	D.P+P	NA		
Protected Phases	1 2 4		3 5	Free		
Permitted Phases		Free	1 2 4			
Actuated Green, G (s)	71.1	130.0	104.7	130.0		
Effective Green, g (s)	75.1	130.0	108.2	130.0		
Actuated g/C Ratio	0.58	1.00	0.83	1.00		
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	2937	1583	569	6408		
v/s Ratio Prot	0.41		c0.32	0.44		
v/s Ratio Perm		0.44	c0.60			
v/c Ratio	0.71	0.44	1.10	0.44		
Uniform Delay, d1	19.7	0.0	40.4	0.0		
Progression Factor	0.68	1.00	0.83	1.00		
Incremental Delay, d2	0.4	0.5	63.9	0.2		
Delay (s)	13.8	0.5	97.6	0.2		
Level of Service	B	A	F	A		
Approach Delay (s)	10.5			18.0	0.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2092	2299	239	1120
v/c Ratio	0.63	0.55	0.34	0.71
Control Delay	4.7	12.8	29.4	2.7
Queue Delay	0.3	0.0	0.1	0.2
Total Delay	5.0	12.8	29.5	2.9
Queue Length 50th (ft)	76	339	66	0
Queue Length 95th (ft)	144	m374	96	0
Internal Link Dist (ft)	250	635	1117	
Turn Bay Length (ft)			500	500
Base Capacity (vph)	3324	4189	713	1583
Starvation Cap Reductn	563	0	0	0
Spillback Cap Reductn	82	122	33	60
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.76	0.57	0.35	0.74

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑↑		↰↰	↱
Traffic Volume (vph)	0	1925	2115	0	220	1030
Future Volume (vph)	0	1925	2115	0	220	1030
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	2.0
Lane Util. Factor		0.91	0.86		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5085	6408		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5085	6408		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2092	2299	0	239	1120
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2092	2299	0	239	1120
Turn Type		NA	NA		Prot	Free
Protected Phases		2 3 4	2 3 4		1 5	
Permitted Phases						Free
Actuated Green, G (s)		81.1	81.1		23.5	130.0
Effective Green, g (s)		80.7	80.7		27.5	130.0
Actuated g/C Ratio		0.62	0.62		0.21	1.00
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)		3156	3977		726	1583
v/s Ratio Prot		0.41	0.36		0.07	
v/s Ratio Perm						c0.71
v/c Ratio		0.66	0.58		0.33	0.71
Uniform Delay, d1		15.9	14.6		43.4	0.0
Progression Factor		0.58	2.02		1.00	1.00
Incremental Delay, d2		0.3	0.1		0.1	2.7
Delay (s)		9.4	29.5		43.5	2.7
Level of Service		A	C		D	A
Approach Delay (s)		9.4	29.5		9.9	
Approach LOS		A	C		A	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1397	935	326	1560	968	445
v/c Ratio	1.00	0.59	0.94	0.61	0.95	1.02
Control Delay	48.8	4.5	71.7	14.6	62.3	91.9
Queue Delay	1.7	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	4.5	71.7	14.6	62.3	91.9
Queue Length 50th (ft)	649	136	285	134	411	~423
Queue Length 95th (ft)	#791	110	m#442	157	#542	#664
Internal Link Dist (ft)	635			630	537	
Turn Bay Length (ft)			275		200	200
Base Capacity (vph)	1401	1583	348	2562	1022	438
Starvation Cap Reductn	10	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.59	0.94	0.61	0.95	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1285	860	300	1435	680	620
Future Volume (vph)	1285	860	300	1435	680	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	4.5	4.4	4.4
Lane Util. Factor	0.95	1.00	1.00	0.91	0.97	0.91
Frt	1.00	0.85	1.00	1.00	0.96	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (prot)	3539	1583	1770	5085	3357	1441
Flt Permitted	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (perm)	3539	1583	1770	5085	3357	1441
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1397	935	326	1560	739	674
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1397	935	326	1560	968	445
Turn Type	NA	Free	Prot	NA	Prot	Prot
Protected Phases	1 2 5		3	1 2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	49.5	130.0	23.6	63.6	37.6	37.6
Effective Green, g (s)	47.5	130.0	25.6	65.6	39.6	39.6
Actuated g/C Ratio	0.37	1.00	0.20	0.50	0.30	0.30
Clearance Time (s)			6.4		6.4	6.4
Vehicle Extension (s)			2.0		3.5	3.5
Lane Grp Cap (vph)	1293	1583	348	2565	1022	438
v/s Ratio Prot	c0.39		c0.18	0.31	0.29	c0.31
v/s Ratio Perm		0.59				
v/c Ratio	1.08	0.59	0.94	0.61	0.95	1.02
Uniform Delay, d1	41.2	0.0	51.4	23.0	44.2	45.2
Progression Factor	0.69	1.00	0.83	0.59	1.00	1.00
Incremental Delay, d2	47.6	1.3	25.8	0.2	16.9	47.1
Delay (s)	76.0	1.3	68.3	13.8	61.1	92.3
Level of Service	E	A	E	B	E	F
Approach Delay (s)	46.0			23.2	70.9	
Approach LOS	D			C	E	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Queues

10: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	277	1793	207	1250	120	266	98	120	239	245	370
v/c Ratio	0.76	0.78	0.84	0.59	0.16	0.91	0.17	0.29	0.61	0.85	0.81
Control Delay	38.8	10.8	60.9	32.1	1.1	70.0	46.5	2.5	41.9	79.4	31.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	10.9	60.9	32.1	1.1	70.0	46.5	2.5	41.9	79.4	31.2
Queue Length 50th (ft)	144	280	121	309	0	173	36	0	153	199	95
Queue Length 95th (ft)	m145	m287	#249	375	9	#306	64	7	230	#319	#223
Internal Link Dist (ft)		630		1233			420			420	
Turn Bay Length (ft)	140		200		200	185		185	170		
Base Capacity (vph)	412	2296	269	2104	759	295	634	434	406	319	480
Starvation Cap Reductn	0	28	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.79	0.77	0.59	0.16	0.90	0.15	0.28	0.59	0.77	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	1430	220	190	1150	110	245	90	110	220	225	340
Future Volume (vph)	255	1430	220	190	1150	110	245	90	110	220	225	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4984		1770	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.12	1.00		0.07	1.00	1.00	0.24	1.00	1.00	0.69	1.00	1.00
Satd. Flow (perm)	218	4984		138	5085	1583	440	3539	1583	1286	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	277	1554	239	207	1250	120	266	98	120	239	245	370
RTOR Reduction (vph)	0	15	0	0	0	70	0	0	100	0	0	213
Lane Group Flow (vph)	277	1778	0	207	1250	50	266	98	20	239	245	157
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8
Actuated Green, G (s)	75.2	57.5		63.8	51.8	51.8	38.0	21.8	21.8	34.6	20.1	20.1
Effective Green, g (s)	77.9	59.5		67.8	53.8	53.8	38.0	21.8	21.8	34.6	20.1	20.1
Actuated g/C Ratio	0.60	0.46		0.52	0.41	0.41	0.29	0.17	0.17	0.27	0.15	0.15
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	365	2281		247	2104	655	294	593	265	396	288	244
v/s Ratio Prot	c0.11	0.36		0.09	0.25		c0.11	0.03		0.07	0.13	
v/s Ratio Perm	0.34			c0.34		0.03	c0.15		0.01	0.09		0.10
v/c Ratio	0.76	0.78		0.84	0.59	0.08	0.90	0.17	0.08	0.60	0.85	0.64
Uniform Delay, d1	25.8	29.7		34.6	29.6	23.1	39.3	46.3	45.6	40.5	53.5	51.6
Progression Factor	1.53	0.34		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.6		20.4	1.2	0.2	28.6	0.0	0.0	1.8	20.0	4.3
Delay (s)	41.5	10.6		55.0	30.9	23.3	67.9	46.4	45.7	42.3	73.5	55.9
Level of Service	D	B		D	C	C	E	D	D	D	E	E
Approach Delay (s)		14.7			33.4			58.0			57.1	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.2
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2299	152	1821	147	190
v/c Ratio	0.54	0.64	0.48	0.68	0.53
Control Delay	17.1	61.8	1.6	65.1	11.8
Queue Delay	0.0	1.4	0.1	0.0	0.0
Total Delay	17.1	63.3	1.7	65.1	11.8
Queue Length 50th (ft)	257	84	27	111	0
Queue Length 95th (ft)	325	#155	27	170	64
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4265	236	3824	545	619
Starvation Cap Reductn	0	18	458	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.70	0.54	0.27	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2010	105	140	1675	135	175
Future Volume (vph)	2010	105	140	1675	135	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	7488		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7488		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2185	114	152	1821	147	190
RTOR Reduction (vph)	5	0	0	0	0	167
Lane Group Flow (vph)	2294	0	152	1821	147	23
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	66.2		14.0	88.2	14.8	14.8
Effective Green, g (s)	68.2		16.0	90.2	14.8	14.8
Actuated g/C Ratio	0.57		0.13	0.75	0.12	0.12
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4255		236	3822	218	195
v/s Ratio Prot	c0.31		c0.09	0.36	c0.08	
v/s Ratio Perm						0.01
v/c Ratio	0.54		0.64	0.48	0.67	0.12
Uniform Delay, d1	16.1		49.3	5.8	50.3	46.8
Progression Factor	1.00		1.00	0.20	1.00	1.00
Incremental Delay, d2	0.1		4.1	0.0	6.3	0.1
Delay (s)	16.2		53.4	1.2	56.6	46.9
Level of Service	B		D	A	E	D
Approach Delay (s)	16.2			5.2	51.1	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	92	2283	1810	82	250	163
v/c Ratio	0.70	0.47	0.45	0.08	0.59	0.49
Control Delay	63.6	2.4	10.0	1.7	55.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	2.4	10.0	1.7	55.0	13.2
Queue Length 50th (ft)	70	26	188	2	95	5
Queue Length 95th (ft)	#153	43	250	m6	130	64
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	132	4818	4017	1023	1058	595
Starvation Cap Reductn	0	529	0	0	0	0
Spillback Cap Reductn	0	0	14	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.53	0.45	0.08	0.24	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	85	2100	1665	75	230	150
Future Volume (vph)	85	2100	1665	75	230	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	2283	1810	82	250	163
RTOR Reduction (vph)	0	0	0	31	0	137
Lane Group Flow (vph)	92	2283	1810	51	250	26
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	7.0	88.2	73.2	73.2	14.8	14.8
Effective Green, g (s)	9.0	90.2	75.2	75.2	14.8	14.8
Actuated g/C Ratio	0.08	0.75	0.63	0.63	0.12	0.12
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	132	4816	4015	992	423	195
v/s Ratio Prot	c0.05	c0.36	0.28		c0.07	
v/s Ratio Perm				0.03		0.02
v/c Ratio	0.70	0.47	0.45	0.05	0.59	0.13
Uniform Delay, d1	54.2	5.7	11.7	8.6	49.7	46.9
Progression Factor	0.72	0.34	0.79	0.67	1.00	1.00
Incremental Delay, d2	10.6	0.0	0.0	0.0	1.5	0.1
Delay (s)	49.6	2.0	9.3	5.8	51.2	47.0
Level of Service	D	A	A	A	D	D
Approach Delay (s)		3.8	9.1		49.6	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1554	947	1391	442	484
v/c Ratio	0.43	0.60	0.48	0.52	0.70
Control Delay	5.3	7.8	7.7	21.9	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	7.8	7.7	21.9	26.7
Queue Length 50th (ft)	74	244	119	70	89
Queue Length 95th (ft)	124	360	156	108	138
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3650	1583	2897	886	719
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.60	0.48	0.50	0.67

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Traffic Volume (vph)	0	1430	900	0	1280	0	420	0	460	0	0
Future Volume (vph)	0	1430	900	0	1280	0	420	0	460	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1554	947	0	1391	0	442	0	484	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1554	947	0	1391	0	442	0	484	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		32.2	60.0		32.2		12.8		12.8		
Effective Green, g (s)		34.2	60.0		34.2		14.8		14.8		
Actuated g/C Ratio		0.57	1.00		0.57		0.25		0.25		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3652	1583		2898		846		687		
v/s Ratio Prot		0.24			0.27		0.13		0.17		
v/s Ratio Perm			c0.60								
v/c Ratio		0.43	0.60		0.48		0.52		0.70		
Uniform Delay, d1		7.3	0.0		7.6		19.5		20.6		
Progression Factor		0.67	1.00		0.93		1.00		1.00		
Incremental Delay, d2		0.3	1.5		0.5		0.4		3.1		
Delay (s)		5.2	1.5		7.6		20.0		23.7		
Level of Service		A	A		A		B		C		
Approach Delay (s)		3.8			7.6			21.9		0.0	
Approach LOS		A			A			C		A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1130	1848	463	495	358
v/c Ratio	0.38	0.62	0.29	0.63	0.56
Control Delay	5.2	4.9	0.2	24.7	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	4.9	0.2	24.7	24.0
Queue Length 50th (ft)	81	116	0	81	64
Queue Length 95th (ft)	56	141	m0	124	104
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2984	2984	1583	829	673
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.62	0.29	0.60	0.53

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations		↑↑↑			↑↑↑	↱	↰↰		↱↱		
Traffic Volume (vph)	0	1040	0	0	1700	440	470	0	340	0	0
Future Volume (vph)	0	1040	0	0	1700	440	470	0	340	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5		
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88		
Frt		1.00			1.00	0.85	1.00		0.85		
Flt Protected		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)		5085			5085	1583	3433		2787		
Flt Permitted		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)		5085			5085	1583	3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1130	0	0	1848	463	495	0	358	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1130	0	0	1848	463	495	0	358	0	0
Turn Type		NA			NA	Free	Prot		Prot		
Protected Phases		6			2		4		4		
Permitted Phases						Free					
Actuated Green, G (s)		33.2			33.2	60.0	11.8		11.8		
Effective Green, g (s)		35.2			35.2	60.0	13.8		13.8		
Actuated g/C Ratio		0.59			0.59	1.00	0.23		0.23		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		2983			2983	1583	789		641		
v/s Ratio Prot		0.22			c0.36		c0.14		0.13		
v/s Ratio Perm						0.29					
v/c Ratio		0.38			0.62	0.29	0.63		0.56		
Uniform Delay, d1		6.6			8.1	0.0	20.8		20.4		
Progression Factor		0.72			0.54	1.00	1.00		1.00		
Incremental Delay, d2		0.3			0.5	0.2	1.4		0.8		
Delay (s)		5.1			4.8	0.2	22.1		21.3		
Level of Service		A			A	A	C		C		
Approach Delay (s)		5.1			3.9			21.8		0.0	
Approach LOS		A			A			C		A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: NE 3rd Ave & SAMPLE ROAD

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	386	1114	49	1669	212	217	65	92	212	516
v/c Ratio	0.85	0.47	0.43	0.86	0.65	0.45	0.11	0.29	0.47	0.95
Control Delay	62.6	18.7	65.7	40.0	40.6	39.7	0.4	29.0	41.7	52.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	18.7	65.7	40.0	40.6	39.7	0.4	29.0	41.7	52.4
Queue Length 50th (ft)	144	208	37	454	114	135	0	46	134	235
Queue Length 95th (ft)	#229	279	79	#558	177	208	0	83	208	#438
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	457	2374	118	1952	324	543	616	312	512	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.47	0.42	0.86	0.65	0.40	0.11	0.29	0.41	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	910	115	45	1470	65	195	200	60	85	195	475
Future Volume (vph)	355	910	115	45	1470	65	195	200	60	85	195	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5000		1770	5053		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.46	1.00	1.00	0.53	1.00	1.00
Satd. Flow (perm)	3433	5000		1770	5053		857	1863	1583	990	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	386	989	125	49	1598	71	212	217	65	92	212	516
RTOR Reduction (vph)	0	12	0	0	4	0	0	0	48	0	0	165
Lane Group Flow (vph)	386	1102	0	49	1665	0	212	217	17	92	212	351
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	13.8	53.3		4.8	44.3		37.9	30.9	30.9	33.9	28.9	28.9
Effective Green, g (s)	15.8	55.3		6.8	46.3		37.9	30.9	30.9	33.9	28.9	28.9
Actuated g/C Ratio	0.13	0.46		0.06	0.39		0.32	0.26	0.26	0.28	0.24	0.24
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	452	2304		100	1949		323	479	407	312	448	381
v/s Ratio Prot	c0.11	0.22		0.03	c0.33		c0.04	0.12		0.01	0.11	
v/s Ratio Perm							0.17		0.01	0.07		c0.22
v/c Ratio	0.85	0.48		0.49	0.85		0.66	0.45	0.04	0.29	0.47	0.92
Uniform Delay, d1	51.0	22.4		54.9	33.8		35.1	37.4	33.4	32.7	39.0	44.4
Progression Factor	0.88	0.80		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.1	0.7		1.4	5.0		3.6	0.2	0.0	0.2	0.3	26.3
Delay (s)	58.0	18.6		56.3	38.8		38.8	37.7	33.4	32.9	39.3	70.7
Level of Service	E	B		E	D		D	D	C	C	D	E
Approach Delay (s)		28.7			39.3			37.6			58.4	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2544	261	2288	114	120
v/c Ratio	0.60	0.87	0.57	0.65	0.45
Control Delay	19.3	77.5	1.8	72.8	14.3
Queue Delay	0.0	52.5	0.2	0.0	0.0
Total Delay	19.4	130.0	2.0	72.8	14.3
Queue Length 50th (ft)	328	169	38	94	0
Queue Length 95th (ft)	395	#360	27	152	57
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4248	299	3992	503	536
Starvation Cap Reductn	0	63	690	0	0
Spillback Cap Reductn	110	0	0	0	1
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	1.11	0.69	0.23	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2260	80	240	2105	105	110
Future Volume (vph)	2260	80	240	2105	105	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	7450		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7450		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2457	87	261	2288	114	120
RTOR Reduction (vph)	3	0	0	0	0	108
Lane Group Flow (vph)	2541	0	261	2288	114	12
Confl. Peds. (#/hr)		80				
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	72.1		20.0	100.1	12.9	12.9
Effective Green, g (s)	74.1		22.0	102.1	12.9	12.9
Actuated g/C Ratio	0.57		0.17	0.79	0.10	0.10
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4246		299	3993	175	157
v/s Ratio Prot	c0.34		c0.15	c0.45	c0.06	
v/s Ratio Perm						0.01
v/c Ratio	0.60		0.87	0.57	0.65	0.08
Uniform Delay, d1	18.2		52.6	5.4	56.4	53.1
Progression Factor	1.00		1.01	0.22	1.00	1.00
Incremental Delay, d2	0.2		19.3	0.1	6.5	0.1
Delay (s)	18.4		72.6	1.3	62.8	53.2
Level of Service	B		E	A	E	D
Approach Delay (s)	18.4			8.6	57.9	
Approach LOS	B			A	E	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	179	2397	2391	272	185	158
v/c Ratio	0.82	0.48	0.61	0.25	0.54	0.53
Control Delay	63.5	1.9	12.7	1.7	61.0	14.3
Queue Delay	6.0	0.1	0.0	0.0	0.0	0.1
Total Delay	69.6	2.0	12.7	1.7	61.0	14.4
Queue Length 50th (ft)	149	23	274	21	77	0
Queue Length 95th (ft)	#278	35	336	m34	112	64
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	217	5031	3947	1079	977	563
Starvation Cap Reductn	16	786	0	0	0	0
Spillback Cap Reductn	0	0	127	0	0	51
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.56	0.63	0.25	0.19	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	2205	2200	250	170	145
Future Volume (vph)	165	2205	2200	250	170	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	2397	2391	272	185	158
RTOR Reduction (vph)	0	0	0	104	0	142
Lane Group Flow (vph)	179	2397	2391	168	185	16
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	14.0	100.1	78.1	78.1	12.9	12.9
Effective Green, g (s)	16.0	102.1	80.1	80.1	12.9	12.9
Actuated g/C Ratio	0.12	0.79	0.62	0.62	0.10	0.10
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	217	5032	3948	975	340	157
v/s Ratio Prot	c0.10	0.37	c0.37		c0.05	
v/s Ratio Perm				0.11		0.01
v/c Ratio	0.82	0.48	0.61	0.17	0.54	0.10
Uniform Delay, d1	55.6	4.8	15.3	10.7	55.8	53.3
Progression Factor	0.68	0.33	0.77	0.93	1.00	1.00
Incremental Delay, d2	17.7	0.0	0.1	0.0	1.0	0.1
Delay (s)	55.4	1.6	11.9	10.0	56.7	53.4
Level of Service	E	A	B	A	E	D
Approach Delay (s)		5.3	11.7		55.2	
Approach LOS		A	B		E	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1908	653	1957	484	684
v/c Ratio	0.57	0.41	0.73	0.46	0.81
Control Delay	13.5	1.6	15.1	19.8	29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	1.6	15.1	19.8	29.6
Queue Length 50th (ft)	240	7	271	77	138
Queue Length 95th (ft)	357	18	330	116	#211
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3369	1583	2673	1082	878
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.41	0.73	0.45	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑↑	↱		↑↑↑		↰↰		↱↱		
Traffic Volume (vph)	0	1755	620	0	1800	0	460	0	650	0	0
Future Volume (vph)	0	1755	620	0	1800	0	460	0	650	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1908	653	0	1957	0	484	0	684	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1908	653	0	1957	0	484	0	684	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		32.2	65.0		32.2		17.8		17.8		
Effective Green, g (s)		34.2	65.0		34.2		19.8		19.8		
Actuated g/C Ratio		0.53	1.00		0.53		0.30		0.30		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3371	1583		2675		1045		848		
v/s Ratio Prot		0.30			c0.38		0.14		c0.25		
v/s Ratio Perm			0.41								
v/c Ratio		0.57	0.41		0.73		0.46		0.81		
Uniform Delay, d1		10.4	0.0		11.9		18.3		20.8		
Progression Factor		1.22	1.00		1.13		1.00		1.00		
Incremental Delay, d2		0.6	0.7		1.4		0.2		5.5		
Delay (s)		13.3	0.7		14.7		18.5		26.3		
Level of Service		B	A		B		B		C		
Approach Delay (s)		10.1			14.7			23.1		0.0	
Approach LOS		B			B			C		A	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1723	1717	358	1074	579
v/c Ratio	0.64	0.64	0.23	0.81	0.54
Control Delay	13.6	13.9	0.2	40.8	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	13.9	0.2	40.8	32.4
Queue Length 50th (ft)	280	184	0	410	211
Queue Length 95th (ft)	239	m194	m0	451	248
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2693	2693	1583	1518	1232
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.64	0.23	0.71	0.47

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Traffic Volume (vph)	0	1585	0	0	1580	340	1020	0	550	0	0
Future Volume (vph)	0	1585	0	0	1580	340	1020	0	550	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5		
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88		
Frt		1.00			1.00	0.85	1.00		0.85		
Flt Protected		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)		5085			5085	1583	3433		2787		
Flt Permitted		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)		5085			5085	1583	3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1723	0	0	1717	358	1074	0	579	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1723	0	0	1717	358	1074	0	579	0	0
Turn Type		NA			NA	Free	Prot		Prot		
Protected Phases		6			2		4		4		
Permitted Phases						Free					
Actuated Green, G (s)		66.9			66.9	130.0	48.1		48.1		
Effective Green, g (s)		68.9			68.9	130.0	50.1		50.1		
Actuated g/C Ratio		0.53			0.53	1.00	0.39		0.39		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		2695			2695	1583	1323		1074		
v/s Ratio Prot		c0.34			0.34		c0.31		0.21		
v/s Ratio Perm						0.23					
v/c Ratio		0.64			0.64	0.23	0.81		0.54		
Uniform Delay, d1		21.7			21.7	0.0	35.7		31.0		
Progression Factor		0.55			0.58	1.00	1.00		1.00		
Incremental Delay, d2		0.4			0.7	0.2	3.8		0.4		
Delay (s)		12.5			13.3	0.2	39.5		31.4		
Level of Service		B			B	A	D		C		
Approach Delay (s)		12.5			11.0			36.7		0.0	
Approach LOS		B			B			D		A	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: NE 3rd Ave & SAMPLE ROAD

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	467	1854	98	1604	228	326	87	71	255	375
v/c Ratio	0.86	0.73	0.74	0.76	0.96	0.76	0.17	0.41	0.78	0.80
Control Delay	76.5	23.3	89.8	35.7	89.0	58.5	0.7	39.8	66.9	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.5	23.3	89.8	35.7	89.0	58.5	0.7	39.8	66.9	31.5
Queue Length 50th (ft)	213	261	82	411	156	266	0	44	209	119
Queue Length 95th (ft)	#288	390	#171	#542	#210	342	0	74	279	223
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	554	2528	136	2120	237	530	594	174	458	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.73	0.72	0.76	0.96	0.62	0.15	0.41	0.56	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	430	1525	180	90	1365	110	210	300	80	65	235	345
Future Volume (vph)	430	1525	180	90	1365	110	210	300	80	65	235	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5005		1770	5028		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.25	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	3433	5005		1770	5028		467	1863	1583	607	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	467	1658	196	98	1484	120	228	326	87	71	255	375
RTOR Reduction (vph)	0	10	0	0	6	0	0	0	67	0	0	190
Lane Group Flow (vph)	467	1844	0	98	1598	0	228	326	20	71	255	185
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	18.5	62.3		7.7	51.5		40.0	30.0	30.0	28.0	24.0	24.0
Effective Green, g (s)	20.5	64.3		9.7	53.5		40.0	30.0	30.0	28.0	24.0	24.0
Actuated g/C Ratio	0.16	0.49		0.07	0.41		0.31	0.23	0.23	0.22	0.18	0.18
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	541	2475		132	2069		243	429	365	166	343	292
v/s Ratio Prot	c0.14	c0.37		0.06	0.32		c0.07	0.18		0.01	0.14	
v/s Ratio Perm							c0.22		0.01	0.08		0.12
v/c Ratio	0.86	0.75		0.74	0.77		0.94	0.76	0.06	0.43	0.74	0.63
Uniform Delay, d1	53.4	26.3		58.9	33.0		41.2	46.6	39.0	42.6	50.1	48.9
Progression Factor	1.18	0.82		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.8	1.7		17.7	2.9		40.2	6.7	0.0	0.6	7.4	3.3
Delay (s)	73.7	23.3		76.7	35.9		81.4	53.4	39.0	43.3	57.5	52.2
Level of Service	E	C		E	D		F	D	D	D	E	D
Approach Delay (s)		33.4			38.2			61.4			53.2	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Queues

1: SW 12th Avenue & Hillsboro Bvd

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	315	2435	370	1641	505	109	152	261	27	27	27
v/c Ratio	0.97	0.77	1.02	0.59	0.46	0.30	0.77	0.49	0.36	0.35	0.07
Control Delay	113.8	27.5	124.1	22.5	7.7	75.1	102.4	16.2	95.6	95.0	0.4
Queue Delay	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.8	27.5	124.1	22.8	8.0	75.1	102.4	16.2	95.6	95.0	0.4
Queue Length 50th (ft)	375	724	~240	359	92	62	178	52	33	33	0
Queue Length 95th (ft)	#583	914	#356	325	95	93	255	140	72	72	1
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	325	3147	364	2789	1230	610	331	528	252	257	385
Starvation Cap Reductn	0	0	0	497	226	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.77	1.02	0.72	0.50	0.18	0.46	0.49	0.11	0.11	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	290	2050	190	340	1510	465	100	140	240	40	10	25
Future Volume (vph)	290	2050	190	340	1510	465	100	140	240	40	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	5020		3433	5085	1583	3433	1863	1583	1681	1719	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1770	5020		3433	5085	1583	3433	1863	1583	1681	1719	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	315	2228	207	370	1641	505	109	152	261	43	11	27
RTOR Reduction (vph)	0	4	0	0	0	100	0	0	165	0	0	21
Lane Group Flow (vph)	315	2431	0	370	1641	405	109	152	96	27	27	6
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	1	6		5	2	3	4	4	5	3	3	1
Permitted Phases						2			4			3
Actuated Green, G (s)	31.1	110.7		17.1	96.7	104.8	19.1	19.1	36.2	8.1	8.1	39.2
Effective Green, g (s)	33.1	112.7		19.1	98.7	108.8	19.1	19.1	36.2	8.1	8.1	39.2
Actuated g/C Ratio	0.18	0.63		0.11	0.55	0.60	0.11	0.11	0.20	0.04	0.04	0.22
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5
Lane Grp Cap (vph)	325	3143		364	2788	956	364	197	318	75	77	344
v/s Ratio Prot	c0.18	c0.48		0.11	0.32	c0.02	0.03	c0.08	0.03	0.02	0.02	0.00
v/s Ratio Perm						0.23			0.03			0.00
v/c Ratio	0.97	0.77		1.02	0.59	0.42	0.30	0.77	0.30	0.36	0.35	0.02
Uniform Delay, d1	72.9	24.4		80.5	27.1	18.9	74.3	78.3	61.2	83.4	83.4	55.3
Progression Factor	1.00	1.00		1.01	0.77	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.9	1.9		46.4	0.7	0.1	0.2	15.5	0.2	1.1	1.0	0.0
Delay (s)	113.9	26.3		128.0	21.7	15.0	74.4	93.9	61.4	84.5	84.4	55.3
Level of Service	F	C		F	C	B	E	F	E	F	F	E
Approach Delay (s)		36.3			36.0			73.6			74.7	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1565	937	1625	642	863
v/c Ratio	0.31	0.59	0.62	0.84	0.71
Control Delay	0.1	5.2	27.5	54.8	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	5.2	27.5	54.8	44.6
Queue Length 50th (ft)	0	116	335	668	471
Queue Length 95th (ft)	0	197	534	719	473
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)		150			
Base Capacity (vph)	5085	1583	2622	919	1447
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.59	0.62	0.70	0.60

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱		↑↑↑		↰		↱↱		
Traffic Volume (vph)	0	1440	890	0	1495	0	610	0	820	0	0
Future Volume (vph)	0	1440	890	0	1495	0	610	0	820	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
Lane Util. Factor		0.91	1.00		0.91		1.00		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		5085	1583		5085		1770		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		5085	1583		5085		1770		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1565	937	0	1625	0	642	0	863	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1565	937	0	1625	0	642	0	863	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		180.0	180.0		90.8		76.2		76.2		
Effective Green, g (s)		180.0	180.0		92.8		78.2		78.2		
Actuated g/C Ratio		1.00	1.00		0.52		0.43		0.43		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2621		768		1210		
v/s Ratio Prot		0.31			0.32		c0.36		0.31		
v/s Ratio Perm			c0.59								
v/c Ratio		0.31	0.59		0.62		0.84		0.71		
Uniform Delay, d1		0.0	0.0		31.0		45.2		41.7		
Progression Factor		1.00	1.00		0.80		1.00		1.00		
Incremental Delay, d2		0.1	1.1		1.1		7.7		1.9		
Delay (s)		0.1	1.1		26.1		52.9		43.6		
Level of Service		A	A		C		D		D		
Approach Delay (s)		0.5			26.1			47.6		0.0	
Approach LOS		A			C			D		A	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lane Group	EBT	WBT	NBR
Lane Group Flow (vph)	1511	1734	842
v/c Ratio	0.58	0.34	0.77
Control Delay	13.8	0.1	28.4
Queue Delay	0.0	0.0	0.0
Total Delay	13.8	0.1	28.4
Queue Length 50th (ft)	178	0	226
Queue Length 95th (ft)	319	m0	268
Internal Link Dist (ft)	286	256	
Turn Bay Length (ft)			
Base Capacity (vph)	2603	5085	1294
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.58	0.34	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↱↱
Traffic Volume (vph)	1390	0	0	1595	0	800
Future Volume (vph)	1390	0	0	1595	0	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5		4.5
Lane Util. Factor	0.91			0.91		0.88
Frt	1.00			1.00		0.85
Flt Protected	1.00			1.00		1.00
Satd. Flow (prot)	5085			5085		2787
Flt Permitted	1.00			1.00		1.00
Satd. Flow (perm)	5085			5085		2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	1511	0	0	1734	0	842
RTOR Reduction (vph)	0	0	0	0	0	10
Lane Group Flow (vph)	1511	0	0	1734	0	832
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Turn Type	NA			NA		Prot
Protected Phases	6			2		5
Permitted Phases						
Actuated Green, G (s)	44.1			90.0		32.9
Effective Green, g (s)	46.1			90.0		34.9
Actuated g/C Ratio	0.51			1.00		0.39
Clearance Time (s)	6.5			6.5		6.5
Vehicle Extension (s)	3.0			3.0		3.0
Lane Grp Cap (vph)	2604			5085		1080
v/s Ratio Prot	c0.30			0.34		c0.30
v/s Ratio Perm						
v/c Ratio	0.58			0.34		0.77
Uniform Delay, d1	15.2			0.0		24.0
Progression Factor	0.80			1.00		1.00
Incremental Delay, d2	0.9			0.1		3.4
Delay (s)	13.1			0.1		27.4
Level of Service	B			A		C
Approach Delay (s)	13.1			0.1	27.4	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	342	1908	130	87	2141	484	92	174	43	5	92
v/c Ratio	1.07	0.56	0.12	0.64	0.75	2.04	0.39	0.49	0.52	0.08	0.42
Control Delay	130.0	13.8	0.8	101.4	31.9	514.9	78.5	13.8	90.8	87.0	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.0	13.8	0.8	101.4	31.9	514.9	78.5	13.8	90.8	87.0	5.7
Queue Length 50th (ft)	~434	427	3	101	684	~829	103	0	44	6	0
Queue Length 95th (ft)	#653	449	8	167	739	#1063	169	79	85	22	0
Internal Link Dist (ft)		775			631		513			403	
Turn Bay Length (ft)	300		150	100		125					340
Base Capacity (vph)	320	3393	1099	160	2846	237	548	588	82	393	470
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.56	0.12	0.54	0.75	2.04	0.17	0.30	0.52	0.01	0.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	315	1755	120	80	1875	95	445	85	160	40	5	85
Future Volume (vph)	315	1755	120	80	1875	95	445	85	160	40	5	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5049		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.41	1.00	1.00	0.70	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5049		767	1863	1583	1299	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	342	1908	130	87	2038	103	484	92	174	43	5	92
RTOR Reduction (vph)	0	0	44	0	2	0	0	0	152	0	0	88
Lane Group Flow (vph)	342	1908	86	87	2139	0	484	92	22	43	5	4
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6				4		4	8		8
Actuated Green, G (s)	30.6	117.0	117.0	11.8	98.2		32.2	23.0	23.0	10.4	7.2	7.2
Effective Green, g (s)	32.6	119.0	119.0	13.8	100.2		32.2	23.0	23.0	10.4	7.2	7.2
Actuated g/C Ratio	0.18	0.66	0.66	0.08	0.56		0.18	0.13	0.13	0.06	0.04	0.04
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0		1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	320	3361	1046	135	2810		243	238	202	83	74	63
v/s Ratio Prot	c0.19	0.38		0.05	c0.42		c0.21	0.05		0.01	0.00	
v/s Ratio Perm			0.05				c0.15		0.01	0.02		0.00
v/c Ratio	1.07	0.57	0.08	0.64	0.76		1.99	0.39	0.11	0.52	0.07	0.06
Uniform Delay, d1	73.7	16.5	10.9	80.7	30.7		71.7	72.0	69.4	81.9	83.2	83.1
Progression Factor	0.98	0.82	0.37	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	64.6	0.6	0.1	7.7	2.0		460.7	0.4	0.1	2.3	0.1	0.1
Delay (s)	136.8	14.1	4.2	88.4	32.7		532.4	72.4	69.5	84.2	83.3	83.3
Level of Service	F	B	A	F	C		F	E	E	F	F	F
Approach Delay (s)		31.2			34.9			368.6			83.6	
Approach LOS		C			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	80.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Queues

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	2316	299	2397	65	250	11	402	274	281	359
v/c Ratio	0.56	0.92	1.29	0.91	0.05	0.70	0.06	1.07	0.91	0.91	0.86
Control Delay	88.5	40.4	206.7	23.2	0.1	70.9	55.1	108.2	88.6	89.3	47.4
Queue Delay	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.5	40.4	206.7	25.1	0.1	70.9	55.1	108.2	88.6	89.3	47.4
Queue Length 50th (ft)	44	718	~181	276	0	115	9	~347	255	263	174
Queue Length 95th (ft)	#98	#897	m#254	#900	m0	157	29	#516	#415	#425	#333
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	88	2511	232	2623	1213	784	425	376	324	330	417
Starvation Cap Reductn	0	0	0	116	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.92	1.29	0.96	0.05	0.32	0.03	1.07	0.85	0.85	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1985	145	275	2205	60	230	10	370	420	90	330
Future Volume (vph)	45	1985	145	275	2205	60	230	10	370	420	90	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	5033		3433	5085	1583	3433	1863	1583	1681	1714	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1770	5033		3433	5085	1583	3433	1863	1583	1681	1714	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	2158	158	299	2397	65	250	11	402	457	98	359
RTOR Reduction (vph)	0	5	0	0	0	19	0	0	62	0	0	82
Lane Group Flow (vph)	49	2311	0	299	2397	46	250	11	340	274	281	277
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	1	6		5	2	3	4	4	5	3	3	1
Permitted Phases						2			4			3
Actuated Green, G (s)	5.0	67.7		7.5	70.2	95.4	14.6	14.6	22.1	25.2	25.2	30.2
Effective Green, g (s)	7.0	69.7		9.5	72.2	99.4	14.6	14.6	22.1	25.2	25.2	30.2
Actuated g/C Ratio	0.05	0.50		0.07	0.52	0.71	0.10	0.10	0.16	0.18	0.18	0.22
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5
Lane Grp Cap (vph)	88	2505		232	2622	1123	358	194	249	302	308	341
v/s Ratio Prot	0.03	0.46		c0.09	c0.47	0.01	0.07	0.01	c0.07	0.16	c0.16	0.03
v/s Ratio Perm						0.02			0.14			0.15
v/c Ratio	0.56	0.92		1.29	0.91	0.04	0.70	0.06	1.36	0.91	0.91	0.81
Uniform Delay, d1	65.0	32.6		65.2	31.1	6.1	60.6	56.5	58.9	56.3	56.3	52.2
Progression Factor	1.00	1.00		1.20	0.57	0.04	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.3	7.1		149.6	4.3	0.0	4.7	0.0	187.5	28.4	29.3	13.1
Delay (s)	69.3	39.8		228.0	22.0	0.3	65.3	56.5	246.5	84.7	85.6	65.3
Level of Service	E	D		F	C	A	E	E	F	F	F	E
Approach Delay (s)		40.4			43.8			175.0			77.4	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	60.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	2114	874	2098	695	642
v/c Ratio	0.42	0.55	0.82	0.90	0.53
Control Delay	0.1	0.9	25.9	52.5	30.3
Queue Delay	0.0	0.0	1.0	0.0	0.0
Total Delay	0.1	0.9	26.9	52.5	30.3
Queue Length 50th (ft)	0	0	539	562	232
Queue Length 95th (ft)	m0	m0	586	733	286
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)		150			
Base Capacity (vph)	5085	1583	2544	828	1303
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	217	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.55	0.90	0.84	0.49

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱		↑↑↑		↰		↱↱		
Traffic Volume (vph)	0	1945	830	0	1930	0	660	0	610	0	0
Future Volume (vph)	0	1945	830	0	1930	0	660	0	610	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
Lane Util. Factor		0.91	1.00		0.91		1.00		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		5085	1583		5085		1770		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		5085	1583		5085		1770		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	2114	874	0	2098	0	695	0	642	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2114	874	0	2098	0	695	0	642	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		140.0	140.0		68.0		59.0		59.0		
Effective Green, g (s)		140.0	140.0		70.0		61.0		61.0		
Actuated g/C Ratio		1.00	1.00		0.50		0.44		0.44		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2542		771		1214		
v/s Ratio Prot		0.42			c0.41		c0.39		0.23		
v/s Ratio Perm			0.55								
v/c Ratio		0.42	0.55		0.83		0.90		0.53		
Uniform Delay, d1		0.0	0.0		29.8		36.7		29.0		
Progression Factor		1.00	1.00		0.74		1.00		1.00		
Incremental Delay, d2		0.1	0.5		3.1		13.7		0.3		
Delay (s)		0.1	0.5		25.0		50.4		29.3		
Level of Service		A	A		C		D		C		
Approach Delay (s)		0.2			25.0			40.3		0.0	
Approach LOS		A			C			D		A	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lane Group	EBT	WBT	NBR
Lane Group Flow (vph)	2038	2315	789
v/c Ratio	0.73	0.46	0.79
Control Delay	15.7	0.1	26.0
Queue Delay	0.0	0.0	0.0
Total Delay	15.7	0.1	26.0
Queue Length 50th (ft)	280	0	159
Queue Length 95th (ft)	273	m0	228
Internal Link Dist (ft)	286	256	
Turn Bay Length (ft)			
Base Capacity (vph)	2789	5085	1079
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.73	0.46	0.73

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑		↱↱
Traffic Volume (vph)	1875	0	0	2130	0	750
Future Volume (vph)	1875	0	0	2130	0	750
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5		2.0
Lane Util. Factor	0.91			0.91		0.88
Frt	1.00			1.00		0.85
Flt Protected	1.00			1.00		1.00
Satd. Flow (prot)	5085			5085		2787
Flt Permitted	1.00			1.00		1.00
Satd. Flow (perm)	5085			5085		2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95
Adj. Flow (vph)	2038	0	0	2315	0	789
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	2038	0	0	2315	0	784
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Turn Type	NA			NA		Prot
Protected Phases	6			2		5
Permitted Phases						
Actuated Green, G (s)	36.4			70.0		23.1
Effective Green, g (s)	38.4			70.0		25.1
Actuated g/C Ratio	0.55			1.00		0.36
Clearance Time (s)	6.5			6.5		4.0
Vehicle Extension (s)	3.0			3.0		3.0
Lane Grp Cap (vph)	2789			5085		999
v/s Ratio Prot	c0.40			0.46		c0.28
v/s Ratio Perm						
v/c Ratio	0.73			0.46		0.78
Uniform Delay, d1	11.9			0.0		20.0
Progression Factor	1.15			1.00		1.00
Incremental Delay, d2	1.5			0.1		4.1
Delay (s)	15.2			0.1		24.1
Level of Service	B			A		C
Approach Delay (s)	15.2			0.1	24.1	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	6.5
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	103	2413	337	152	2505	315	11	141	136	54	337
v/c Ratio	0.92	0.86	0.36	1.00	0.86	1.08	0.03	0.37	0.43	0.16	0.88
Control Delay	119.4	24.4	8.6	135.8	30.2	125.0	43.4	9.7	46.2	46.5	57.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.4	24.4	8.6	135.8	30.2	125.0	43.4	9.7	46.2	46.5	57.8
Queue Length 50th (ft)	91	572	77	141	676	~286	8	2	100	42	197
Queue Length 95th (ft)	m#160	#919	200	#290	#954	#351	25	56	144	75	291
Internal Link Dist (ft)		775			631		513			402	
Turn Bay Length (ft)	300		150	100		125					340
Base Capacity (vph)	112	2799	928	152	2910	291	492	520	313	505	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.86	0.36	1.00	0.86	1.08	0.02	0.27	0.43	0.11	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	2220	310	140	2270	35	290	10	130	125	50	310
Future Volume (vph)	95	2220	310	140	2270	35	290	10	130	125	50	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5074		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.72	1.00	1.00	0.72	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5074		1345	1863	1583	1341	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	2413	337	152	2467	38	315	11	141	136	54	337
RTOR Reduction (vph)	0	0	57	0	1	0	0	0	115	0	0	103
Lane Group Flow (vph)	103	2413	280	152	2504	0	315	11	26	136	54	234
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6				4		4	8		8
Actuated Green, G (s)	6.9	75.1	75.1	10.1	78.3		28.8	23.8	23.8	30.8	24.8	24.8
Effective Green, g (s)	8.9	77.1	77.1	12.1	80.3		28.8	23.8	23.8	30.8	24.8	24.8
Actuated g/C Ratio	0.06	0.55	0.55	0.09	0.57		0.21	0.17	0.17	0.22	0.18	0.18
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0		1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	112	2800	871	152	2910		291	316	269	313	330	280
v/s Ratio Prot	0.06	0.47		c0.09	c0.49		c0.04	0.01		0.02	0.03	
v/s Ratio Perm			0.18				c0.18		0.02	0.08		0.15
v/c Ratio	0.92	0.86	0.32	1.00	0.86		1.08	0.03	0.10	0.43	0.16	0.84
Uniform Delay, d1	65.2	26.9	17.2	64.0	25.1		54.9	48.5	49.0	46.6	48.8	55.6
Progression Factor	1.07	0.76	0.65	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	45.8	2.6	0.7	73.0	3.6		76.5	0.0	0.1	0.4	0.1	18.3
Delay (s)	115.6	23.0	11.9	136.9	28.7		131.4	48.5	49.1	46.9	48.9	73.9
Level of Service	F	C	B	F	C		F	D	D	D	D	E
Approach Delay (s)		25.0			34.9			104.6			64.4	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Queues

5: S Military Trail & SR 869/SW 10th Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	364	2598	174	364	1696	375	207	929	701	522	658	315
v/c Ratio	1.54	1.23	0.23	1.47	1.15	0.48	0.65	0.95	1.20	1.57	0.66	0.53
Control Delay	302.5	143.8	3.4	270.9	109.3	22.7	71.3	69.2	136.1	309.1	48.6	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	302.5	143.8	3.4	270.9	109.3	22.7	71.3	69.2	136.1	309.1	48.6	18.0
Queue Length 50th (ft)	~238	~1066	0	~229	~925	131	94	439	~629	~345	281	80
Queue Length 95th (ft)	#342	#1151	37	#337	#1071	213	138	#574	#877	#462	352	178
Internal Link Dist (ft)		880			1200			569			457	
Turn Bay Length (ft)	280		500	275			300		300	300		200
Base Capacity (vph)	237	2113	767	247	1481	781	333	975	585	333	990	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.54	1.23	0.23	1.47	1.15	0.48	0.62	0.95	1.20	1.57	0.66	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	2390	160	335	1560	345	190	855	645	480	605	290
Future Volume (vph)	335	2390	160	335	1560	345	190	855	645	480	605	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	4.8	4.8	5.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	364	2598	174	364	1696	375	207	929	701	522	658	315
RTOR Reduction (vph)	0	0	102	0	0	119	0	0	149	0	0	148
Lane Group Flow (vph)	364	2598	72	364	1696	256	207	929	552	522	658	167
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	7.7	56.2	56.2	8.1	56.6	56.6	11.0	36.6	36.6	11.6	37.2	37.2
Effective Green, g (s)	9.7	58.2	58.2	10.1	58.6	58.6	13.0	38.6	38.6	13.6	39.2	39.2
Actuated g/C Ratio	0.07	0.42	0.42	0.07	0.42	0.42	0.09	0.28	0.28	0.10	0.28	0.28
Clearance Time (s)	8.3	6.8	6.8	7.9	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	237	2113	658	247	1481	662	318	975	436	333	990	443
v/s Ratio Prot	0.11	c0.51		0.11	c0.48		0.06	0.26		c0.15	0.19	
v/s Ratio Perm			0.05			0.16			c0.35			0.11
v/c Ratio	1.54	1.23	0.11	1.47	1.15	0.39	0.65	0.95	1.27	1.57	0.66	0.38
Uniform Delay, d1	65.2	40.9	25.0	65.0	40.7	28.2	61.3	49.8	50.7	63.2	44.6	40.6
Progression Factor	1.00	1.00	1.00	1.04	1.02	1.66	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	261.2	107.7	0.3	226.9	71.0	1.1	3.6	18.4	136.7	269.6	1.7	0.5
Delay (s)	326.4	148.6	25.4	294.3	112.6	48.0	64.9	68.2	187.4	332.8	46.3	41.1
Level of Service	F	F	C	F	F	D	E	E	F	F	D	D
Approach Delay (s)		162.4			129.8			113.3			145.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	140.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	111.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Queues

6: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	332	3489	440	2283	370	35	36	114	27	27	92
v/c Ratio	0.91	1.05	1.04	0.77	0.36	0.49	0.49	0.49	0.42	0.39	0.43
Control Delay	59.0	35.0	110.7	18.4	2.2	87.8	88.0	8.7	85.1	81.7	6.0
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	35.0	110.7	18.6	2.2	87.8	88.0	8.7	85.1	81.7	6.0
Queue Length 50th (ft)	259	~982	~419	621	5	33	34	0	25	25	0
Queue Length 95th (ft)	m191	m222	#639	666	11	#80	#80	11	61	61	0
Internal Link Dist (ft)		700		595			420			170	
Turn Bay Length (ft)	600		550		295	100					
Base Capacity (vph)	381	3317	424	2976	1014	72	73	231	65	70	217
Starvation Cap Reductn	0	0	0	112	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	1.05	1.04	0.80	0.36	0.49	0.49	0.49	0.42	0.39	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	305	2705	505	405	2100	340	55	10	105	40	10	85
Future Volume (vph)	305	2705	505	405	2100	340	55	10	105	40	10	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	6.0	6.0	6.0	5.7	5.7	5.7
Lane Util. Factor	1.00	0.86		1.00	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.97	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1736	6257		1770	5085	1524	1681	1710	1583	1453	1573	1154
Flt Permitted	0.05	1.00		0.95	1.00	1.00	0.95	0.97	1.00	0.95	0.97	1.00
Satd. Flow (perm)	99	6257		1770	5085	1524	1681	1710	1583	1453	1573	1154
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	332	2940	549	440	2283	370	60	11	114	43	11	92
RTOR Reduction (vph)	0	24	0	0	0	122	0	0	109	0	0	88
Lane Group Flow (vph)	332	3465	0	440	2283	248	35	36	5	27	27	4
Heavy Vehicles (%)	4%	2%	2%	2%	2%	6%	2%	2%	2%	18%	2%	40%
Turn Type	pm+pt	NA		Prot	NA	Perm	Split	NA	Prot	Split	NA	Prot
Protected Phases	1	6		5	2		3	3	3	4	4	4
Permitted Phases	6					2						
Actuated Green, G (s)	95.1	71.7		31.6	79.9	79.9	6.0	6.0	6.0	6.2	6.2	6.2
Effective Green, g (s)	99.1	73.7		33.6	81.9	81.9	6.0	6.0	6.0	6.2	6.2	6.2
Actuated g/C Ratio	0.71	0.53		0.24	0.59	0.59	0.04	0.04	0.04	0.04	0.04	0.04
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	6.0	6.0	6.0	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	367	3293		424	2974	891	72	73	67	64	69	51
v/s Ratio Prot	0.16	c0.55		c0.25	0.45		0.02	c0.02	0.00	c0.02	0.02	0.00
v/s Ratio Perm	0.48					0.16						
v/c Ratio	0.90	1.05		1.04	0.77	0.28	0.49	0.49	0.07	0.42	0.39	0.08
Uniform Delay, d1	44.9	33.1		53.2	21.9	14.4	65.5	65.5	64.3	65.2	65.1	64.2
Progression Factor	1.27	0.25		1.19	0.75	0.40	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	24.4		51.3	1.8	0.7	1.9	1.9	0.2	1.6	1.3	0.2
Delay (s)	60.2	32.8		114.4	18.1	6.5	67.4	67.4	64.5	66.8	66.4	64.4
Level of Service	E	C		F	B	A	E	E	E	E	E	E
Approach Delay (s)		35.2			30.4			65.6			65.2	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	2321	777	908	3092
v/c Ratio	0.91	0.49	1.27	0.48
Control Delay	10.0	1.1	151.8	0.2
Queue Delay	0.5	0.0	0.0	0.0
Total Delay	10.5	1.1	151.8	0.2
Queue Length 50th (ft)	362	0	~834	0
Queue Length 95th (ft)	m345	m0	#1253	0
Internal Link Dist (ft)	595			250
Turn Bay Length (ft)				
Base Capacity (vph)	2542	1583	717	6408
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	44	0	0	242
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.93	0.49	1.27	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑↑		
Traffic Volume (vph)	2135	715	835	2845	0	0
Future Volume (vph)	2135	715	835	2845	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	2.0		
Lane Util. Factor	0.91	1.00	1.00	0.86		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	5085	1583	1770	6408		
Flt Permitted	1.00	1.00	0.06	1.00		
Satd. Flow (perm)	5085	1583	114	6408		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2321	777	908	3092	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	2321	777	908	3092	0	0
Turn Type	NA	Free	D.P+P	NA		
Protected Phases	1 2 4		3 5	Free		
Permitted Phases		Free	1 2 4			
Actuated Green, G (s)	66.1	140.0	114.7	140.0		
Effective Green, g (s)	70.1	140.0	118.2	140.0		
Actuated g/C Ratio	0.50	1.00	0.84	1.00		
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	2546	1583	718	6408		
v/s Ratio Prot	0.46		c0.47	0.48		
v/s Ratio Perm		0.49	c0.59			
v/c Ratio	0.91	0.49	1.26	0.48		
Uniform Delay, d1	32.1	0.0	39.9	0.0		
Progression Factor	0.44	1.00	0.71	1.00		
Incremental Delay, d2	0.5	0.1	127.5	0.2		
Delay (s)	14.6	0.1	156.0	0.2		
Level of Service	B	A	F	A		
Approach Delay (s)	11.0			35.6	0.0	
Approach LOS	B			D	A	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2321	2924	467	1076
v/c Ratio	0.64	0.64	0.87	0.68
Control Delay	7.5	8.0	59.6	2.4
Queue Delay	1.7	0.2	0.0	0.4
Total Delay	9.2	8.2	59.6	2.7
Queue Length 50th (ft)	225	300	167	0
Queue Length 95th (ft)	256	m311	#241	0
Internal Link Dist (ft)	250	635	1117	
Turn Bay Length (ft)			500	500
Base Capacity (vph)	3632	4577	539	1583
Starvation Cap Reductn	1068	664	0	0
Spillback Cap Reductn	0	248	0	139
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.91	0.75	0.87	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑↑		↰↰	↱
Traffic Volume (vph)	0	2135	2690	0	430	990
Future Volume (vph)	0	2135	2690	0	430	990
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	2.0
Lane Util. Factor		0.91	0.86		0.97	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5085	6408		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5085	6408		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2321	2924	0	467	1076
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2321	2924	0	467	1076
Confl. Peds. (#/hr)					410	
Turn Type		NA	NA		Prot	Free
Protected Phases		2 3 4	2 3 4		1 5	
Permitted Phases						Free
Actuated Green, G (s)		96.1	96.1		18.5	140.0
Effective Green, g (s)		95.7	95.7		22.5	140.0
Actuated g/C Ratio		0.68	0.68		0.16	1.00
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)		3475	4380		551	1583
v/s Ratio Prot		0.46	0.46		0.14	
v/s Ratio Perm						c0.68
v/c Ratio		0.67	0.67		0.85	0.68
Uniform Delay, d1		12.9	12.9		57.1	0.0
Progression Factor		1.23	1.31		1.00	1.00
Incremental Delay, d2		0.1	0.2		11.1	2.4
Delay (s)		16.0	17.1		68.2	2.4
Level of Service		B	B		E	A
Approach Delay (s)		16.0	17.1		22.3	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1299	1489	315	2000	990	445
v/c Ratio	1.08	0.94	0.61	0.72	1.05	1.12
Control Delay	85.4	24.8	37.9	18.9	92.0	128.1
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	85.4	24.8	37.9	19.1	92.0	128.1
Queue Length 50th (ft)	~705	1228	188	422	~505	~512
Queue Length 95th (ft)	#850	#1270	m239	458	#638	#748
Internal Link Dist (ft)	635			630	537	
Turn Bay Length (ft)			275		200	200
Base Capacity (vph)	1200	1583	513	2778	942	397
Starvation Cap Reductn	0	0	0	160	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.94	0.61	0.76	1.05	1.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1195	1370	290	1840	850	470
Future Volume (vph)	1195	1370	290	1840	850	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	4.5	4.4	4.4
Lane Util. Factor	0.95	1.00	1.00	0.91	0.97	0.91
Frt	1.00	0.85	1.00	1.00	0.99	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (prot)	3539	1583	1770	5085	3418	1441
Flt Permitted	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (perm)	3539	1583	1770	5085	3418	1441
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1299	1489	315	2000	924	511
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1299	1489	315	2000	990	445
Turn Type	NA	Free	Prot	NA	Prot	Prot
Protected Phases	1 2 5		3	1 2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	45.5	140.0	38.6	74.6	36.6	36.6
Effective Green, g (s)	43.5	140.0	40.6	76.6	38.6	38.6
Actuated g/C Ratio	0.31	1.00	0.29	0.55	0.28	0.28
Clearance Time (s)			6.4		6.4	6.4
Vehicle Extension (s)			2.0		3.5	3.5
Lane Grp Cap (vph)	1099	1583	513	2782	942	397
v/s Ratio Prot	c0.37		0.18	0.39	0.29	c0.31
v/s Ratio Perm		c0.94				
v/c Ratio	1.18	0.94	0.61	0.72	1.05	1.12
Uniform Delay, d1	48.2	0.0	42.9	23.7	50.7	50.7
Progression Factor	0.84	1.00	0.81	0.76	1.00	1.00
Incremental Delay, d2	89.0	9.6	0.8	0.4	43.6	82.2
Delay (s)	129.3	9.6	35.4	18.3	94.3	132.9
Level of Service	F	A	D	B	F	F
Approach Delay (s)	65.4			20.6	106.3	
Approach LOS	E			C	F	

Intersection Summary			
HCM 2000 Control Delay	58.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	272	1538	168	1685	92	239	163	163	250	201	391
v/c Ratio	1.00	0.76	0.62	0.83	0.12	0.90	0.41	0.42	0.78	0.77	0.91
Control Delay	44.4	25.3	20.7	23.4	0.3	61.3	32.1	4.5	40.8	50.0	39.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.4	25.3	20.7	23.4	0.3	61.3	32.1	4.5	40.8	50.0	39.8
Queue Length 50th (ft)	~140	383	33	233	0	82	34	0	86	84	61
Queue Length 95th (ft)	m118	m351	#90	293	0	#200	62	16	#144	#178	#217
Internal Link Dist (ft)		630		1233			420			420	
Turn Bay Length (ft)	140		200		200	185		185	170		
Base Capacity (vph)	273	2037	273	2038	773	265	419	401	319	274	439
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.76	0.62	0.83	0.12	0.90	0.39	0.41	0.78	0.73	0.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	1135	280	155	1550	85	220	150	150	230	185	360
Future Volume (vph)	250	1135	280	155	1550	85	220	150	150	230	185	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4935		1770	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.14	1.00		0.14	1.00	1.00	0.63	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	265	4935		265	5085	1583	1177	3539	1583	962	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	272	1234	304	168	1685	92	239	163	163	250	201	391
RTOR Reduction (vph)	0	60	0	0	0	55	0	0	145	0	0	208
Lane Group Flow (vph)	272	1478	0	168	1685	37	239	163	18	250	201	183
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8
Actuated Green, G (s)	30.7	26.1		30.7	26.1	26.1	13.1	7.8	7.8	17.1	9.8	9.8
Effective Green, g (s)	34.7	28.1		34.7	28.1	28.1	13.1	7.8	7.8	17.1	9.8	9.8
Actuated g/C Ratio	0.50	0.40		0.50	0.40	0.40	0.19	0.11	0.11	0.24	0.14	0.14
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	273	1981		273	2041	635	265	394	176	319	260	221
v/s Ratio Prot	c0.09	0.30		0.06	0.33		0.07	0.05		c0.08	0.11	
v/s Ratio Perm	c0.40			0.25		0.02	0.10		0.01	0.11		c0.12
v/c Ratio	1.00	0.75		0.62	0.83	0.06	0.90	0.41	0.10	0.78	0.77	0.83
Uniform Delay, d1	14.5	17.9		12.0	18.8	12.8	27.1	29.0	28.0	23.7	29.0	29.3
Progression Factor	2.17	1.48		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.4	0.2		2.9	4.0	0.2	30.3	0.3	0.1	11.0	12.2	20.8
Delay (s)	46.8	26.7		14.9	22.7	13.0	57.5	29.2	28.1	34.7	41.2	50.1
Level of Service	D	C		B	C	B	E	C	C	C	D	D
Approach Delay (s)		29.8			21.6			40.8			43.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	20.2
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: S Military Trail & SR 869/SW 10th Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	397	1924	212	473	2571	554	223	717	391	272	967	538
v/c Ratio	1.30	0.90	0.27	0.84	1.46	0.61	1.03	1.13	0.73	1.11	1.45	1.10
Control Delay	198.9	39.1	3.5	43.8	234.8	7.3	123.4	120.3	20.0	139.5	247.7	96.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	198.9	39.1	3.5	43.8	234.8	7.3	123.4	120.3	20.0	139.5	247.7	96.8
Queue Length 50th (ft)	~202	502	0	170	~1476	133	~94	~337	58	~123	~537	~314
Queue Length 95th (ft)	#304	574	42	m165	m#1381	m124	#177	#461	178	#212	#668	#534
Internal Link Dist (ft)		880			1200			569			457	
Turn Bay Length (ft)	280		500	275			300		300	300		200
Base Capacity (vph)	306	2146	794	575	1757	914	217	637	535	246	666	489
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.90	0.27	0.82	1.46	0.61	1.03	1.13	0.73	1.11	1.45	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	365	1770	195	435	2365	510	205	660	360	250	890	495
Future Volume (vph)	365	1770	195	435	2365	510	205	660	360	250	890	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	4.8	4.8	5.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	397	1924	212	473	2571	554	223	717	391	272	967	538
RTOR Reduction (vph)	0	0	123	0	0	128	0	0	250	0	0	192
Lane Group Flow (vph)	397	1924	89	473	2571	426	223	717	141	272	967	346
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	8.7	48.6	48.6	17.7	57.6	57.6	5.6	19.6	19.6	6.6	20.6	20.6
Effective Green, g (s)	10.7	50.6	50.6	19.7	59.6	59.6	7.6	21.6	21.6	8.6	22.6	22.6
Actuated g/C Ratio	0.09	0.42	0.42	0.16	0.50	0.50	0.06	0.18	0.18	0.07	0.19	0.19
Clearance Time (s)	8.3	6.8	6.8	7.9	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0	2.0	3.0	3.0
Lane Grp Cap (vph)	306	2144	667	563	1757	786	217	637	284	246	666	298
v/s Ratio Prot	c0.12	0.38		0.14	c0.73		0.06	c0.20		0.08	c0.27	
v/s Ratio Perm			0.06			0.27			0.09			0.22
v/c Ratio	1.30	0.90	0.13	0.84	1.46	0.54	1.03	1.13	0.50	1.11	1.45	1.16
Uniform Delay, d1	54.6	32.3	21.3	48.6	30.2	20.8	56.2	49.2	44.3	55.7	48.7	48.7
Progression Factor	1.00	1.00	1.00	0.86	0.92	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	155.9	6.4	0.4	1.1	208.8	0.2	68.5	75.5	1.4	88.6	211.7	103.6
Delay (s)	210.5	38.7	21.7	43.0	236.6	13.3	124.7	124.7	45.7	144.3	260.4	152.3
Level of Service	F	D	C	D	F	B	F	F	D	F	F	F
Approach Delay (s)		64.2			176.8			101.5			209.9	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	141.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	122.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Queues

6: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	82	2505	152	2815	125	194	197	478	62	63	402
v/c Ratio	0.57	0.86	0.78	1.04	0.16	0.77	0.78	1.18	0.34	0.34	1.20
Control Delay	41.7	12.7	89.2	51.4	1.1	69.8	70.6	129.2	54.9	54.9	137.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	12.7	89.2	51.4	1.1	69.8	70.6	129.2	54.9	54.9	137.0
Queue Length 50th (ft)	21	467	120	~890	0	153	156	~304	47	48	~229
Queue Length 95th (ft)	m30	m406	#222	#979	2	#272	#278	#517	94	96	#430
Internal Link Dist (ft)		700		595			420			170	
Turn Bay Length (ft)	600		550		295	100					
Base Capacity (vph)	143	2922	200	2703	792	252	253	406	184	185	336
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.86	0.76	1.04	0.16	0.77	0.78	1.18	0.34	0.34	1.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	2235	70	140	2590	115	350	10	440	110	5	370
Future Volume (vph)	75	2235	70	140	2590	115	350	10	440	110	5	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	6.0	6.0	6.0	5.7	5.7	5.7
Lane Util. Factor	1.00	0.86		1.00	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.96	1.00
Satd. Flow (prot)	1597	6379		1770	5085	1369	1681	1690	1583	1665	1677	1417
Flt Permitted	0.07	1.00		0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.96	1.00
Satd. Flow (perm)	123	6379		1770	5085	1369	1681	1690	1583	1665	1677	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	2429	76	152	2815	125	380	11	478	120	5	402
RTOR Reduction (vph)	0	3	0	0	0	60	0	0	169	0	0	180
Lane Group Flow (vph)	82	2502	0	152	2815	65	194	197	309	62	63	222
Heavy Vehicles (%)	13%	2%	2%	2%	2%	18%	2%	2%	2%	3%	2%	14%
Turn Type	pm+pt	NA		Prot	NA	Perm	Split	NA	Prot	Split	NA	Prot
Protected Phases	1	6		5	2		3	3	3	4	4	4
Permitted Phases	6					2						
Actuated Green, G (s)	56.6	52.9		11.3	60.5	60.5	18.0	18.0	18.0	13.3	13.3	13.3
Effective Green, g (s)	60.6	54.9		13.3	62.5	62.5	18.0	18.0	18.0	13.3	13.3	13.3
Actuated g/C Ratio	0.51	0.46		0.11	0.52	0.52	0.15	0.15	0.15	0.11	0.11	0.11
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	6.0	6.0	6.0	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	132	2918		196	2648	713	252	253	237	184	185	157
v/s Ratio Prot	0.03	0.39		c0.09	c0.55		0.12	0.12	c0.20	0.04	0.04	c0.16
v/s Ratio Perm	0.29					0.05						
v/c Ratio	0.62	0.86		0.78	1.06	0.09	0.77	0.78	1.30	0.34	0.34	1.42
Uniform Delay, d1	26.8	29.1		51.9	28.8	14.5	49.0	49.1	51.0	49.3	49.3	53.4
Progression Factor	1.97	0.38		1.27	0.76	0.34	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	1.5		15.0	36.3	0.2	12.0	12.9	163.6	0.4	0.4	220.6
Delay (s)	55.7	12.6		80.9	58.3	5.2	61.0	61.9	214.6	49.7	49.7	273.9
Level of Service	E	B		F	E	A	E	E	F	D	D	F
Approach Delay (s)		13.9			57.3			145.7			220.7	
Approach LOS		B			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	64.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	2245	783	913	3092
v/c Ratio	0.83	0.49	1.45	0.48
Control Delay	8.9	1.9	231.4	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.9	1.9	231.4	0.2
Queue Length 50th (ft)	195	20	~916	0
Queue Length 95th (ft)	m256	m17	#1169	0
Internal Link Dist (ft)	595			250
Turn Bay Length (ft)				
Base Capacity (vph)	2712	1583	630	6408
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	910
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.83	0.49	1.45	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑↑		
Traffic Volume (vph)	2065	720	840	2845	0	0
Future Volume (vph)	2065	720	840	2845	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	2.0		
Lane Util. Factor	0.91	1.00	1.00	0.86		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	5085	1583	1770	6408		
Flt Permitted	1.00	1.00	0.07	1.00		
Satd. Flow (perm)	5085	1583	125	6408		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2245	783	913	3092	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	2245	783	913	3092	0	0
Turn Type	NA	Free	D.P+P	NA		
Protected Phases	1 2 4		3 5	Free		
Permitted Phases		Free	1 2 4			
Actuated Green, G (s)	60.1	120.0	94.7	120.0		
Effective Green, g (s)	64.1	120.0	98.2	120.0		
Actuated g/C Ratio	0.53	1.00	0.82	1.00		
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)	2716	1583	631	6408		
v/s Ratio Prot	0.44		c0.47	0.48		
v/s Ratio Perm		0.49	c0.72			
v/c Ratio	0.83	0.49	1.45	0.48		
Uniform Delay, d1	23.3	0.0	35.8	0.0		
Progression Factor	0.59	1.00	0.83	1.00		
Incremental Delay, d2	0.9	0.5	207.6	0.2		
Delay (s)	14.7	0.5	237.2	0.2		
Level of Service	B	A	F	A		
Approach Delay (s)	11.0			54.2	0.0	
Approach LOS	B			D	A	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	2245	2712	337	1293
v/c Ratio	0.64	0.61	0.62	0.82
Control Delay	4.7	9.3	36.1	4.8
Queue Delay	0.4	0.1	0.0	2.3
Total Delay	5.1	9.4	36.1	7.0
Queue Length 50th (ft)	97	356	95	0
Queue Length 95th (ft)	173	m283	133	0
Internal Link Dist (ft)	250	635	1117	
Turn Bay Length (ft)			500	500
Base Capacity (vph)	3517	4432	543	1583
Starvation Cap Reductn	653	373	0	0
Spillback Cap Reductn	0	334	0	170
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.78	0.67	0.62	0.92

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑↑		↰↰	↱
Traffic Volume (vph)	0	2065	2495	0	310	1190
Future Volume (vph)	0	2065	2495	0	310	1190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	2.0
Lane Util. Factor		0.91	0.86		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		5085	6408		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		5085	6408		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2245	2712	0	337	1293
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	2245	2712	0	337	1293
Turn Type		NA	NA		Prot	Free
Protected Phases		2 3 4	2 3 4		1 5	
Permitted Phases						Free
Actuated Green, G (s)		79.1	79.1		15.5	120.0
Effective Green, g (s)		78.7	78.7		19.5	120.0
Actuated g/C Ratio		0.66	0.66		0.16	1.00
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)		3334	4202		557	1583
v/s Ratio Prot		0.44	0.42		0.10	
v/s Ratio Perm						c0.82
v/c Ratio		0.67	0.65		0.61	0.82
Uniform Delay, d1		12.7	12.3		46.7	0.0
Progression Factor		0.70	1.63		1.00	1.00
Incremental Delay, d2		0.2	0.1		1.3	4.8
Delay (s)		9.1	20.2		48.0	4.8
Level of Service		A	C		D	A
Approach Delay (s)		9.1	20.2		13.7	
Approach LOS		A	C		B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1495	1087	348	1723	1189	539
v/c Ratio	1.19	0.69	0.89	0.71	1.12	1.20
Control Delay	119.5	6.2	54.5	17.3	106.4	144.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.5	6.2	54.5	17.3	106.4	144.8
Queue Length 50th (ft)	~719	233	278	168	~547	~554
Queue Length 95th (ft)	#864	150	m#371	m208	#681	#792
Internal Link Dist (ft)	635			630	537	
Turn Bay Length (ft)			275		200	200
Base Capacity (vph)	1253	1583	392	2436	1059	451
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.69	0.89	0.71	1.12	1.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1375	1000	320	1585	910	680
Future Volume (vph)	1375	1000	320	1585	910	680
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	2.0	4.4	4.5	4.4	4.4
Lane Util. Factor	0.95	1.00	1.00	0.91	0.97	0.91
Frt	1.00	0.85	1.00	1.00	0.97	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (prot)	3539	1583	1770	5085	3382	1441
Flt Permitted	1.00	1.00	0.95	1.00	0.96	1.00
Satd. Flow (perm)	3539	1583	1770	5085	3382	1441
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1495	1087	348	1723	989	739
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1495	1087	348	1723	1189	539
Turn Type	NA	Free	Prot	NA	Prot	Prot
Protected Phases	1 2 5		3	1 2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	40.5	120.0	24.6	55.6	35.6	35.6
Effective Green, g (s)	38.5	120.0	26.6	57.6	37.6	37.6
Actuated g/C Ratio	0.32	1.00	0.22	0.48	0.31	0.31
Clearance Time (s)			6.4		6.4	6.4
Vehicle Extension (s)			2.0		3.5	3.5
Lane Grp Cap (vph)	1135	1583	392	2440	1059	451
v/s Ratio Prot	c0.42		c0.20	0.34	0.35	c0.37
v/s Ratio Perm		0.69				
v/c Ratio	1.32	0.69	0.89	0.71	1.12	1.20
Uniform Delay, d1	40.8	0.0	45.3	24.5	41.2	41.2
Progression Factor	0.66	1.00	0.82	0.66	1.00	1.00
Incremental Delay, d2	147.6	1.9	13.2	0.5	67.9	107.7
Delay (s)	174.6	1.9	50.4	16.5	109.1	148.9
Level of Service	F	A	D	B	F	F
Approach Delay (s)	101.9			22.2	121.5	
Approach LOS	F			C	F	

Intersection Summary			
HCM 2000 Control Delay	81.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

10: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	266	1967	239	1348	125	304	147	136	261	310	418
v/c Ratio	0.84	0.92	0.97	0.69	0.18	1.06	0.23	0.34	0.61	0.95	0.96
Control Delay	41.8	11.1	82.5	33.3	4.2	103.1	43.2	8.9	37.3	88.2	60.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	11.1	82.5	33.3	4.2	103.1	43.2	8.9	37.3	88.2	60.7
Queue Length 50th (ft)	145	238	137	323	0	~209	52	0	153	240	186
Queue Length 95th (ft)	m110	m167	#303	379	34	#392	83	51	230	#414	#390
Internal Link Dist (ft)		630		1233			420			420	
Turn Bay Length (ft)	140		200		200	185		185	170		
Base Capacity (vph)	339	2130	247	1965	695	287	648	404	440	330	439
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.92	0.97	0.69	0.18	1.06	0.23	0.34	0.59	0.94	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	245	1575	235	220	1240	115	280	135	125	240	285	385
Future Volume (vph)	245	1575	235	220	1240	115	280	135	125	240	285	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4		4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	4986		1770	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.09	1.00		0.09	1.00	1.00	0.18	1.00	1.00	0.66	1.00	1.00
Satd. Flow (perm)	160	4986		161	5085	1583	339	3539	1583	1227	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	266	1712	255	239	1348	125	304	147	136	261	310	418
RTOR Reduction (vph)	0	16	0	0	0	77	0	0	111	0	0	159
Lane Group Flow (vph)	266	1951	0	239	1348	48	304	147	25	261	310	259
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8
Actuated Green, G (s)	63.9	48.8		54.9	44.3	44.3	37.3	22.0	22.0	35.5	21.1	21.1
Effective Green, g (s)	67.8	50.8		58.9	46.3	46.3	37.3	22.0	22.0	35.5	21.1	21.1
Actuated g/C Ratio	0.56	0.42		0.49	0.39	0.39	0.31	0.18	0.18	0.30	0.18	0.18
Clearance Time (s)	6.4	6.4		6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	319	2110		247	1961	610	287	648	290	428	327	278
v/s Ratio Prot	c0.12	c0.39		c0.10	0.27		c0.13	0.04		0.07	0.17	
v/s Ratio Perm	0.35			0.37		0.03	c0.19		0.02	0.11		0.16
v/c Ratio	0.83	0.92		0.97	0.69	0.08	1.06	0.23	0.09	0.61	0.95	0.93
Uniform Delay, d1	31.8	32.8		34.8	30.8	23.3	36.0	41.8	40.7	34.9	48.9	48.7
Progression Factor	1.38	0.29		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.9		47.5	2.0	0.3	69.6	0.1	0.0	1.7	35.5	35.7
Delay (s)	45.6	10.5		82.3	32.8	23.6	105.6	41.8	40.7	36.6	84.4	84.4
Level of Service	D	B		F	C	C	F	D	D	D	F	F
Approach Delay (s)		14.7			39.0			74.6			71.8	
Approach LOS		B			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.2
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2554	174	2011	158	207
v/c Ratio	0.60	0.79	0.53	0.69	0.54
Control Delay	17.9	78.8	2.1	64.9	11.3
Queue Delay	0.0	1.5	0.1	0.0	0.0
Total Delay	17.9	80.3	2.1	64.9	11.3
Queue Length 50th (ft)	298	104	37	119	0
Queue Length 95th (ft)	377	#237	32	181	65
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4279	221	3791	545	631
Starvation Cap Reductn	0	7	458	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.81	0.60	0.29	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2235	115	160	1850	145	190
Future Volume (vph)	2235	115	160	1850	145	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	7489		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7489		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2429	125	174	2011	158	207
RTOR Reduction (vph)	5	0	0	0	0	180
Lane Group Flow (vph)	2549	0	174	2011	158	27
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	66.5		13.0	87.5	15.5	15.5
Effective Green, g (s)	68.5		15.0	89.5	15.5	15.5
Actuated g/C Ratio	0.57		0.12	0.75	0.13	0.13
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4274		221	3792	228	204
v/s Ratio Prot	c0.34		c0.10	0.40	c0.09	
v/s Ratio Perm						0.02
v/c Ratio	0.60		0.79	0.53	0.69	0.13
Uniform Delay, d1	16.8		51.0	6.4	50.0	46.3
Progression Factor	1.00		1.11	0.23	1.00	1.00
Incremental Delay, d2	0.2		14.0	0.1	7.1	0.1
Delay (s)	16.9		70.6	1.5	57.1	46.4
Level of Service	B		E	A	E	D
Approach Delay (s)	16.9			7.0	51.0	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	103	2533	2005	92	272	179
v/c Ratio	0.78	0.53	0.50	0.09	0.61	0.53
Control Delay	70.9	2.7	11.1	1.4	54.8	16.1
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	70.9	2.7	11.1	1.4	54.8	16.1
Queue Length 50th (ft)	80	29	233	1	104	17
Queue Length 95th (ft)	m#174	46	298	m6	140	82
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	132	4778	3977	1017	1058	594
Starvation Cap Reductn	0	476	0	0	0	0
Spillback Cap Reductn	0	0	40	0	0	5
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.59	0.51	0.09	0.26	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	95	2330	1845	85	250	165
Future Volume (vph)	95	2330	1845	85	250	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	2533	2005	92	272	179
RTOR Reduction (vph)	0	0	0	35	0	134
Lane Group Flow (vph)	103	2533	2005	57	272	45
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	7.0	87.5	72.5	72.5	15.5	15.5
Effective Green, g (s)	9.0	89.5	74.5	74.5	15.5	15.5
Actuated g/C Ratio	0.08	0.75	0.62	0.62	0.13	0.13
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	132	4779	3978	982	443	204
v/s Ratio Prot	c0.06	c0.40	0.31		c0.08	
v/s Ratio Perm				0.04		0.03
v/c Ratio	0.78	0.53	0.50	0.06	0.61	0.22
Uniform Delay, d1	54.5	6.4	12.6	8.9	49.4	46.8
Progression Factor	0.71	0.34	0.82	0.55	1.00	1.00
Incremental Delay, d2	19.9	0.0	0.0	0.0	1.8	0.2
Delay (s)	58.5	2.2	10.3	4.9	51.2	47.0
Level of Service	E	A	B	A	D	D
Approach Delay (s)		4.4	10.1		49.5	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1717	1053	1500	526	579
v/c Ratio	0.48	0.67	0.53	0.59	0.80
Control Delay	6.3	10.1	7.9	22.5	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	10.1	7.9	22.5	30.9
Queue Length 50th (ft)	86	344	146	84	109
Queue Length 95th (ft)	159	486	168	127	#189
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3567	1583	2830	909	738
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.67	0.53	0.58	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations											
Traffic Volume (vph)	0	1580	1000	0	1380	0	500	0	550	0	0
Future Volume (vph)	0	1580	1000	0	1380	0	500	0	550	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1717	1053	0	1500	0	526	0	579	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1717	1053	0	1500	0	526	0	579	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		31.4	60.0		31.4		13.6		13.6		
Effective Green, g (s)		33.4	60.0		33.4		15.6		15.6		
Actuated g/C Ratio		0.56	1.00		0.56		0.26		0.26		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3567	1583		2830		892		724		
v/s Ratio Prot		0.27			0.29		0.15		0.21		
v/s Ratio Perm			c0.67								
v/c Ratio		0.48	0.67		0.53		0.59		0.80		
Uniform Delay, d1		8.1	0.0		8.4		19.4		20.7		
Progression Factor		0.72	1.00		0.88		1.00		1.00		
Incremental Delay, d2		0.4	2.0		0.5		0.8		6.0		
Delay (s)		6.2	2.0		7.9		20.2		26.7		
Level of Service		A	A		A		C		C		
Approach Delay (s)		4.6			7.9			23.6		0.0	
Approach LOS		A			A			C		A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1293	1957	600	579	442
v/c Ratio	0.45	0.68	0.38	0.68	0.64
Control Delay	6.8	7.3	0.2	25.0	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	7.3	0.2	25.0	24.9
Queue Length 50th (ft)	111	172	0	95	79
Queue Length 95th (ft)	97	m160	m0	143	126
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2895	2895	1583	886	719
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.45	0.68	0.38	0.65	0.61

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations		↑↑↑			↑↑↑	↱	↰↰		↱↱		
Traffic Volume (vph)	0	1190	0	0	1800	570	550	0	420	0	0
Future Volume (vph)	0	1190	0	0	1800	570	550	0	420	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5		
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88		
Frt		1.00			1.00	0.85	1.00		0.85		
Flt Protected		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)		5085			5085	1583	3433		2787		
Flt Permitted		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)		5085			5085	1583	3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1293	0	0	1957	600	579	0	442	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1293	0	0	1957	600	579	0	442	0	0
Turn Type		NA			NA	Free	Prot		Prot		
Protected Phases		6			2		4		4		
Permitted Phases						Free					
Actuated Green, G (s)		32.2			32.2	60.0	12.8		12.8		
Effective Green, g (s)		34.2			34.2	60.0	14.8		14.8		
Actuated g/C Ratio		0.57			0.57	1.00	0.25		0.25		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		2898			2898	1583	846		687		
v/s Ratio Prot		0.25			c0.38		c0.17		0.16		
v/s Ratio Perm						0.38					
v/c Ratio		0.45			0.68	0.38	0.68		0.64		
Uniform Delay, d1		7.4			9.0	0.0	20.5		20.2		
Progression Factor		0.84			0.75	1.00	1.00		1.00		
Incremental Delay, d2		0.4			0.3	0.2	2.1		1.8		
Delay (s)		6.7			7.1	0.2	22.6		22.1		
Level of Service		A			A	A	C		C		
Approach Delay (s)		6.7			5.5			22.4		0.0	
Approach LOS		A			A			C		A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: NE 3rd Ave & SAMPLE ROAD

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	424	1326	60	1847	250	228	82	109	223	571
v/c Ratio	1.00	0.60	0.48	1.00	0.73	0.45	0.15	0.32	0.44	1.04
Control Delay	87.3	20.6	66.9	60.1	46.2	39.3	0.6	28.7	39.2	80.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.3	20.6	66.9	60.1	46.2	39.3	0.6	28.7	39.2	80.7
Queue Length 50th (ft)	168	252	45	~524	140	146	0	56	143	~381
Queue Length 95th (ft)	#281	307	91	#645	#224	225	0	98	219	#604
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	425	2194	131	1838	341	509	544	338	507	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.60	0.46	1.00	0.73	0.45	0.15	0.32	0.44	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	1075	145	55	1615	85	230	210	75	100	205	525
Future Volume (vph)	390	1075	145	55	1615	85	230	210	75	100	205	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	4946		1752	4998		1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00		0.50	1.00	1.00	0.49	1.00	1.00
Satd. Flow (perm)	3400	4946		1752	4998		921	1845	1568	913	1845	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	424	1168	158	60	1755	92	250	228	82	109	223	571
RTOR Reduction (vph)	0	14	0	0	4	0	0	0	59	0	0	117
Lane Group Flow (vph)	424	1312	0	60	1843	0	250	228	23	109	223	454
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	13.0	49.5		5.5	42.0		39.1	33.1	33.1	38.9	33.0	33.0
Effective Green, g (s)	15.0	51.5		7.5	44.0		39.1	33.1	33.1	38.9	33.0	33.0
Actuated g/C Ratio	0.12	0.43		0.06	0.37		0.33	0.28	0.28	0.32	0.28	0.28
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	425	2122		109	1832		341	508	432	337	507	431
v/s Ratio Prot	c0.12	0.27		0.03	c0.37		c0.04	0.12		0.02	0.12	
v/s Ratio Perm							0.20		0.01	0.09		c0.29
v/c Ratio	1.00	0.62		0.55	1.01		0.73	0.45	0.05	0.32	0.44	1.05
Uniform Delay, d1	52.5	26.6		54.6	38.0		36.0	35.9	31.9	29.4	35.9	43.5
Progression Factor	0.87	0.75		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.2	1.2		3.4	22.4		6.9	0.2	0.0	0.2	0.2	57.8
Delay (s)	86.0	21.2		58.0	60.4		42.9	36.1	31.9	29.6	36.1	101.3
Level of Service	F	C		E	E		D	D	C	C	D	F
Approach Delay (s)		36.9			60.3			38.5			76.5	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	52.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2777	272	2571	125	130
v/c Ratio	0.63	1.15	0.66	0.65	0.45
Control Delay	17.8	152.1	2.1	66.5	13.1
Queue Delay	0.0	1.0	0.3	0.0	0.0
Total Delay	17.8	153.1	2.4	66.5	13.1
Queue Length 50th (ft)	330	~239	45	94	0
Queue Length 95th (ft)	405	#413	33	152	56
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4375	236	3896	545	578
Starvation Cap Reductn	0	16	582	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	1.24	0.78	0.23	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2460	95	250	2365	115	120
Future Volume (vph)	2460	95	250	2365	115	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	7502		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7502		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2674	103	272	2571	125	130
RTOR Reduction (vph)	4	0	0	0	0	116
Lane Group Flow (vph)	2773	0	272	2571	125	14
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	68.0		14.0	90.0	13.0	13.0
Effective Green, g (s)	70.0		16.0	92.0	13.0	13.0
Actuated g/C Ratio	0.58		0.13	0.77	0.11	0.11
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4376		236	3898	191	171
v/s Ratio Prot	0.37		c0.15	c0.51	c0.07	
v/s Ratio Perm						0.01
v/c Ratio	0.63		1.15	0.66	0.65	0.08
Uniform Delay, d1	16.5		52.0	6.6	51.3	48.1
Progression Factor	1.00		1.20	0.20	1.00	1.00
Incremental Delay, d2	0.2		98.8	0.2	6.0	0.1
Delay (s)	16.7		161.1	1.6	57.4	48.2
Level of Service	B		F	A	E	D
Approach Delay (s)	16.7			16.8	52.7	
Approach LOS	B			B	D	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Queues

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	196	2609	2674	315	207	168
v/c Ratio	1.11	0.53	0.68	0.29	0.55	0.52
Control Delay	129.7	2.2	13.6	2.4	55.8	13.0
Queue Delay	0.0	0.1	0.1	0.0	0.0	0.1
Total Delay	129.7	2.2	13.7	2.4	55.8	13.1
Queue Length 50th (ft)	~174	25	266	7	79	0
Queue Length 95th (ft)	#326	38	393	m44	113	63
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	177	4910	3949	1096	1058	604
Starvation Cap Reductn	0	535	0	0	0	0
Spillback Cap Reductn	0	0	215	0	0	67
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.60	0.72	0.29	0.20	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	180	2400	2460	290	190	155
Future Volume (vph)	180	2400	2460	290	190	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	196	2609	2674	315	207	168
RTOR Reduction (vph)	0	0	0	121	0	150
Lane Group Flow (vph)	196	2609	2674	194	207	18
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	10.0	90.0	72.0	72.0	13.0	13.0
Effective Green, g (s)	12.0	92.0	74.0	74.0	13.0	13.0
Actuated g/C Ratio	0.10	0.77	0.62	0.62	0.11	0.11
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	177	4912	3951	976	371	171
v/s Ratio Prot	c0.11	0.41	c0.42		c0.06	
v/s Ratio Perm				0.12		0.01
v/c Ratio	1.11	0.53	0.68	0.20	0.56	0.11
Uniform Delay, d1	54.0	5.5	15.1	10.1	50.8	48.3
Progression Factor	0.70	0.31	0.83	1.52	1.00	1.00
Incremental Delay, d2	91.8	0.0	0.2	0.0	1.0	0.1
Delay (s)	129.6	1.8	12.7	15.3	51.8	48.4
Level of Service	F	A	B	B	D	D
Approach Delay (s)		10.7	13.0		50.3	
Approach LOS		B	B		D	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	2054	737	2174	589	789
v/c Ratio	0.57	0.47	0.75	0.50	0.83
Control Delay	11.5	2.2	22.3	32.5	44.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	2.2	22.3	32.5	44.3
Queue Length 50th (ft)	136	19	451	182	311
Queue Length 95th (ft)	173	53	549	226	382
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3631	1583	2881	1301	1056
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.47	0.75	0.45	0.75

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑↑	↱		↑↑↑		↰↰		↱↱		
Traffic Volume (vph)	0	1890	700	0	2000	0	560	0	750	0	0
Future Volume (vph)	0	1890	700	0	2000	0	560	0	750	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		0.88		
Frt		1.00	0.85		1.00		1.00		0.85		
Flt Protected		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (prot)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	2054	737	0	2174	0	589	0	789	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2054	737	0	2174	0	589	0	789	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		66.0	120.0		66.0		39.0		39.0		
Effective Green, g (s)		68.0	120.0		68.0		41.0		41.0		
Actuated g/C Ratio		0.57	1.00		0.57		0.34		0.34		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3631	1583		2881		1172		952		
v/s Ratio Prot		0.32			c0.43		0.17		c0.28		
v/s Ratio Perm			0.47								
v/c Ratio		0.57	0.47		0.75		0.50		0.83		
Uniform Delay, d1		16.6	0.0		19.7		31.4		36.3		
Progression Factor		0.64	1.00		1.02		1.00		1.00		
Incremental Delay, d2		0.6	0.9		1.2		0.2		5.9		
Delay (s)		11.1	0.9		21.3		31.6		42.2		
Level of Service		B	A		C		C		D		
Approach Delay (s)		8.4			21.3			37.7		0.0	
Approach LOS		A			C			D		A	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1880	1891	453	1200	705
v/c Ratio	0.75	0.76	0.29	0.84	0.61
Control Delay	18.3	24.0	0.2	37.4	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	24.0	0.2	37.4	29.5
Queue Length 50th (ft)	287	263	0	412	232
Queue Length 95th (ft)	339	m343	m0	488	292
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2502	2502	1583	1530	1242
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.76	0.29	0.78	0.57

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations		↑↑↑			↑↑↑	↱	↰↰		↱↱		
Traffic Volume (vph)	0	1730	0	0	1740	430	1140	0	670	0	0
Future Volume (vph)	0	1730	0	0	1740	430	1140	0	670	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5		
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88		
Frt		1.00			1.00	0.85	1.00		0.85		
Flt Protected		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)		5085			5085	1583	3433		2787		
Flt Permitted		1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)		5085			5085	1583	3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1880	0	0	1891	453	1200	0	705	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1880	0	0	1891	453	1200	0	705	0	0
Turn Type		NA			NA	Free	Prot		Prot		
Protected Phases		6			2		4		4		
Permitted Phases						Free					
Actuated Green, G (s)		57.1			57.1	120.0	47.9		47.9		
Effective Green, g (s)		59.1			59.1	120.0	49.9		49.9		
Actuated g/C Ratio		0.49			0.49	1.00	0.42		0.42		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		2504			2504	1583	1427		1158		
v/s Ratio Prot		0.37			c0.37		c0.35		0.25		
v/s Ratio Perm						0.29					
v/c Ratio		0.75			0.76	0.29	0.84		0.61		
Uniform Delay, d1		24.5			24.6	0.0	31.5		27.4		
Progression Factor		0.65			0.90	1.00	1.00		1.00		
Incremental Delay, d2		1.1			1.0	0.2	4.6		0.8		
Delay (s)		17.0			23.2	0.2	36.1		28.2		
Level of Service		B			C	A	D		C		
Approach Delay (s)		17.0			18.7			33.2		0.0	
Approach LOS		B			B			C		A	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: NE 3rd Ave & SAMPLE ROAD

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	511	2098	114	1820	261	337	120	87	266	418
v/c Ratio	0.99	0.86	0.97	0.90	1.12	0.84	0.23	0.50	0.69	0.84
Control Delay	92.4	23.3	130.5	41.1	130.1	63.2	1.1	38.8	53.3	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.4	23.3	130.5	41.1	130.1	63.2	1.1	38.8	53.3	36.4
Queue Length 50th (ft)	216	263	90	477	~184	251	0	48	191	155
Queue Length 95th (ft)	#329	#685	#210	#662	#314	336	0	81	265	267
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	514	2441	118	2030	233	512	593	176	496	582
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.86	0.97	0.90	1.12	0.66	0.20	0.49	0.54	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	470	1715	215	105	1545	130	240	310	110	80	245	385
Future Volume (vph)	470	1715	215	105	1545	130	240	310	110	80	245	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5000		1770	5026		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.33	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)	3433	5000		1770	5026		607	1863	1583	430	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	511	1864	234	114	1679	141	261	337	120	87	266	418
RTOR Reduction (vph)	0	12	0	0	7	0	0	0	94	0	0	173
Lane Group Flow (vph)	511	2086	0	114	1813	0	261	337	26	87	266	245
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	16.0	56.3		6.0	46.3		32.9	25.9	25.9	30.5	24.7	24.7
Effective Green, g (s)	18.0	58.3		8.0	48.3		32.9	25.9	25.9	30.5	24.7	24.7
Actuated g/C Ratio	0.15	0.49		0.07	0.40		0.27	0.22	0.22	0.25	0.21	0.21
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	514	2429		118	2022		234	402	341	174	383	325
v/s Ratio Prot	c0.15	c0.42		0.06	0.36		c0.07	0.18		0.02	0.14	
v/s Ratio Perm							c0.24		0.02	0.10		0.15
v/c Ratio	0.99	0.86		0.97	0.90		1.12	0.84	0.08	0.50	0.69	0.75
Uniform Delay, d1	50.9	27.2		55.9	33.5		43.1	45.0	37.5	36.1	44.2	44.8
Progression Factor	1.20	0.70		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	31.7	3.0		71.2	6.7		93.3	13.6	0.0	0.8	4.4	8.5
Delay (s)	92.8	22.1		127.1	40.3		136.4	58.6	37.5	36.9	48.5	53.3
Level of Service	F	C		F	D		F	E	D	D	D	D
Approach Delay (s)		36.0			45.4			83.4			49.8	
Approach LOS		D			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group